

2

ATTITUDINAL EXTREMISM

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The extensive social psychological literature on *attitudes* (people's overall evaluations of issues, objects, and people; Petty & Cacioppo, 1981) has featured prominently in attempts to understand a diversity of behavior from consumer purchases to voting patterns (e.g., Fishbein & Ajzen, 1975). Thus, it might be surprising that with respect to understanding the determinants of radical or extreme behavior, with only a few exceptions (e.g., McCauley & Moskaleiko, 2017; Doosje, van den Bos, Loseman, Feddes, & Mann, 2012), research on attitudes as a determinant has been largely ignored with more attention placed on other variables and nonattitudinal processes. To be sure, a variety of factors can motivate radical behavior, and no single approach is likely to provide a complete model. Nevertheless, the theme of this chapter is that the accumulated literature over the last 70 years on the topic of attitudes can contribute to an understanding of extreme behavior. We offer a conceptualization of attitudinal extremism including the identification of some antecedents of both 'authentic' and 'perceived' extremism, and we also address when attitudes are more or less likely to result in extreme behavior.

Developing a Model of Attitudinal Extremism

Prior research documents several factors that can result in extreme attitudes and actions, and it is important to examine how or if these findings fit together. Researchers have operationalized attitudinal extremism (and closely related constructs like ideological extremity) in very different ways. For example, the most widely used general measure of attitude extremity is to compute the discrepancy between a person's overall evaluative rating (positive or negative) and neutrality (Abelson, 1995; see further discussion in the following). This can be adapted to

politics, for example, by calculating the distance from self-report ratings of political orientation (liberal-conservative) to having no political leaning (Brandt, Evans, & Crawford, 2015; Frimer, Brandt, Melton, & Motyl, 2019). Other approaches within politics (where attitudinal extremism is most studied) include assessing the degree of identification with a political party (Zmigrod, Rentfrow, & Robbins, 2020) and the ideologies of the social media accounts that an individual follows (Sterling, Jost, & Bonneau, 2020). Still other work has focused on more general individual differences such as overall intolerance of other views (van Prooijen & Krouwel, 2019; Rollwage, Dolan, & Fleming, 2018) and unwillingness to compromise (Webber et al., 2018).

Although these are all plausible approaches, it may be useful to identify with more conceptual clarity what are the core features of a person being an attitudinal extremist. In the view (e.g., Kruglanski, Jasko, Chernikova, Dugas, & Webber, 2017; Kruglanski, Szumowska, Kopetz, Vallerand, & Pierro, 2021) elaborated in many chapters in this volume, extremism is a general psychological phenomenon rooted in the dynamics of motivation (discussed further shortly). Given the need for a conceptual framework to help organize the growing literature on attitudinal extremism, we take this motivational perspective as our point of departure and proceed to explore its implications for attitudes. In adopting this approach, our goal is to advance the study of both attitudes and extremism in an integrative and reciprocally generative manner.

We begin our analysis with three critical issues that remain unresolved. First, research has not yet established what properties of attitudes should be present before labeling a person as an attitudinal extremist. We offer some suggestions before turning to the empirical questions of: (1) whether these factors are indeed considered by others in labeling people as extremists and (2) whether these factors are implicated in the link between attitudes and extreme behavior. In addition to literal attitude extremity or *polarization* (i.e., deviation from neutrality), we consider the attitude's strength and in particular the *certainty* with which it is held, its *unusualness*, and the *social disapproval* associated with it. We propose these as reasonable contributors to attitudinal extremism based on the prior literature on behavioral extremism (e.g., Kruglanski et al., 2021) and attitude strength (Petty & Krosnick, 1995).

After considering these dimensions, we turn to people's perceptions of others as extremists and assessing whether the factors just identified play a role in such attributions. It is important to note that the judgment that someone else is an extremist (*perceived extremism*) might or might not reflect or be based on all of the factors that actually lead people to engage in radical actions (*authentic extremism*). We detail potential similarities and differences between authentic and perceived extremism in the upcoming section on determinants of attributing extremism to others. We also report the results of two experiments that assess targets' attitude polarization, certainty, and unusualness as determinants of attributions of extremism. Although our aim is simply to identify key variables and delineate a few

central considerations in this area, our framework can ultimately guide future research on the degree to which people accurately attribute extremism to others versus over-attributing it (to nonextremists) or under-attributing it (i.e., failing to recognize it in authentic extremists).

Following our consideration of attributions of extremism, we aim to clarify the conditions under which attitudes are likely to result in extreme behavior. The dearth of prior research on this topic echoes the difficulties researchers encountered in early attempts to use attitudes to predict *any* behavior (Wicker, 1969). Although considerable progress has been made in understanding when and for whom attitudes predict so-called normal behaviors (e.g., whether attitudes toward ice cream predict ice cream purchases; Fazio, 1990; Petty, Haugtvedt, & Smith, 1995), some have argued that attitudes have not proven to be very helpful in predicting extreme behaviors (McCauley & Moskaleiko, 2017). Thus, we conclude this chapter by reporting the results of a new study suggesting that attitudes may be more predictive of tendencies toward extreme action once other factors are taken into account.

In sum, this chapter proceeds in four sections. First, we propose going beyond the attitude literature's near-exclusive reliance on polarization as the sole defining feature of attitudinal extremism and expand on other attitude properties that might be needed. In weighing these additional variables, we incorporate considerations raised by the literature on attitude strength (Petty & Krosnick, 1995) such as attitude certainty, and especially Kruglanski et al.'s motivational account of extremism (this volume; Kruglanski, Bélanger, & Gunaratna, 2019; Kruglanski et al., 2021). In the motivational account, the concept of extremism connotes intensity, defined as the amount of a characteristic (as in extreme heat) as well as the characteristic's frequency or unusualness (as in an extreme situation). From an attitudinal perspective, the notion of intensity can be conceptualized as encompassing both the amount of positivity or negativity an attitude has (i.e., its polarization) as well as the strength associated with that amount of positivity or negativity (e.g., the certainty with which the particular attitude is held, its importance, or one's commitment to it). We consider both attitude polarization and attitude strength, as well as unusualness (infrequency) and social disapproval, in our discussion of the characteristics associated with attitudinal extremism. Although attitude polarization can be related to attitude strength (e.g., more polarized attitudes tend to be held with greater certainty than more moderate ones) and unusualness is related to disapproval (i.e., attitudes that are unique in society tend to be approved of less than those that are common), we argue that each variable is sufficiently distinct that considering their independent contributions can further clarify the psychology of extremism.

The second section turns to an impression formation context, examining determinants of people's proclivities to attribute extremism to others. No prior research of which we are aware has examined this issue. In the third section, we describe key determinants of polarized, certain, and unusual attitudes, paying

particular attention to processes that can mediate effects of motivation on their formation. Finally, the fourth section takes up the question of how attitudes are linked to extreme behaviors, and new data are reported that begin to address this important issue.

Candidates for Inclusion in a Model of Attitudinal Extremism

From the perspective of the research literature on attitudes, the most obvious candidate for inclusion in a conceptualization of attitudinal extremism might simply be holding polarized attitudes (cf., Abelson, 1995). Conceptually, *polarization* represents the degree (magnitude) of liking or disliking for an attitude object (i.e., the thing being evaluated), and as noted earlier, is typically operationalized as the distance on an evaluative scale between the endorsed position and the scale neutral point. Thus, on a *bipolar* scale (e.g., -4 to +4), where low values reflect strong disliking or negativity (e.g., extremely bad) and high values represent strong liking or positivity (e.g., extremely good), polarization is operationalized as the distance from the selected position to the neutral (0) midpoint (e.g., Tesser, 1976). Alternatively, when a *unipolar* scale (e.g., 1 = not good, 7 = extremely good) measures a single evaluative dimension, more polarization is reflected in higher values. Although attitude polarization has often been identified in research by the term attitude extremity (Abelson, 1995), we use the term polarization rather than extremity to avoid confusion with the broader construct of attitudinal *extremism*, which as we argue shortly, should include additional criteria.

