Dialectical Thinking Motivates Political Centrism

A dissertation presented to

the faculty of

the College of Arts and Sciences of Ohio University

In partial fulfillment

of the requirements for the degree

Doctor of Philosophy

Zachary C. Roth

August 2021

This dissertation titled

Dialectical Thinking Motivates Political Centrism

by

ZACHARY C. ROTH

has been approved for

the Psychology Department

and the College of Arts and Sciences by

Kimberly Rios

Associate Professor of Psychology

Florenz Plassmann

Dean, College of Arts and Sciences

## Abstract

ROTH, ZACHARY C., Ph.D., August 2021, Experimental Psychology

<u>Dialectical Thinking Motivates Political Centrism</u>

Director of Dissertation: Kimberly Rios

When exploring the antecedents of political orientation, social scientists often take a social cognitive perspective that posits individuals adopt a political position that "fits" their set of psychological characteristics. Dialectical thinking, a cognitive style that allows contradiction and change, could lead to a more centrist political orientation because it is a "compromise" position preferred by such thinkers. Four studies confirmed an association between dialectical thinking and center-placement on political measures, even when controlling for the importance of political attitudes. The effect of dialectical thinking on centrism was related to important effects on theoretically relevant conflict management strategies. However, tests of possible mechanisms of the dialectical thinking-centrism relationship did not support the proposed model, though this may be the result of methodological and statistical issues. Additionally, manipulations of dialectical thinking did not affect political centrism scores. Implications of these findings are discussed.

**Dedication**

*In memory of Mark Alicke.*

**Acknowledgments**

I would like to thank Dr. Kimberly Rios, my mentor and advisor, without whom this dissertation may not have been completed. In a year marked by uncertainty and turmoil, her guidance and advice has been invaluable. I would also like to thank the other members of my committee: Dr. Keith Markman, Dr. Dominik Mischkowski, Dr. Kenneth DeMarree, and Dr. Paula Miller-Buckner. Their insight and feedback was indispensable in improving this dissertation.

**Table of Contents**

Page

**List of Tables**

Page

# List of Figures

Page

## Dialectical Thinking Motivates Political Centrism

A commonly espoused idea among political pundits, lay people, and even some academics is that those who hold centrist political beliefs are more "neutral," "balanced," or "nuanced," while those who are on the left or right must have been motivated or pushed to more extreme positions by some internal or external influences. Indeed, even social scientists sometimes imply that a disposition toward the political center is equivalent to a sort of "neutral" position when describing the methodology and results of their research (de Witte, 2019). yet the proposition that one must be "moved" to a left or right position and that the centrist position is the default remains untested. It might be the case that centrism, far from being "neutral" or "un-motivated," is driven by certain psychological factors in much the same way that certain characteristics lead individuals to adopt partisan positions. Charles Wheelan, author of *The Centrist Manifesto* and a self-described "radical centrist," recently wrote that,

> "Some find solace in moral certainty. As moderate centrists, we find that deeply troubling. The opposite of moral certainty is not ambivalence. It is toleration, moral humility…and a fierce loyalty to governing a diverse nation in complex times." (Seibert & Wheelan, 2017).

This statement illustrates my primary argument: individuals adopt a centrist political orientation because it serves a particular cognitive style where contradiction is tolerated, fluid change of beliefs is seen as inevitable and natural, and the social world is considered holistically. In other words, centrists are dialectical thinkers.

**Political Orientation**

Political orientation refers to an interrelated set of attitudes, values, and beliefs held by groups with the aim of maintaining, contesting, or changing the socio-political organization of a society (Jost, 2006). Political orientation in the United States and most other Western countries is typically conceptualized with a unidimensional, left-right model. Though there have been a handful of attempts at defining a two-dimensional model of political orientation, these models have limited utility (Jost, 2006). For example, a two-dimensional model (social, economic) shows differing voting rates only when individuals place more importance on one dimension over the other (Klar, 2014). Indeed, nationally representative, psychometrically rigorous surveys show that social and economic dimensions are not only highly related, but do not differentially predict relevant constructs, such as authoritarianism, social dominance, and system justification about the economy and gender (Azevedo et al., 2019). The unidimensional model is a good predictor of not only values and preferences (e.g., Hawkins & Nosek, 2012; Holbrook & Mcclurg, 2005), but political behaviors like voting as well (Adams et al., 2017).