We argue that polarization is a key component of attitudinal extremism because although a person can value a *moderate* position (e.g., political centrism), such a view would not be considered extreme unless the person adopts a polarized attitude toward that position (i.e., liking or disliking centrism a great deal). In such a case, this polarized attitude could lead to extreme behavior with respect to centrism.¹ In contrast, a mildly positive attitude toward a radical position (e.g., white supremacy) would not be polarized (even though the attitude object itself is extreme). A mild favoring of an extreme attitude object on its own would be unlikely to produce extreme behavior. It is also possible for a person to be very favorable toward both sides of an issue (i.e., be extremely ambivalent; Priester & Petty, 1996). On a bipolar scale, this person might appear to be neutral (e.g., see Kaplan, 1972) when in fact the person's attitude is highly polarized in *both* positive and negative directions. Such a person would therefore be capable of engaging in extremely positive or negative behavior depending on which aspect of the attitude is salient (Luttrell, Petty, & Briñol, 2016). Or, if both evaluations are simultaneously salient, the level of felt conflict could be extreme (Newby-Clark, McGregor, & Zanna, 2002), which could be paralyzing in the short term (Durso, Briñol, & Petty, 2016), but potentially provoke extreme action in the longer term as the person aims to resolve the conflict.

Related to but distinct from polarization, another candidate feature of attitudinal extremism is attitude *strength* (Petty & Krosnick, 1995), and in particular, the *certainty* or confidence with which attitudes are held. Certainty largely reflects the extent to which people believe their attitudes are valid (Petrocelli, Tormala, & Rucker, 2007; Rucker, Tormala, Petty, & Briñol, 2014). Attitude certainty could be relevant to extremism in multiple ways, and we discuss its role both as a possible criterion for identifying someone as an attitudinal extremist and as a moderator of the effect of attitudes on extreme behavior. Certainty is a key example of a host of other attitude strength indicators (e.g., attitude importance and accessibility), but because it is the one that has garnered the most research attention, we focus on it in this chapter. Importantly, attitudes can vary in certainty (and other strength features) regardless of their degree of polarization, so just as a highly polarized attitude can be held with uncertainty or doubt (e.g., doubting one's intense love for one's spouse), a moderate or neutral attitude can be held with considerable conviction (e.g., being confident in one's apathy about politics). Importantly, attitudes held with certainty are generally more predictive of behavior than those held with some doubt, although research shows that sometimes uncertainty can be highly motivating (e.g., McGregor, 2003), and attitudes that are held with doubt can inspire efforts to increase certainty and might therefore result in extreme behavior. We return to this issue in the section linking attitudes to extreme behavior.

Although attitude polarization and certainty (strength) are plausibly important components of attitudinal extremism, we also argue that they might be insufficient to define the construct. This is because some attitudes that are both polarized and strong seem unlikely to result in extremist action. For example, passionate and confidently held love of commonly liked attitude objects such as ice cream hardly seems to merit the designation of extremism and would be unlikely to predict who would stock a garage freezer full of the treat or kill to be the first to obtain a special flavor (i.e., engage in extremist ice cream behavior). Similarly, confident hatred of commonly disliked objects such as parking tickets likely would not predict who would be willing to go to jail in protest or set the local traffic court on fire. Thus, in accord with other approaches to extremism (e.g., Kruglanski et al., 2021), we suggest that another potentially important dimension is an attitude's *unusualness* in the sense of a particular attitude being different from other people's attitudes or one's own other attitudes. As was the case with polarization and strength, unusualness refers to the evaluation and not the attitude object.

Attitudes can be unusual in at least two ways. First, they can be unusually polarized such as when someone likes or dislikes some object much more or less than most other people do (e.g., I hate Mary but everyone else loves her) or when a person likes or dislikes some object much more or less than other objects (I hate Mary but I love all other people). Indeed, considering not only a person's attitude toward one object (e.g., a political candidate) but also the attitude toward other relevant objects (e.g., the alternative candidates) improves prediction of relevant

behavior (Fishbein, 1980; Petty & Cacioppo, 1981; Ajzen & Kruglanski, 2019). Second, attitudes can be unusually strong or weak such as when someone has much more or less confidence in a particular attitude than most other people, or when the individual's attitude toward a given object is held with much more or less certainty than the person's other attitudes.² Unusualness is conceptually independent of polarization and strength, and it is possible that even neutral or weak attitudes could reflect extremism if they are incredibly deviant. Nevertheless, most examples of attitudinal extremism, from religious fanatics to rabid sports fans to extreme dieters, reflect high degrees of polarization and/or strength.

A final and related property of attitudes that might relate to extremism is *social disapproval* or holding an attitude that is rejected by the mainstream. Other people can disapprove of a person's attitude because of the particular position taken (i.e., holding an attitude that others see as inappropriately positive or negative in degree) or because of the attitude's strength (e.g., holding attitudes that others consider inappropriately confident or important). Although social disapproval can be related to unusualness, these dimensions need not go together. For example, attitudes can be very unusual but not socially disapproved (e.g., a person who greatly likes a very unique flavor of ice cream but most others, though vehemently disagreeing, do not disapprove of liking unusual flavors). Some unusual attitudes might even be highly admired, such as caring a great deal about alleviating poverty. Similarly, even very popular attitudes (e.g., liking for junk food) might not be very high in social approval (i.e., people might think this is the wrong attitude to have; DeMarree, Wheeler, Briñol, & Petty, 2014). Nevertheless, the unusualness of the position taken and social disapproval are likely correlated across many attitude objects because people generally take socially acceptable positions (Cialdini, 2003). Because of this, a key question is whether unusualness alongside polarization and strength is sufficient to characterize attitudinal extremism or whether the additional element of social disapproval adds explanatory power.

Conceptualizing Extremism: Motivational and Attitudinal Imbalance

As noted, the polarization, strength (e.g., certainty), and unusualness criteria on their own do not require attitudes or behavior to be antisocial or negative in order to be extremist. The issue of whether they are diagnostic of attitudinal extremism in the absence of social disapproval turns on whether very unusual but socially approved (or at least not disapproved) attitudes can be meaningfully classified as extremist. According to Kruglanski et al., unusualness is inherently linked to extremism, with or without social disapproval, through the dynamics of motivation (Kruglanski et al., 2017; this volume). That is, core motivations such as the needs for understanding and social approval (Murray, 1955) ordinarily maintain a relative state of balance with each other, and people prefer *multifinal* means (i.e., behaviors that satisfy multiple goals or motivations; Kruglanski et al., 2002). This

constrains the range of behaviors likely to be appealing as a means of satisfying any given motive because single-minded pursuit of one motive can undermine the satisfaction of others. As a consequence, most people's behaviors reflect trade-offs between motivations, whereas behaviors aimed at maximally satisfying a single motivation even at the expense of others are comparatively rare. It is only when an individual is deprived of satisfaction of an important motivation, or when it is enhanced through incentivization, or when competing motives become less influential that a state of *motivational imbalance* can arise such that some motives are neglected in favor of single-minded pursuit of a particular motive that has become dominant (Kruglanski et al., 2021). The pursuit of this dominant motive can give rise to extreme behaviors.

The same reasoning can be applied to attitudes, which are often linked to core motives (Briñol & Petty, 2005), with several key implications for attitudinal extremism. First, since motivational imbalance is a relatively unusual state, the attitudes associated with imbalanced motives are likely to be uncommon too. For example, political partisans can be motivated to (a) see their party succeed relative to the opposing party and also to (b) view themselves as relatively unbiased consumers of political information. Most of the time, these two motives should stay roughly balanced, producing partisans who support their side but are nevertheless somewhat skeptical of information that is excessively favorable to it. When the motive to support one's party becomes dominant, however, people might develop unusual political attitudes and beliefs (e.g., endorsing conspiracy theories) and even their more conventional opinions might become unusually polarized, while they refuse to entertain uncertainty (van Prooijen & Krouwel, 2019) and make minimal efforts to correct for bias (Wegener & Petty, 1997). We give further consideration to how motivational imbalance can produce unusual as well as polarized and certain attitudes in a subsequent section.

Second and related, motivational imbalance would often involve *attitudinal imbalance* resulting in discrepancies between properties of attitudes that are relevant to the dominant need versus properties of non-need relevant attitudes (Kruglanski et al., 2021). That is, as noted earlier, extremist attitudes can differ not only from other people's attitudes toward relevant objects (e.g., video game addicts like video games much more than other people do) but also from the person's own attitudes toward other objects (e.g., video game addicts like video games much more than they like social interaction). Moreover, we argue that these within-person discrepancies can involve not only relative polarization (liking or disliking need-relevant objects much more than nonrelevant objects) but also relative strength and unusualness. For example, someone with a single-minded motivation to pursue their political goals might dislike people who disagree with them about politics more than they dislike anyone for any non-political reasons (relative polarization), insist upon the superiority of their political ideology despite having epistemic humility about non-political information (relative certainty), and endorse outlandish political ideas while having conventional opinions about

non-political topics (relative unusualness). That is, even attitudes that are polarized, strong, and unusual might not reflect extremism if they are not *especially* so for that individual because people can possess many attitudes with these features, and this would not reflect motivational or attitudinal imbalance. Thus, an individual who holds uniformly strange political and non-political views, believes all their opinions to be infallible, and is contemptuous of anyone who disagrees with them about any topic would not be a *political* extremist.

Third, the notion of attitudinal imbalance, and especially relative polarization, is also helpful in predicting attitude-consistent behavior because relative liking for a future state of need satisfaction over alternative states produces a desire for that state and can catalyze the formation of a goal to attain it (Ajzen & Kruglanski, 2019). Similarly, relative liking for a different attitude from one's current view can produce a desire for that attitude and relevant behaviors to achieve it (DeMarree et al., 2014). Thus, attitudes toward need-relevant objects under conditions of motivational imbalance should be more predictive of behavior than the same attitudes under conditions of balance because such attitudes are especially likely to translate into desire and goal formation. Although we address this only briefly later in this chapter, we consider it a promising avenue for future research. Next, we consider the factors that contribute to people's attributions of extremism to others.

Properties of Attitudes That Increase Attributions of Extremism

What do people mean when they refer to others as *extremists*? We argued that authentic attitudinal extremism involves holding attitudes that are polarized and/or strong as well as unusual in some way. But what about perceptions? We expect that observers would rely on these same dimensions in judging extremism in other people. There are also reasons unique to the domain of attribution (i.e., that do not apply to the question of extremist motivations) to expect unusualness to play a role. In particular, a long tradition of research on attribution (how people explain behavior in terms of personal and/or situational causes; Kelley, 1967) demonstrates that common behaviors are often discounted (i.e., perceived as non-diagnostic of the actor's traits), whereas unusual behaviors need an explanation and are often explained with reference to the actor's traits (e.g., Skowronski & Carlston, 1989). In other words, uncommon attitudes are seen as reflecting more on the person who holds them than common ones. As such, if polarized attitudes are more likely than neutral ones to be perceived as extremist, then that should especially be so when those attitudes are also unusual in some way.

We conducted two studies to address the prediction that polarized attitudes (and, in the second study, polarized and confident attitudes) are more likely to be perceived as extremist when they are also unusual. We focused on how unusual attitudes were with respect to other people's attitudes rather than the person's

own attitudes since observers are more likely to be aware of the former than the latter. But, according to attribution theories, both sources of unusualness should produce similar effects (Kelley, 1967). We did not consider social disapproval in these studies, although the unusual attitude in the second study was likely seen by many participants as inappropriate as well as unusual.

The studies used similar designs with several key differences. Both involved participants reading brief summaries of the attitudes of four targets who took either a polarized or more moderate position in favor of or against a particular issue. After receiving the relevant information, participants judged the extent to which each target was an extremist on a seven-point Likert scale. The first study used a fictional issue, and the second study used a real and presumably more engaging issue.

Participants in the first study (101 undergraduates) were asked to consider a situation in which a society was contemplating a potential change to an unspecified law—called ‘Proposition 6’. They were told that if a majority voted in favor of the proposition, the change would be implemented. Participants were randomly assigned to receive information that ‘the majority of voters’ in society took one of four positions with respect to Proposition 6: slight support, strong support, slight opposition, or strong opposition. In this way, the majority position valence (support versus opposition) and polarization (slight support/opposition versus strong support/opposition) were manipulated. Regardless of which of the four societal positions they received, participants were then exposed to a series of four individuals, each taking one of these four positions. All participants provided attributions of extremism for each of the four targets to which they were exposed.

For analysis, we recoded the variables into a 2 (target polarization: slight/strong position) \times 2 (societal polarization: slight/strong position) \times 2 (target position: support/oppose Proposition 6) \times (societal position: support/oppose Proposition 6) mixed factorial design. In addition to a significant main effect of target polarization (i.e., polarized targets were perceived as more extremist than nonpolarized targets ($p < .001$)) and a significant two-way interaction between target position and societal position (i.e., disagreement with society was seen as more extremist than agreement with society, $p < .001$), a four-way interaction emerged among the variables ($p < .001$). Because the results were not further moderated by the particular position that targets took, for ease of interpretation, the two position factors are recoded in Figure 2.1 into a single target–society agreement factor. As can be seen in the figure, target polarization increased attributions of extremism except when the target was in agreement with a polarized societal position. Thus, this study shows that both the degree to which a target expresses a polarized position and the extent to which that position deviates from society (it is unusual) contribute to perceptions of extremism.

The second study was designed to extend these results to a real-world issue. The study focused on the issue of social distancing as a method of preventing the spread of COVID-19 (data were collected in May, 2020, during the pandemic).

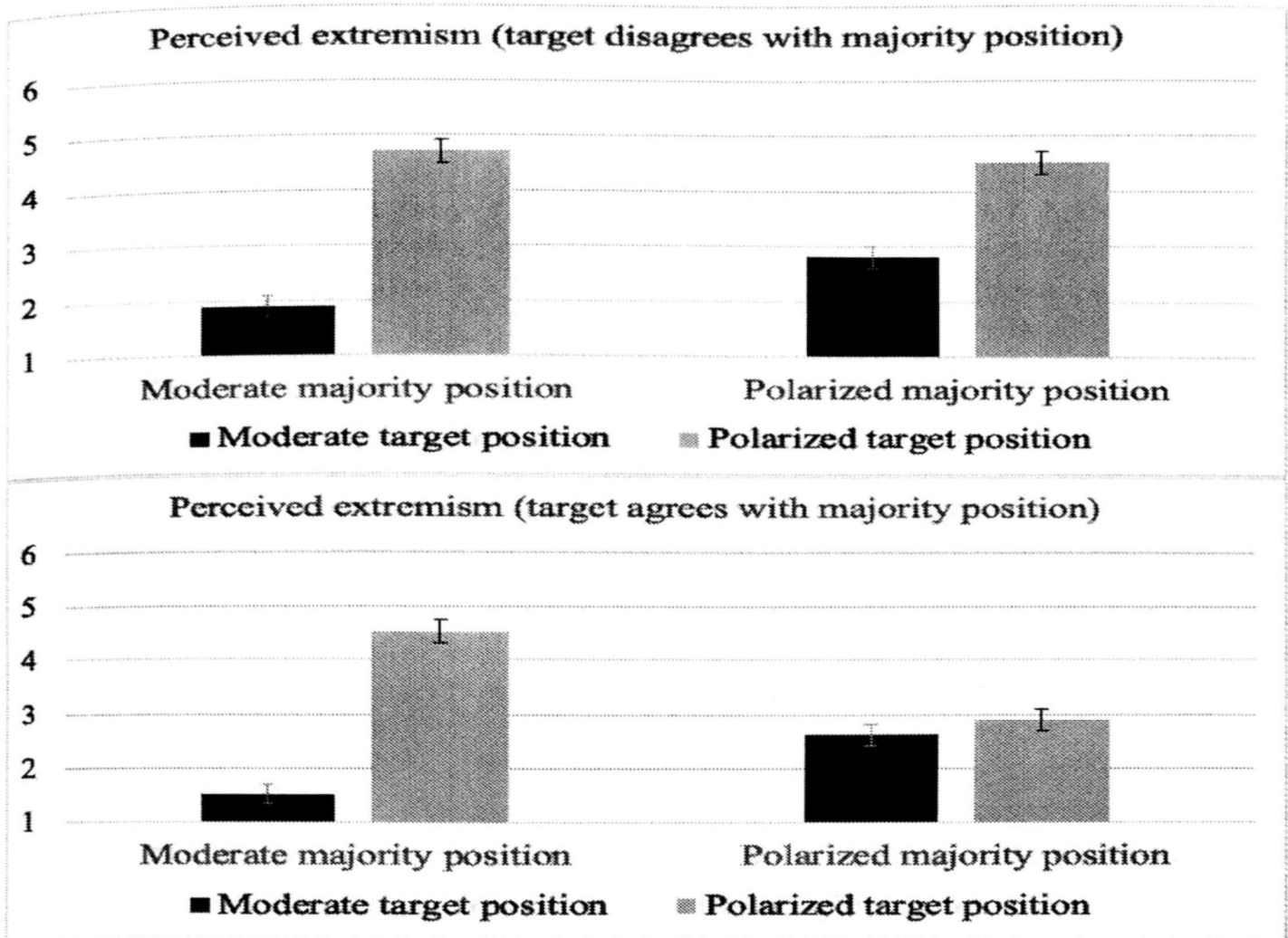


FIGURE 2.1 Attributions of extremism as a function of target and societal position, polarization, and target agreement with society in Study 1.