Using the unidimensional, left-right model, researchers have collected a wealth of data showing that liberals and conservatives are favorably biased toward the ideas, people, and things that are consistent with their own positions. For example, pro-life *and* pro-choice individuals accept conclusions that support their own positions more than conclusions that do not, even if the arguments follow the same logical rules (Čavojová et al., 2017), and political identity has a powerful effect on attitudes, even when participants

are induced to think effortfully about a subject (Cohen, 2003). In fact, a recent meta-analysis showed that both self-identified "liberals" and "conservatives" evaluate the quality of arguments that support their own position more favorably than arguments that do not support their own position (Ditto et al., 2019); this occurred across different methodologies and topic domains. Though not political "biases" per se (errors in reasoning favoring one's social group), there are certainly many other psychological propensities driven by individuals' political positions. For example, differences in values, specifically those related to intrasocietal cooperation and competition, lead liberals to prefer "warm" leaders and conservatives to prefer "strong" leaders (Laustsen, 2017). Similarly, conservatives, compared to liberals, tend to be less bothered by social inequality, place less emphasis on social injustice, and are more religious, all of which predict a greater overall life satisfaction (Butz et al., 2017). Suffice it to say, political orientation has important influences on psychological and behavioral outcomes.

Political psychologists and other social scientists have attempted to explain *why* these differences exist with varying degrees of success. Generally, political attitudes are thought to be functional, satisfying some psychological needs or satisfying some goal. Approaches that posit "political ideology as motivated social cognition" have been especially fruitful in explaining the differences and biases between individuals on either end of the unidimensional left-right model (Jost, 2006). According to these approaches, certain social cognitive characteristics "fit" some political orientations better than others, and thus motivate individuals to adopt one political position rather than another. For instance, Jost et al. (2003) found that those with high openness, novelty seeking

tendencies, and low threat sensitivity are motivated to adopt a left-leaning political orientation, while those with opposite needs (closed, familiarity seeking tendencies, and high threat sensitivity) are motivated to adopt a right-leaning political orientation.

One drawback of these approaches is that, because they contrast the two poles against each other, they fail to consider psychological traits that might cluster in the *center* of the political spectrum. At most, they imply that centrists adopt their political attitudes because they have moderate levels of the psychological characteristics that push people to the poles. Although this is true of certain characteristics (e.g., locus of control, threat sensitivity, need for closure; Jost et al., 2007), there is a growing body of evidence showing that centrism is not merely a neutral point from which people are motivated to one pole or the other. Instead, there may be psychological characteristics unique to those in the center (vs. the left or right). however, identifying these characteristics from the existing literature proves to be complicated.

**Who are Political Centrists?**

The nature of political centrism is unclear at best. First "nonpartisans" are usually included in research as a sort of control used to contrast against liberals and conservatives, emphasizing what partisans "have" and what nonpartisans "lack"; in other words, this research often assumes that individuals must be motivated by something to be partisan and without such motivation would simply be centrist (van Prooijen & Krouwel, 2019; Jost et al., 2003). While this kind of perspective is valid for examining what kinds of people are "pushed" toward the poles, it does not account for the possibility that a centrist political position may be more than the default—there may be psychological

characteristics that "push" individuals toward the political center. Additionally, research that includes "nonpartisans" often fails to distinguish centrists from those who lack a clear political position. While these two groups share the fact that they do not identify with the social labels often associated with either pole of the political spectrum (e.g., "liberal", "Republican") they likely *do not* share many more characteristics. Indeed, a comparison might be made between this issue and one found in the psychology of religion; religious "nones" (those who do not identify with any particular religion) and atheists both share a rejection of typical religious identities and attitudes (e.g., "Christian," "Muslim") but are very different from each other in many ways. For instance, atheists and agnostics are both less likely to engage in religious behavior, but atheists express much more negative attitudes toward religion than do those who believe "nothing in particular" (Baker & Smith, 2009). Likewise, the psychological characteristics that motivate one to adopt a centrist political orientation, and the resulting behaviors, are likely different from those that motivate (or prevent) one from not adopting any clear political position; to borrow the phraseology from the psychology of religion literature, it is important to distinguish these *political* "nones" from the true political centrists.