Because we expected this to be a very familiar issue at the time the study was run, it seemed unrealistic to manipulate perceptions of the normative position in society, though it was likely that participants would realize that a clear majority of the public favored social distancing (Kaiser Family Foundation, 2020). Thus, we dropped the normative position manipulation and added a within-subject manipulation of the target's certainty about the position expressed as a potential contributor to attributions of extremism. Using social distancing as the topic also suggested measuring participants' own prior attitudes in order to determine how those might affect judgments of others.

Participants in Study 2 (328 Amazon MTurk workers) first reported their own attitudes about social distancing using three 9-point scales (e.g., -4 *Dislike* and $+4$ *Like*). They next rated the extremism of each of four groups of people who took the following positions on social distancing: confident support, doubtful support, confident opposition, and doubtful opposition. Furthermore, participants were

randomly assigned to read these four positions expressed in either a polarized or a moderate way. For example, in the polarized (moderate) confident support condition, the position taken was described as follows: ‘People in Group A strongly (slightly) support social distancing, are completely certain about their opinion and have no doubts about it’. In the polarized (moderate) doubtful support condition, it was said that group members ‘strongly (slightly) support social distancing but are very uncertain about their opinion and have clear doubts about it’. The opposition to social distancing conditions was identically worded with ‘oppose’ replacing ‘support’.

Attitudes about social distancing among participants were highly favorable with less than 5% of the sample on the negative side of the neutral point. We thus excluded the 16 with negative attitudes. A 2 (target polarization: moderate/polarized, between subjects) \times 2 (target certainty: certainty/doubt, within subjects) \times 2 (target position: support/oppose social distancing, within subjects) mixed analysis of variance was performed. Although the main effect of target polarization was not significant, there was a main effect of target position. That is, targets who opposed social distancing and thus held an unusual (and perhaps socially disapproved) position (i.e., in disagreement with the majority of society) were viewed as more extremist than supporters, $p < .001$. In addition, targets expressing certainty in their attitudes were viewed as more extremist than those expressing doubt, $p < .001$. Furthermore, an interaction was present among the three variables ($p = .02$). Polarization increased attributions of extremism only when targets were *certain* about opposing social distancing (i.e., the target disagreed with participants’ views and presumably societal views as well; Figure 2.2A). Viewed differently, expressing doubt in one’s unusual position attenuated the normal effect of polarization on perceived extremism. When targets were on the same side of the issue as the subject and society (in support of social distancing), neither certainty nor polarization affected extremism (Figure 2.2B).

In sum, consistent with our argument about the roles of attitude polarization, certainty, and unusualness in producing attributions of extremism, participants in the first study perceived polarized attitudes as indicative of extremism, especially when the position and degree of polarization were unusual (nonnormative). In the second study, polarization increased attributions of extremism only when targets held a disagreeable position that was also counter to society (i.e., unusual) and certainty rather than doubt in that view was expressed. More research is needed to understand these dynamics fully, but our findings are consistent with the notion that polarization, unusualness, and certainty all contribute to perceptions of extremism in others.

Processes That Produce Polarized, Confident, and Unusual Attitudes

So far, we have focused on identifying core features of extremism, which we approached by incorporating insights from prior work on attitudes, attitude

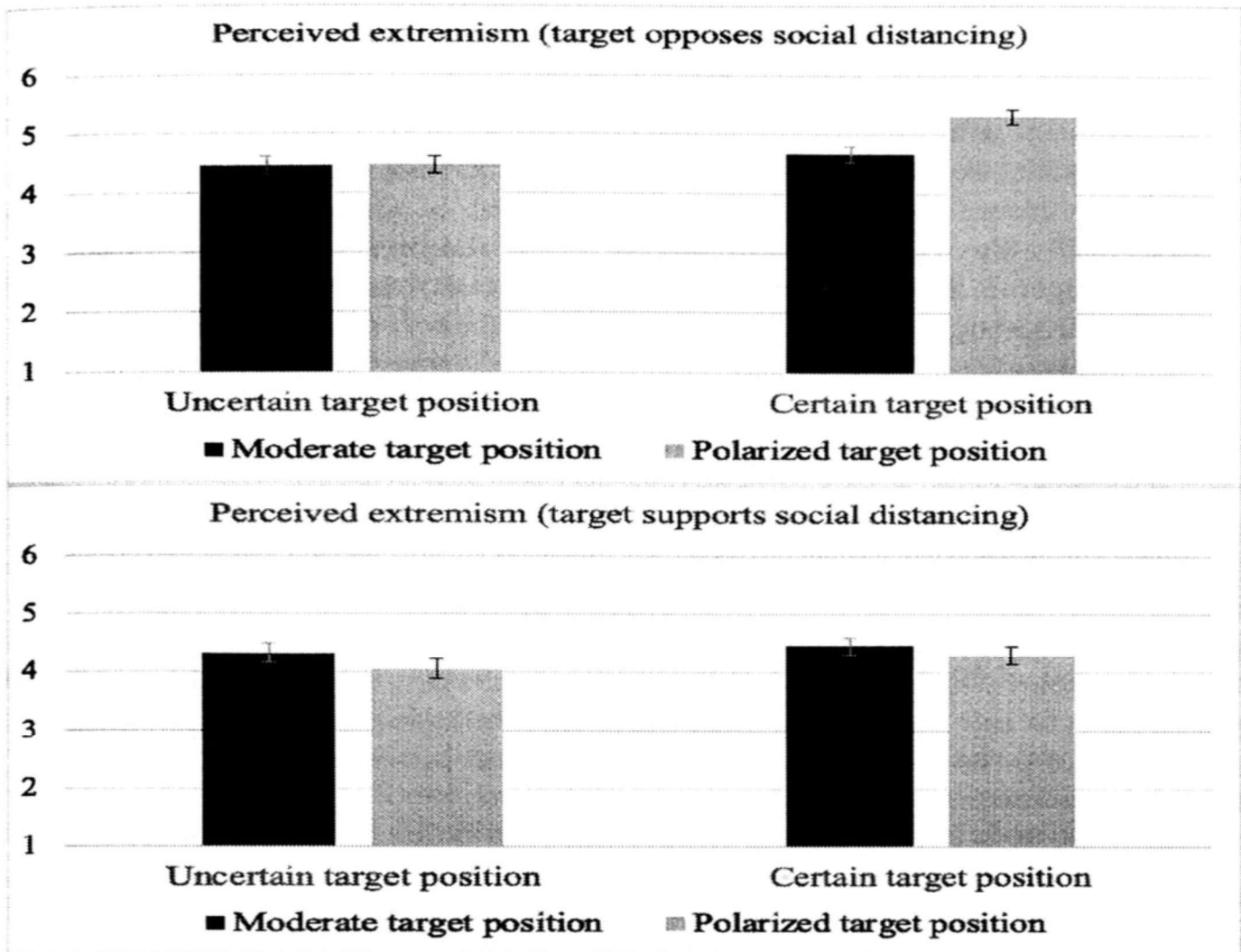


FIGURE 2.2 Attributions of extremism as a function of target position, polarization, and certainty in Study 2.

strength, and motivation. We also reported new evidence for the impact of three attitude features on perceptions of extremism—polarization, certainty, and unusualness. In this section, we continue our analysis by briefly considering the determinants of each of these contributors to extremism.

Determinants of Attitude Polarization

Producing polarized attitudes can be viewed as producing extreme initial attitudes or extreme amounts of attitude change (i.e., moving people with neutral or somewhat moderate attitudes to more polarized ones in either direction, or converting someone from one extreme position to its opposite). Thus, the processes involved in producing polarized attitudes should be compatible with those involved in forming or changing attitudes in general. We group these processes into four broad categories: *information exposure and processing*, *mere thought*, *metacognitive validation*, and *normative influence*.

Common models of attitude formation and change suggest that first, a person is exposed to and attends to some sort of information (McGuire, 1985). Second, they might elaborate upon this information, generating new thoughts and/or feelings and integrating those with content already stored in memory (Petty & Cacioppo, 1986; Petty & Briñol, 2012). People can also engage in mere thought where they contemplate an issue in the absence of any external information (Tesser, 1978). Finally, they may engage in metacognition (Petty, Briñol, Torrala, & Wegener, 2007), secondary thinking about their primary thoughts and feelings (Jost, Kruglanski, & Nelson, 1998). Of particular importance, people metacognitively appraise the validity of their thoughts and feelings, thereby determining if they should rely on them or not in forming their attitudes (Briñol & Petty, 2009).

The processes we have outlined can be driven by mostly rational cognitive considerations (e.g., seeking knowledge) or antecedents that are highly motivationally and affectively charged (e.g., reactions to threat). As noted earlier, motivational factors might be more likely than purely cognitive ones to result in attitudinal extremism due to the possibility of the person's motivational system becoming imbalanced, and we highlight motivational antecedents to attitude polarization in our discussion. Finally, because we assume that social norms can contribute to polarization through any of these processes, we also briefly discuss normative influence.

Information Exposure and Processing

Repeated exposure to a simple object (e.g., symbol, logo) can affect attitudes toward it (Bornstein, 1989; Zajonc, 1968). For example, repetition can increase liking by making the object easier to process (Winkielman & Cacioppo, 2001). However, mere repetition can also increase the salience of the repeated object (making it stand out versus other objects), and this can polarize one's reaction to it (increasing positivity for positive objects and increasing negativity for negative ones; Mrkva & Van Boven, 2020). Because of the joint operation of these processes, mere exposure is most likely to enhance positivity for objects that are already positively evaluated or neutral.

Repeated exposure to persuasive messages containing substantive information tends to enhance favorability if the arguments are strong, but to decrease favorability if the arguments are weak as repeated exposure gives people greater opportunity to consider and elaborate upon the evidence presented (i.e., generating favorable thoughts to strong arguments and unfavorable thoughts to weak ones; Cacioppo & Petty, 1989). Although many factors besides repetition can affect an individual's opportunity or motivation to think about a message (and therefore result in polarized thoughts and attitudes), people are particularly likely to elaborate upon information when the issue affects them personally (Petty & Cacioppo, 1990) or matches something about them (e.g., their personality; see Teeny, Siev,

Briñol, & Petty, 2021). In contrast, when not motivated or able to think carefully about incoming information, people tend to rely on simple valenced cues (e.g., quick reactions to the attractiveness of the source; Petty & Cacioppo, 1986). When attitudes are based on simple cues rather than extensive thought, those attitudes tend to be less consequential and therefore less likely to result in action (Petty et al., 1995).

People are typically motivated to hold correct attitudes (Festinger, 1950) as this helps them satisfy their needs and pursue their goals (Petty & Cacioppo, 1986). When an accuracy goal dominates, people are open to receiving information on both sides of an unfamiliar issue and process it in a relatively objective way (Petty & Cacioppo, 1990). They are even open to contrary information if they already have an opinion, and the new information is not perceived to be threatening (Hart et al., 2009). However, sometimes accuracy is not at the forefront, and motivational factors such as a desire to avoid cognitive dissonance (Festinger, 1957) or maintain cognitive closure (Kruglanski & Webster, 1996) can produce *selective exposure* (a preference for seeking congenial and/or avoiding uncongenial information; Hart et al., 2009) and motivated reasoning (Kunda, 1990). This biased information seeking and processing can result in attitudes becoming more polarized in their initial direction.

The motivation to defend one's attitudes or bolster them against uncertainty can override accuracy concerns if the perceived threat from the information is sufficiently high. The likelihood of attitude polarization following threat is greatest when the motivation to defend one's attitude overwhelms accuracy and other motives (i.e., motivational imbalance). Among the factors known to increase selective exposure and defensiveness are commitment to and perceived irreversibility of the attitude, the value-inconsistency or otherwise threatening nature of the message, and the individual's dispositional closed-mindedness (Hart et al., 2009; Clark & Wegener, 2013). One of the most studied threats that can affect attitudes is momentary thoughts about one's own death. This *mortality salience* (Greenberg, Solomon, & Pyszczynski, 1997) has resulted in polarization of existing beliefs and attitudes (Greenberg et al., 1990; See & Petty, 2006), similar to the impact of other self-threats (e.g., McGregor, Zanna, Holmes, & Spencer, 2001). Research on selective exposure and biased information processing highlights the importance of intervening early in the attitude polarization process. Once people make extremist commitments or irreversible decisions (e.g., supporting an extremist group or perpetrating violence), their motivation to defend or bolster attitudes consistent with those realities will likely strengthen (Gopinath & Nyer, 2009).

Mere Thought

People are active information processors, not mere receptacles of the information to which they are exposed, and thus as just noted, people's positive and negative

thoughts in response to the information they receive play an important role in determining what attitudes are formed (Petty, Ostrom, & Brock, 1981). However, thinking about external information is not necessary for attitudes to polarize. Merely thinking about a topic in the absence of any new information can also result in polarization (Tesser, 1978).

Research finds that mere thought polarization effects tend to occur so long as people do not possess conflicting views of the object of thought. While thinking, people generate new reasons for their initial evaluation, and these new attitude-consistent thoughts can polarize attitudes (Clarkson, Tormala, & Leone, 2011). A typical paradigm involves exposing participants to a stimulus (e.g., a person or painting) then randomly assigning them to think about it and rate it immediately, after a short interval, or after a long interval. Generally speaking, attitudes polarize more as the interval increases. However, several factors have been identified that reduce mere thought-based polarization. A process constraint limitation can occur if people have difficulty in rationalizing their current view (Tesser, Leone, & Clary, 1978). A reality constraint limitation can occur if the physical presence of the attitude object renders biased thoughts implausible (Tesser, 1976). For example, it might be easier to become inordinately favorable toward one's country from afar. Polarization can also be stymied if people run out of viewpoint-consistent thoughts with extended thinking and contrary thoughts come to mind (Tormala, Falces, Briñol, & Petty, 2007).

As with information exposure, however, motivation can increase the effect of mere thought on polarization when it makes people resistant to the constraints just mentioned. For example, in line with our discussion of selective exposure and biased processing, when reality challenges core aspects of people's worldviews, they strategically avoid reality testing by framing the reasons underlying their attitudes in unfalsifiable terms (Friesen, Campbell, & Kay, 2015). That is, similar factors, rooted in motivations to defend one's attitudes from threats or bolster them against uncertainty, shape the extent to which external information and mere thought result in attitude polarization.

Metacognitive Validation

When people think extensively about an attitude object, in addition to the positive or negative thoughts they generate, they may also appraise the validity of those thoughts (Petty, Briñol, & Tormala, 2002). The outcome of this metacognitive appraisal process is important because validated thoughts have a greater impact on attitudes, thereby increasing thought-consistent attitude polarization (Briñol & Petty, 2009). Perceptions of thought validity have been implicated in the polarizing impact of numerous variables. For example, thought validity plays a role in mere exposure effects as thinking longer enhances not only the number of attitude-consistent thoughts but also the confidence placed in them (Clarkson et al., 2011). Other variables that have increased the perceived validity of

people's thoughts and thereby polarized attitudes include momentary feelings of power (Briñol, Petty, Valle, Rucker, & Becerra, 2007), affirmation of one's values (Briñol, Petty, Gallardo, & DeMarree, 2007), and feeling prepared (Carroll, Briñol, Petty, & Ketchman, 2020). Validation effects are most likely when these variables are salient during or after thinking rather than before. It is also noteworthy in connection to extremism that oppositional and attacking (vs. defensive) mindsets can be associated with confidence (Bizer, Larsen, & Petty, 2011; De Dreu & Gross, 2019) and thereby increase the impact of thoughts on attitudes (e.g., Briñol, Petty, & Requero, 2017; see Briñol, Petty, & DeMarree, 2015, for a review). Overall, individuals likely differ in the sources they tend to look to for validation including radical groups, God, and epistemic authorities (e.g., Evans & Clark, 2012; Huntsinger, 2013).