Examining the psychological literature for political centrism *per se* is further complicated by the fact that these conceptual issues lead to methodological issues. Rodon (2015) describes these issues well; centrist self-placement on a continuous measure of political orientation, ranging from liberal to conservative (or sometimes left to right) may indeed represent "true centrists" who hold moderate political attitudes, but it may also

represent the political "nones"; political orientation is often measured without the consideration that many individuals likely do not *have* a political orientation. Rodon (2015) showed that when these political "nones" are presented with the standard continuous, left-right measure of political orientation, they place themselves in the center as a sort of non-answer. In other words, without proper sampling or methodology, center-placement may conflate political "nones" with centrists. This makes interpretation of results on this topic problematic at best. Further, the typical response options for categorical measures of political identity, whether addressing party ("Democrat") or social identity ("Liberal"), often relegate nonpartisans to a single option, "Independent", which could include political identities as diverse as centrist, socialist, and libertarian. For example, Hawkins & Nosek (2012) found that "independents" do not show explicit political policy preferences, but do show implicit preferences, implying that they have a desire to remain (or appear) objective. Are we to attribute these findings to centrists? Political "nones"? Both? An undefined composite of groups? Thus, understanding the nature of political centrism from the existing literature poses two issues. The existing research often conflates centrists with political "nones" (and sometimes others), leaving any existing findings difficult to interpret. Additionally, centrists are understudied and, when included, are not the primary targets of interest and are treated as a comparison group.

Still, some researchers have examined the difference between extremists (those on the left or right) and centrists in a more meaningful way. van Prooijen and Krouwel (2019), for example, attempt to explain the psychological motives underpinning extremist

positions. Specifically, they propose that psychological distress motivates individuals to adopt more extreme political orientations because of the simplistic nature of these worldviews; they argue that this simplicity addresses felt distress by allowing for (over)confidence in one's beliefs, which has the consequence of lower tolerance for outgroups. Indeed, compared to centrists, extremists do feel more negative emotions about the socio-political environment (van Prooijen et al., 2015) and those who strongly identify as "Democrat" or "Republican" seem to sort social groups into simpler categories than political "moderates" or "neutrals" (Feinberg, et al., 2019). Additionally, van Prooijen & Krouwel (2017) have shown that extremists feel their beliefs are superior to others' beliefs, and this belief superiority is associated with greater derogation of outgroups. Though van Prooijen and colleagues developed this model to describe *extremism* as motivated social cognition, we might also use this model to speculate about the nature of centrists. These findings imply that centrists feel less distress about the social world and are more "complex" in their thinking; because of this, they feel less confident in or certain of their attitudes. Indeed, some have found that initial ambivalence about an issue leads to stable, moderate political positions, not attitude instability or variability that might be interpreted as a "nonattitude" (Mulligan, 2013).

Consistent with the aforementioned cognitive aspect we might associate with centrists ('mental complexity or fluidity'), some have found that "independents" value objectivity. Hawkins and Nosek (2012) found that those who eschew labels ("independents") are more motivated to appear objective than partisans; though they show implicit political preferences, they do not express these preferences when asked to

place themselves on an explicit measure of political orientation. Similarly, others have also found that while "independents" tend to show a centrist orientation on the standard left-right political dimension, they do show left-right preferences for specific policies (Zell & Bernstein, 2014). However, these findings should be taken with caution, as they do not address the issue of political "nones" (Rodon, 2015).