Motivational factors can also play a role in validation processes. For example, an imbalance in motivation in which the need to maintain certainty (Webster & Kruglanski, 1994) comes to dominate accuracy motivation could enhance perceived thought validity and result in attitude polarization (Hart et al., 2009). In fact, research confirms that ideological polarization is associated with overconfidence (van Prooijen & Krouwel, 2019) and perceiving one's views as superior to others (Toner, Leary, Asher, & Jongman-Sereno, 2013; Brandt et al., 2015) despite basing them on simplistic causal explanatory models (Fernbach, Rogers, Fox, & Sloman, 2013).

Although research indicates that thoughts accompanied by feeling confident typically have a larger impact on attitudes than thoughts accompanied by feeling doubt, some work is consistent with the notion that feeling uncertain can increase thought-attitude correspondence under certain conditions—particularly when the uncertainty is threatening in some way (Briñol, et al., 2015). In these situations, people aim to be confident in order to compensate for and mitigate the anxiety from threat. In one recent study (Horcajo et al., 2020), for example, participants were induced to generate positive or negative thoughts because they evaluated either a strong or a weak resume for a job candidate. Next, participants were asked to think either about the COVID-19 pandemic (inducing threatening uncertainty) or feeling cold (an unpleasant but nonthreatening situation). As predicted, the threat induction enhanced thought confidence more than the nonthreat induction, and this thought confidence produced more polarized attitudes toward the strong and weak job candidates (see also, Horcajo et al., 2008). Thus, the extent to which feeling doubtful increases or decreases attitude polarization might depend on the degree to which the uncertainty is experienced as threatening.

Normative Influence

Influential though they are, the determinants of attitude polarization described so far have focused on individuals without accounting for the social contexts that

shape their attitudes and behavior (Visser & Mirabile, 2004). However, normative and group-based processes are widely implicated in the psychology of influence (Cialdini, 2003). Indeed, research on influence from others who are said to hold majority versus minority views is one of the most prolific topics in the domain of attitude change (Martin & Hewstone, 2010). And, normative influence has proven particularly important in the phenomenon of extremism (e.g., Kruglanski et al., 2019; Smith, Blackwood, & Thomas, 2020).

One key process by which norms contribute to attitude polarization is seen in work showing that group discussion can polarize attitudes. In some ways, this research parallels individual thought-based polarization in that each type is facilitated by an initial uniformity of thought. Likewise, both are driven in part by discovering new arguments in support of the initial position, whether by thinking of them oneself or learning them from others (Burnstein & Vinokur, 1977; Levendusky, Druckman, & McLain, 2016). Repetition of known reasons (as when group members reiterate previous points) can also increase their impact on attitudes (Judd & Brauer, 1995). Normative mechanisms have additional impacts in the group discussion context, however. For one thing, attitudes polarize when corroborated (validated) by others (Baron et al., 1996). Moreover, group members might attempt to enhance their image or achieve status by advocating the group's ideal position, typically a more polarized one (Myers, 1978). Notably, those with the most polarized political orientations are most prone to such grandstanding (Grubbs, Warmke, Tosi, Shanti, & Campbell, 2019).

The risks of group polarization are compounded by a related process known as groupthink (Janis, 1972). Proposed partly as an explanation of disasters in US foreign policy decision-making, including the Cuban Missile Crisis, the core idea is that individuals who are motivated to maintain their standing in a group seek consensus at the expense of a realistic analysis of the issues at hand. Although early theoretical treatments of groupthink proposed a variety of antecedent conditions, more recent research has found that most are not required and likeminded groups often fail to consider alternatives to a consensus position even in the absence of additional factors (e.g., cohesion, threat, time pressure; Baron, 2005).

People adhere to social norms and majority positions for both interpersonal reasons (to fit in) and informational reasons (because they perceive them as diagnostic). Thus, norm-driven polarization can be increased when either motivation (relational *or* epistemic) dominates. For example, feelings of ostracism increase openness to even extreme groups because affiliating with them reduces the painful feelings of social exclusion (a relational motive; Hales & Williams, 2018) and feeling humiliated increases attitude polarization in part by increasing the need for cognitive closure (an epistemic motive; Webber et al., 2018). In general, frustration (a reaction to one's goal being thwarted) increases affirmation of social norms, which are seen as offering an alternative means of goal satisfaction (Leander et al., 2020). As such, the frustrated individual's risk of becoming radicalized

depends on what exactly—and how polarized and/or unusual—the norms they turn to are.

Determinants of Attitude Certainty

As was the case regarding the determinants of polarized attitudes, there is considerable research on the determinants of attitude certainty. Because there have been several recent reviews of this literature (e.g., Luttrell & Sawicki, 2020; Tormala & Rucker, 2018), our discussion will be brief. In one comprehensive review, Rucker et al. (2014) identified four general sources of attitude certainty. That is, they argued and provided evidence to support four building blocks of attitude confidence.

Specifically, Rucker et al. argued that people infer that they are confident in their attitudes to the extent that they perceive their attitudes are based on (a) accurate information, (b) complete information, (c) relevant/legitimate information, and (d) information that feels right. Each of these general sources of attitude confidence was then tied to several more specific factors. For example, an appraisal regarding accuracy can stem from a perceived social consensus around that information (Visser & Mirabile, 2004) or that the information came from an expert source (Kruglanski et al., 2005). An appraisal of completeness can stem from the quantity of information one has (Smith et al., 2008) or how much thought went into the attitude (Wan, Rucker, Tormala, & Clarkson, 2010). These highlighted determinants of confidence not only apply to attitude confidence but also can contribute to perceptions of confidence in one's thoughts. Finally, it is important to note that this appraisal framework does not require the appraisals to be correct. For example, a person does not have to actually have thought a great deal about an issue to feel certain in the resulting attitude. Rather, it is sufficient to have the mere perception of having thought a lot about one's attitude for confidence in it to be enhanced (e.g., Barden & Petty, 2008; see also, Rucker, Petty, & Briñol, 2008).

Determinants of Attitude Unusualness

Much less research has investigated the determinants of adopting an unusual attitude, but it is nonetheless possible to identify several factors that should increase the likelihood they will develop. We divide these factors into two categories: those that produce attitudes that happen to be unusual and those that specifically produce unusual attitudes. The first category includes attitudes that result from motivational imbalance. As explained, core motivations are usually balanced relative to one another (Kruglanski et al., this volume). As a result, attitudes that result from motivational imbalance are likely to be relatively unusual both with respect to other people's attitudes and with respect to the person's own other attitudes.

Beyond this, people can sometimes be motivated to hold unusual attitudes *because* those attitudes are deviant. For example, although most people prefer to feel moderately distinct from others (Snyder & Fromkin, 1980), those with a strong need for uniqueness (e.g., those high in narcissism; White, Szabo, & Tiliopoulos, 2018) might adopt unusual attitudes in order to satisfy this need. Motivational imbalance could compound this tendency, such as when a uniqueness motive dominates a belonging motive. Similar dynamics occur at the group level, as individuals generally prefer to join groups that are optimally distinct from others (Brewer, 1991), but some prefer especially distinct groups (e.g., Hogg, 2007). Other factors that could increase the tendency to hold unusual attitudes are the goals of drawing attention to and/or communicating something about oneself or the attitude object to others, or simply rejecting normative standards or self-consistency as goals. These questions await investigation.