Centrists also seem to pay more attention to anchoring information—an important characteristic in a political environment like the United States, where individuals are positioned between two political parties, which could serve as naturally occurring "anchors" for one's political attitudes. For example, Brandt et al. (2015) found that centrists' judgements are affected to greater degree by anchoring manipulations (non-political tasks where estimates are influenced by a prior value) than extreme partisans. They found that, whereas partisans' estimates were affected by self-generated anchors only, centrists' estimates were affected by anchors regardless of the source (self or experimenter). A similar pattern is found when judgments are made in an explicitly political context. Exposure to extreme political policies and messages shifts political orientation toward the center (Conroy-Krutz & Moehler, 2015; Simonivits, 2016). If centrists are more sensitive to general anchoring information, then they should be more vulnerable to the center-shift effect seen in these studies.

Much like Jost's explanation of the differences between the left and right, and van Prooijen's explanation of the adoption of "extreme" political attitudes (Jost et al., 2003; van Prooijen & Krouwel, 2019), I argue that certain psychological characteristics, preferences, and needs motivate the adoption of centrist political attitudes. Far from the

portrait often painted by political commentators of a "neutral" centrism, those in the middle of the political spectrum may engage in a particular cognitive style: dialectical thinking. Existing research shows that centrists use a looser categorization of social groups (Feinberg, et al., 2019), tend to feel less negative emotion in response to opposing views (van Prooijen et al., 2015), and are affected to a greater degree by contextual information (Brandt et al., 2015). These patterns and preferences suggest that centrists may engage in a more dialectical cognitive style—where change is thought to be inevitable and natural, contradiction is accepted, and interconnectedness and holism are assumed (Peng & Nisbett, 1999). In other words, centrists' psychological characteristics, namely their dialectical cognitive style, may affect their attitudes, which could potentially lead to their own set of ideologically influenced behaviors and biases.

**Dialectical Thinking**

A desire to remain unbiased, changing one's own position relative to contextual information, and holding a less "categorical" view of the political sphere are all indications that centrists make use of a particular cognitive style: *dialectical thinking*. Dialectical thinking is a cognitive style whereby one sees the world in a state of "constant flux" (Peng & Nisbet, 1999; Spencer-Rodgers et al., 2018). Those with a dialectical cognitive style believe that change is inevitable and integral to the way of the world; because of this, contradiction is expected and necessary. Thus, dialectical thinkers have a higher acceptance of contradiction and often endorse "middle way", compromise approaches in which the basic components of opposing ideas are addressed. Dialectical thinking was initially conceptualized in the context of cross-cultural research (Peng &

Nisbett, 1999). Those in East Asian cultures tend to engage in more dialectical thinking, while those in Western countries tend to engage in more analytical thinking. Analytical thinkers treat objects and concepts in a discrete categorical manner. Peng and Nisbett (1999) attribute the widespread use of this tendency to the tradition of formal logic founded by Greek philosophers. Because of the emphasis on separating objects and analyzing them independent of their context, analytical thinkers tend *not* to view the world as ever-changing (and at most view change as constant, rather than variable), which leads to less acceptance of contradiction. For example, Peng & Nisbett (1999) found that dialectical thinkers addressed conflict scenarios containing two opposing positions (e.g., a mother and daughter disagreeing about whether or not the daughter should engage in work or fun) differently. Dialectical thinkers tended to respond by acknowledging the issues and positions on both sides (e.g., both family members failed to understand each other), while analytical thinkers provided more categorical, "either-or" responses (e.g., mothers need to recognize their daughters' values). Peng & Nisbett (1999) also showed that dialectical thinkers found contradicting scientific studies equally plausible, while analytical thinkers tended to rate one study as more plausible than the other.

Dialectical cognitive style is thought to be exemplified by three primary principles: the principle of holism, the principle of change, and the principle of contradiction (Peng & Nisbett, 1999; Spencer-Rodgers et al., 2018). The principle of holism (or sometimes, "interconnectedness") is the expectation or belief that all things are interrelated; this can be contrasted with analytic thinkers' emphasis on the importance

of isolating ideas and analyzing things without their context (Koo et al., 2018). For example, Choi et al. (2003) presented participants with a murder mystery scenario and found that dialectical thinkers tended to focus on a wider variety of pieces of information, while analytical thinkers focused on fewer pieces of information based on their direct relevance. Because dialectical thinkers assume interconnectedness, they also assume that constancy in the nature of objects is unlikely (the principle of change). If things are interconnected, then one change is likely to lead to a chain of subsequent changes. In contrast, analytic thinkers assume objects exist independently and thus change is nonexistent, or at the very least stable across time; Aristotle, one of the philosophers who is thought to have contributed to the widespread use of analytical thinking, famously proclaimed his law of non-contradiction, "It is impossible to hold (suppose) the same thing to be and not to be" (Gottleib, 2019). Finally, dialectical thinkers are more accepting, or at least more tolerant, of contradiction without resolution; because dialectical thinkers believe that objects are interconnected and in constant flux, contradiction is not only expected, but allowed. Dialectical thinkers process contradictory information more fluently than analytical thinkers and, rather than refute one of the opposing propositions, pursue a "middle way" where the primary components of opposing propositions are maintained (Koo et al., 2018; Peng & Nisbett, 1999). It is important to note that "contradiction" in this context is psychological, rather than philosophical, in nature; in other words, it would be better characterized as "felt", rather than being a formal contradiction in logic. Thus "contradiction" in this sense is not limited to the very strict "A and not-A" formal definition of contradiction used in logic.

*Conceptualization and Measurement Issues*

One debate that remains unresolved is the extent to which dialectical and analytical thinking are tendencies that generalize across situations and domains (Spencer-Rodgers, et al., 2018). The dialectical thinking-analytical thinking distinction was originally conceptualized as a general underlying difference in cognitive style that had broad psychological consequences (Peng & Nisbett, 1999); this conceptualization of dialectical thinking is now commonly called *cognitive holism.* Later researchers contrasted this approach with *naïve dialecticism,* where the extent to which individuals think dialectically is heavily dependent on the domain (Peng et al., 2006). Rather than a broad cognitive style, this latter approach posits that dialectical thinking is a collection of folk beliefs that are only relevant in certain situations. Both of these perspectives have merit and supporting empirical evidence. There are general differences between Eastern cultures and Western cultures in the extent to which dialectical thinking is emphasized across contexts (Zell et al., 2012). In contrast, there are also within-culture variations in the extent to which people think dialectically between domains; for example, those in Eastern cultures think more dialectically about the self (e.g., a greater tendency to accept contradiction in the self-concept) compared to groups (e.g., a lesser tendency to see groups as fluid and changeable) (Spencer-Rodgers, et al., 2004; Tsukamoto, et al., 2015). The exact nature of the relationship between cognitive holism and naïve dialecticism and the relative value of either conceptualization is still debated in the literature (Spencer-Rodgers, et al., 2018). It is possible that one approach may emerge with the most empirical support or that both have relevance for certain research. Additionally, if the

latter is true, naïve dialecticism might be a narrower construct that should be considered a subset of cognitive holism, or naïve dialecticism and cognitive holism might work somewhat independently.

Out of the debate around cognitive holism and naïve dialecticism, two individual difference measures have been developed. The Dialectical Self Scale (DSS) was developed to measure the extent to which individuals tolerate contradiction and accept change in their own attitudes, beliefs, and behaviors (Spencer-Rodgers, et al., 2015). The DSS comes out of the naïve dialecticism approach and is specific to dialectical thinking about the self. The Analysis-Holism Scale (AHS) was developed out of the cognitive holism approach and measures a tendency to think dialectically more generally (Choi, et al., 2007). Both measures are widely used. As of this writing, the AHS is used in 35 articles and its original publication has been cited 117 times in the database PsycINFO. In contrast, the DSS has yet to be associated with a published psychometric study, though PsycINFO reports its use in 51 articles, and the first article to use the scale (Spencer-Rodgers, et al., 2004) has been cited 153 times. Spencer-Rodgers, et al. (2009) state that it shows alphas ranging from .69 to .87, and studies from other labs report similar reliabilities (Zell, et al., 2012). The differences in domain-specificity for these scales is reflected both in the face validity of their items (DSS, "I often find that my beliefs and attitudes will change under different contexts."; AHS, "Current situations can change at any time.") and in their predictive ability. The DSS is most commonly related to self-relevant constructs such as identity and self-consistency (Zhang et al., 2017), whereas the