Properties of Attitudes That Predict Extreme Behavior

Having discussed three key elements involved in possessing and being perceived to possess extremist attitudes, we turn now to the role of attitudes in guiding extremist behavior. We have already noted the difficulties that researchers faced in early efforts to predict when attitudes should produce *any* corresponding behavior (Wicker, 1969) and the prospect that these difficulties might be enhanced when considering extreme behaviors (McCauley & Moskaleiko, 2017). Conversely, we also mentioned the possibility that motivational imbalance could increase the propensity to act (in even extreme ways) on one's need-relevant attitudes (Kruglanski et al., 2015). By extreme behavior, we mean behaviors that are polarized and unusual.³ We also address the role of attitude confidence as a moderator. Prominent measures of extreme behavior used in the literature include willingness to fight and die for one's group or cause (Gómez et al., 2020; Swann, Gómez, Seyle, Morales, & Huici, 2009), to endure intense suffering, or give up all of one's belongings (Bélanger, Caouette, Sharvit, & Dugas, 2014). Although extreme pro-group sacrifice has received the most attention in social psychological literature, the theoretically relevant set of extreme behaviors also includes acts motivated by individual concerns, including those that are largely private such as extreme eating or exercise (see various chapters in this volume). It also includes behaviors that are, in contrast to those just mentioned, widely socially approved but highly unusual, such as extreme prosociality (e.g., giving all of one's money to charity).

Past research has identified *attitude strength* as a key moderator of attitude-behavior consistency (Petty & Krosnick, 1995). Strong attitudes tend to be consequential—persisting over time, resisting persuasive attacks, and most relevant to this chapter, impacting behavior (Krosnick & Petty, 1995). As noted, a key indicator of an attitude's strength is the extent to which it is held with certainty (Rucker et al., 2014), but it also includes the extent to which the attitude is based on direct

experience (Fazio & Zanna, 1978), high in importance (Boninger, Krosnick, Berent, & Fabrigar, 1995), based on extensive thinking (Barden & Petty, 2008), composed of uniformly positive or negative versus a mix of evaluations (i.e., ambivalence; e.g., Priester & Petty, 1996), highly accessible (Fazio & Williams, 1986), tied to a strong psychological need (Strahan, Spencer, & Zanna, 2002; Ajzen & Kruglanski, 2019; Kruglanski et al., 2015), imbued with moral significance (Skitka, Bauman, & Sargis, 2005), or based on emotion (Rocklage & Fazio, 2018), among other attributes.

The available research evidence shows that knowing how strong an attitude is can be used to understand when that attitude is likely to predict behavior. For example, there is much research showing that increased certainty in one's attitudes and beliefs enhances their ability to predict various non-extreme (normal) behaviors (e.g., product purchases, voting), and some evidence suggests that certainty can also increase the impact of people's beliefs even for predicting extreme behavior. For example, one recent study (Paredes, Santos, Briñol, Gómez, & Petty, 2020) showed that the more certain people were that their self-concept overlapped with their group (as assessed with the identity fusion scale, Gómez et al., 2020), the more willing they were to engage in high levels of sacrifice for their group. Similarly, enhanced certainty in other self-beliefs (e.g., political ideology; Shoots-Reinhard, Petty, DeMarree, & Rucker, 2015; trait aggressiveness, Santos, Briñol, Petty, Gandarillas, & Mateos, 2019) helps those scales predict relevant behavior better. Moreover, participants in our second attribution of extremism study (described earlier) viewed confident polarized attitudes as more indicative of extremism than uncertain polarized attitudes, suggesting that laypeople expect attitude certainty to increase attitude-consistent extreme behavior.

Although certainty in one's attachment to a group or a position on an issue can increase the impact of that group attachment or position on behavior, as noted earlier, previous research has found that feelings of *uncertainty* can motivate behavior under particular circumstances—especially when the uncertainty is experienced as threatening. For instance, research shows that threatening uncertainty can result in a *compensation effect* (e.g., Heine, Proulx, & Vohs, 2006) whereby people attempt to restore confidence by bolstering their attitudinal positions (compensatory conviction; see McGregor, 2003; McGregor et al., 2001), or becoming more confident in their already generated thoughts (Horcajo et al., 2008), which can result in more polarized or confidently held attitudes. Alternatively, people can compensate in a more fluid manner by choosing to act on attitudes irrelevant to the particular threat about which they are already confident. Similar compensatory processes occur whether the object of the uncertainty concerns the self (Baumeister, Bushman, & Campbell, 2000; Bushman & Baumeister, 1998; Hogg, 2007) or one's nonself attitudes and beliefs (Sawicki & Agnew, 2021; Sawicki & Wegener, 2018). At times, people might try to reduce uncertainty symbolically by acting *as if* they were certain (Briñol et al., 2015; Hart, 2014; Jonas et al., 2014;

Landau, Kay, & Whitson, 2015). In such circumstances, greater uncertainty can enhance willingness to act (even extremely) on one's beliefs and attitudes.

As yet, however, it is not entirely clear whether and when feelings of certainty versus uncertainty would be expected to increase the impact of attitudes on extreme behavior. On the one hand, the majority of research findings on attitude certainty suggest that higher certainty usually increases the impact of attitudes on behavior, though the context studied has not tended to be threatening. On the other hand, some research has suggested that a threatening context can enhance individuals' willingness to engage in extreme behaviors that are belief-consistent, although this research did not explicitly consider the moderating impact of certainty. For example, one set of studies (Jasko et al., 2020) examined the extent to which a quest for significance (motivated by beliefs that oneself or one's group was undervalued by others) predicted willingness to support violence in support of one's group. This relationship was studied both in contexts and for people in which radical behavior was salient (high threat context) or not (low threat context). When radical behavior was highly salient (for contextual or personal reasons), the quest for significance showed a stronger relationship with support for violence than in cases in which salience was low. In a conceptually similar study (Paredes, Briñol, Petty, & Gómez, in press), the salience of extreme behavior was manipulated to be high or low by having participants think about making an extreme or a moderate sacrifice for their group. In conditions in which the possibility of radical behavior was made salient, a measure of identity fusion with one's group (Gómez et al., 2020) was more predictive of willingness to self-sacrifice than in conditions where extreme behavior was not made salient. Thus, the salience of threats and extreme behaviors can moderate the relationships among extremism-relevant variables.

Threat as a Moderator of Compensation Effects

Although the research just reviewed shows that people are more willing to engage in self-sacrificial behaviors that are compatible with their beliefs when threats or the possibility of extreme actions are salient, little research has examined the role that attitude certainty plays in compensatory attitude-behavior consistency. One possibility is that threat could enhance compensation effects by producing a motivation to bolster one's low level of attitude certainty in an important domain. If so, threat could increase the likelihood of attitude-consistent behavior especially when people are *uncertain* in their views. In the absence of threat, however, attitude-consistent behavior should be increased as certainty increases.

To examine this interaction hypothesis, for our Study 3, we recruited 299 participants from Amazon's Mechanical Turk platform and asked them to report their attitudes on several nine-point bipolar scales (e.g., -4 , *Dislike*; $+4$, *Like*) along with their attitude certainty (seven-point scale, *not at all certain*—*very certain*) regarding social distancing during the worldwide COVID-19 pandemic

(May 2020). This was followed by reports of their behavioral proclivities regarding two sets of behaviors (order counterbalanced) related to COVID-19 prevention: one set of behaviors was relatively *moderate* (e.g., avoiding crowds for a month, attempting to persuade others about social distancing) and the other set was rather *extreme* (e.g., completely isolating oneself for a year, fighting others who disagreed). Participants were randomly assigned to respond to questions that referred to the extent of their *willingness*, *desire*, or *intention* to perform each behavior on seven-point scales anchored at 1, *not at all* and 7, *very much*. Finally, participants reported the amount of threat they perceived from COVID-19 (their concern about themselves or someone they care about becoming seriously ill). The full study design was thus a 2 (behavioral extremity: moderate/extreme; within subjects) \times 3 (measure: willingness/desire/intention; between subjects) \times attitude toward social distancing (continuous) \times attitude certainty (continuous) \times perceived threat of COVID-19 (continuous).

First, we expected that higher attitude *certainty* would produce higher attitude–behavior consistency with respect to moderate behaviors when people perceived a low degree of threat from the virus (i.e., when threat was not salient). This is the typical attitude certainty finding—the more certain people are in their attitudes, the more they engage in attitude–consistent behavior. In contrast, we reasoned that higher attitude *uncertainty* would be especially likely to produce attitude–behavior consistency with respect to extreme behaviors when people perceived a high degree of threat from the virus because, as mentioned, uncertainty can be especially motivating when threat is salient. In order to obtain a focused test of our hypotheses, an overall *threat salience* factor was constructed that considered both the behavioral extremity measure and the perceived threat variables. Specifically, the *high threat* condition examined reports of proclivity to engage in extreme behaviors among those participants who were above the median in their reported concern about the virus. The *low threat* condition examined reports of proclivity to engage in moderate behaviors among those participants who were below the median in reported concern about the virus. The threat salience variable was then coded -1 for the low threat condition and $+1$ for the high threat condition.