AHS is most commonly associated with outcomes related to causal reasoning (Spaccatini, et al., 2021) and perceptual tasks (Duff & Sar, 2015).

Because the debate surrounding cognitive holism and naïve dialecticism remains unresolved (Spencer-Rodgers et al., 2018), researchers attempting to examine the consequences of individual differences in dialectical thinking are presented with the question of which measure is appropriate. If dialectical thinking is a broader cognitive style that is consistent across contexts, then domain-specificity would not be a necessary or harmful quality in individual difference measures. That is, if the cognitive holism approach is correct, then individuals would respond similarly on both the AHS and the DSS because these measures would both tap the broader cognitive style. In contrast, if the naïve dialecticism approach is correct and individual differences in dialectical thinking vary across domains, then individuals may respond differently to these measures; thus, narrower measures like the DSS would be more appropriate. For example, an individual who thinks dialectically about the self but thinks analytically in most other areas would score higher on the DSS and lower on the AHS. For this individual, there would also likely be differences in the predictive ability of the DSS and AHS for various outcomes. Because of this possibility, it might be most advantageous for researchers to utilize domain-specific measures until the debate surrounding cognitive holism and naïve dialecticism is resolved.

### *Dialecticism and Related Constructs*

Because of its emphasis on contradiction, dialectical thinking seemingly shares similarity with many other psychological constructs, including the need for closure,

preference for consistency, and personal preference for structure. Need for Cognitive

Closure (NFC) is an individual difference measure developed to capture the extent to

which people prefer order and avoid ambiguity (Kruglanski et al., 1997); it contains five

facets including preference for order, preference for predictability, decisiveness,

discomfort with ambiguity, and closed-mindedness. Preference for Consistency (PFC) is

a similar measure that assesses the extent to which individuals desire consistency in the

responses of others and in oneself (Cialdini, et al., 1995). Yet another related construct is

the Personal Need for Structure (PNS) that assesses individuals desire for simple

structure (Neuberg & Newsom, 1993). These constructs share strong similarities at the

conceptual level and at the measurement level (NFC, *"I don't like to be with people who

are capable of unexpected actions."*; PFC, *"I prefer to be around people whose reactions

I can anticipate."*, PNS, *"I hate to be with people who are unpredictable."*; Cialdini, et

al., 1995, Kruglanski et al., 1997, Neuberg & Newsom, 1993). Some researchers have

questioned the extent to which these constructs overlap with one another and have found

considerably strong relationships among them. For example, NFC and PNS show *r*s

ranging from .75 to .82 (Leone et al., 1999), and the authors of the scales themselves

sometimes argue that these constructs are redundant with one another (Neuberg et al.,

1997).

On the surface, it may seem that dialectical thinking is yet another overlapping

construct. However, there is good reason to believe that dialectical cognitive style should

be considered separately from these constructs. Dialectical thinking is conceptually

distinct from constructs like NFC and PNS in that dialectical thinking is an

epistemological style ("way of knowing") rather than a need or preference (Peng & Nisbett, 1999). Dialectical thinkers simply *believe* that the world is in a constant state of change and contradiction; analytical thinkers *believe* that the world is orderly and that two opposing ideas cannot simultaneously exist. In contrast, those with a *need* for closure (or structure or consistency) show a *desire* for their world to be orderly and predictable. Thus, while dialectical thinking represents individuals' differences in beliefs about the state of the world, these other constructs represent preferences. However, there are surprisingly few studies that investigate the relationship between dialectical thinking and these need-based constructs. Authors of the DSS state that it correlates negatively with the NFC scale, but did not report the correlation coefficient (Spencer-Rodgers et al., 2009). An unpublished doctoral dissertation also found a negative correlation between the DSS and NFC (Wang, 2018). To my knowledge, only one recent study reported the actual correlation ($r$ = -.15) between the DSS and NFC (Brown et al, 2020).

Another class of constructs adjacent to dialectical thinking represent "unjustified attitude certainty" and are often labeled "dogmatism" (Altemeyer, 2002). Like the need-for-certainty based constructs, dogmatism may seem to share similarities with dialectical thinking, but has important differences. Measures of dogmatism were initially developed to create an ideology-free assessment of "authoritarian personalities" (i.e., one that does not also conflate authoritarianism with conservatism or religious fundamentalism; Rokeach, 1956). Some aspects of dogmatism do seem related to dialectical thinking, such as the extent to which one is willing to be flexible in one's beliefs (Altemeyer, 2002; Peng & Nisbett, 1999). However, one of the defining features of dogmatism is a strong

conviction in the "rightness" of one's attitudes and the willingness to consider novel

information. Much like the NFC or PNS, there is a motivational aspect to dogmatism that

is not present in dialectical thinking and an epistemological aspect to dialectical thinking

(how are objects related in the world?) that is not present in dogmatism. Because of these

differences, dialectical thinking and dogmatism should be considered somewhat

orthogonal to one another. However, much like the constructs related to need-for-

structure, empirical comparisons of dialectical thinking and dogmatism are scant.

One construct that may have considerable overlap with dialectical thinking is

integrative complexity. Integrative complexity is the extent to which statements generally

display structural complexity by distinguishing between separate elements and

identifying the associations between those dimensions (Suedfeld et al., 1992). Integrative

complexity can take two somewhat independent forms, elaborative complexity and

dialectical complexity (Conway et al., 2008). Elaborative complexity occurs when one

develops a single, dominant theme in a more complex way, while dialectical complexity

occurs when one recognizes multiple elements that might have conflicting features (i.e.,

recognizing both the positive and negative elements of an object). Both dialectical

complexity and dialectical cognitive style share an emphasis on the reconciliation of

opposing elements (Conway et al., 2008; Peng & Nisbett, 1999). However, these

constructs are not redundant with one another. Dialectical thinking is a *cognitive style,*

whereas integrative complexity is a *feature of statements* produced by one's cognitive

processes. In fact, because the construct "dialectical cognitive style" describes a way of

thinking that views objects in the world as interconnected and in flux, thus allowing

contradiction, I would *expect* that those who engage in this style of thinking produce statements that have integrative complexity.

Thus, individual differences in "complexity of thought" can be considered along many different dimensions. Individuals can show affective or preferential differences in the complexity of the world and in themselves (Cialdini, et al., 1995, Kruglanski et al., 1997, Neuberg & Newsom, 1993). Individuals can also differ in the extent to which they actually engage in dialectical or analytical cognitive styles (Peng & Nisbett, 1999; Spencer-Rodgers et al., 2009). Finally, the products of these styles, statements, and arguments made by individuals can differ in their complexity, and even in the *way* they make statements more complex (Conway et al., 2008). Though we might expect that these different dimensions in "complexity of thought" are related to one another, it is important to distinguish them from one another conceptually and methodologically.

**Dialectical Thinking Promotes Adoption of Centrist Political Orientation**

In the tradition of treating attitudes as functional and, more specifically, as a kind of motivated social cognition (Jost et al., 2003; van Prooijen & Krouwel, 2019), dialectical thinking may cause a more centrist political orientation because such a position satisfies the needs and preferences of such thinkers. The primary characteristics of dialectical cognitive style are reflected in the behaviors and psychological characteristics of political centrists. Dialectical thinkers emphasize the interconnectedness of objects with each other and their contexts (Koo et al., 2018). While contextual information can lead to more moderate positions in general (Conroy-Krutz & Moehler, 2015; Simonivits, 2016), centrists are especially affected by this information, as

indicated by the influence of anchors on their judgements (Brandt et al., 2015).