We used multiple regression to analyze the data as a 2 (threat salience: low/high) \times 3 (measure: willingness/desire/intention) \times attitudes (continuous) \times attitude certainty (continuous) predicting attitude–consistent behavior. This allows a focused test of the predictions for certainty as a moderator of attitude–behavior consistency in the key high and low threat salience conditions. The analysis returned a highly significant three-way threat salience \times attitudes \times attitude certainty interaction ($p < .0001$), which is depicted in Figure 2.3.

This three-way interaction resulted from different two-way attitude \times attitude certainty interactions in the different threat salience conditions. In the low threat condition (Figure 2.3A), the two-way interaction ($p = .06$) indicated that attitudes impacted action tendencies more when they were held with a relatively high ($p = .0001$) rather than a low degree of certainty ($p = .448$). This

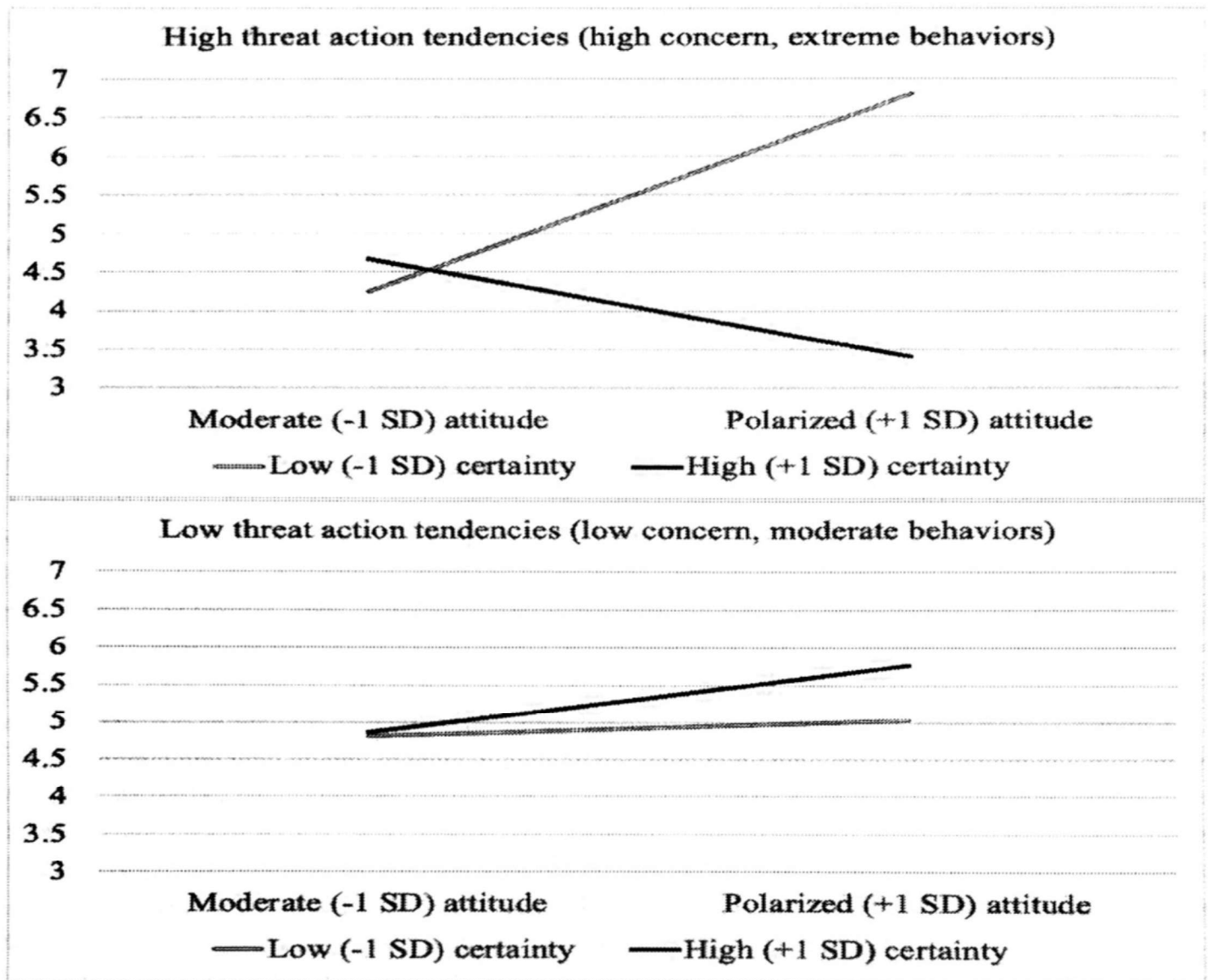


FIGURE 2.3 The moderating effect of certainty on attitude–behavior consistency under conditions of relatively high threat (A: high concern, extreme behaviors) versus low threat (B: low concern, moderate behaviors) in Study 3.

outcome represents the standard attitude strength effect whereby higher certainty attitudes are more predictive of behavior. In contrast, in the high threat condition (Figure 2.3B), the two-way interaction ($p < .0001$) was opposite to the interaction under low threat. Here, attitudes were more predictive of behavior when they were held with relatively low certainty ($p < .001$). For participants who were relatively certain of their attitudes, attitudes were inversely related to extreme action tendencies ($p = .0001$).⁴

In sum, attitude certainty moderated attitude–behavior consistency but did so differently depending on the level of threat salient in the situation. Specifically, when people were relatively unconcerned about COVID-19 and were

considering engaging in moderate social distancing behaviors (low threat salience conditions), higher levels of attitude certainty led them to report action tendencies that were more consistent with their attitudes. This pattern is entirely consistent with much previous work on attitude certainty as an attitude strength indicator. In contrast, when people were relatively concerned about the virus and were considering engaging in extreme social distancing behaviors (high threat salience conditions), lower levels of attitude certainty led them to report action tendencies that were more consistent with their attitudes. This pattern is compatible with the notion that when experiencing a threat related to their attitudes in an important domain, people were attempting to compensate for their weak (uncertain) attitudes by expressing a willingness to engage in more attitude-consistent extreme actions.

Conclusions

Extremism is a complex social problem, and multiple levels of analysis must be brought together to understand it fully. We have argued that the study of attitudes can be part of that constellation and offers unique insights to help illuminate the nature and dynamics of extremism. We provided a start on identifying the attitudinal variables that reflect extreme motivations and lead others to see people who hold them as extremists (i.e., polarization, certainty, and unusualness), and we discussed how attitudes with these properties might be fostered. We also addressed the conditions under which attitudinal factors might be useful in predicting engagement in extreme behaviors. In particular, we showed that when people feel threatened by an issue and are considering extreme action, it can be uncertainty rather than certainty in one's attitudes that leads to attitude-consistent actions. More research is needed to better establish the extent and nature of attitudinal processes in relation to extremism, and it is our hope that elaborating these ideas will encourage other researchers to join that effort.

Notes

1. Whether the attitude is considered polarized or not could depend on the method of attitude measurement. For example, if in measuring political attitudes a person was given a -5 (very conservative) to +5 (very liberal) scale, a moderate would score zero and not seem very extreme. However, if the scale asked for attitudes regarding political moderation with -5 representing 'very opposed to moderation' and +5 representing 'strongly favoring moderation', the extremity of the person's attitude toward moderation could more easily be seen.
2. Other attitude strength features can be similarly unusual such as when an attitude is unusually important to the person compared to other people or to the person's other attitudes.
3. Although as noted earlier, considering how people's attitudes toward one object relate to other relevant attitudes could enhance behavioral prediction, we focus on how attitudes toward one particular attitude object relate to behavior as this reflects the most common approach in studies of attitude-behavior consistency.

4. These analyses exclude the mixed or moderate threat conditions (i.e., low concern about the virus with extreme behaviors and high concern about the virus with moderate behaviors). In these cases, certainty did not differentially moderate the impact of attitudes on action tendencies.

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