Dialectical thinkers also deal with contradiction differently—because all things are

interconnected and change is inevitable, contradiction is thought to be natural, necessary,

and accepted (Koo et al., 2018). In dealing with contradiction, or opposing propositions,

dialectical thinkers adopt more moderate positions when given two opposing positions to

an issue, while analytical thinkers adopt more extreme positions (Peng & Nisbet, 1999).

Such a strategy likely leads dialectical thinkers to adopt more moderate political

orientations; the unidimensional model of political orientation, by its nature, has two

poles.

### *Dialectical Thinking and Threat*

As discussed earlier, van Prooijen and Krouwel (2019) suggest that threatening

personal and societal events cause distress and such distress leads individuals to adopt

"simplistic, black and white" extreme political positions because adopting extreme

beliefs allows for (over)confidence in their beliefs and resolution of the threat. This

implies that without such distress, individuals are not motivated to adopt extreme

positions. Without such a motivation, individuals may adopt more "complex" centrist

political positions. For example, the existence of socioeconomic inequality and the

opposing arguments over its causes and solutions may be experienced as distressing.

Liberals may attempt to resolve this threat by expressing egalitarian beliefs and

supporting policies that attempt to address the perceived cause: unfair labor practices. On

the other hand, conservatives may attempt to resolve the threat by expressing meritocratic

beliefs that justify the inequality. and instead support policies that attempt to address their perceived cause: reliance on welfare.

I suggest that van Prooijen and Krouwel's (2019) proposed simplicity-complexity difference may in fact be a difference in *cognitive style*—partisans may be analytical thinkers, treating objects discretely and resolving contradiction using an "either-or" strategy, while centrists may be dialectical thinkers, addressing objects in their contexts and resolving threat and contradiction using a "compromise" strategy. For example, a centrist, dialectical approach to the socioeconomic inequality issue would find value in the two contradicting views endorsed by extreme liberals (i.e., low-SES individuals are victims of an unjust hierarchy) and extreme conservatives (i.e., low-SES individuals deserve their position due to their effort and motivation). Beyond this theoretical argument, there is some evidence that suggests that dialectical thinkers might experience less "socio-political distress." Dialectical thinkers respond to stressful situations in a more flexible manner and, in turn, are more effective at dealing with those stressful situations (Cheng, 2009). Similarly, centrists express less fear of financial crises, government instability, and other issues compared to extremists (van Prooijen et al., 2015). In fact, when dialectical thinking is examined in an explicitly intergroup context, dialectical thinkers are better able to tolerate positive and negative emotions during an intergroup conflict, while analytical thinkers are distressed by such ambivalence (Lu et al., 2019). Thus, dialectical thinking may motivate individuals to adopt a more centrist political orientation because such an orientation matches the sorts of psychological strategies employed by dialectical thinkers. Indeed, centrist political orientation may be

less an adherence to particular values or governmental policies than an expression of a

dialectical cognitive style.

**Exploratory Study**

To test of the relationship between dialectical thinking and political orientation, I collected data for an exploratory study. I examined participants' cognitive style and political orientation using a variety of measures. The purpose of this study was to address several pertinent questions to this line of research. First, I wanted to investigate the issue of how to measure centrist political identity. It was important to determine whether or not political identity (categorical labels), policy preference, and political orientation (a continuous left-right dimension) represented the same construct. In addition, a measure of attitude importance was included to account for the difference between "true" centrists and political "nones" who used centrist responses as non-answers. Political "nones," who place little importance on politics, may identify as centrist as a default, non-answer, rather than as a result of dialectical thinking strategies. In contrast, "true" centrists *actually endorse* center political positions; in the exploratory study, I use two strategies to explore the effect of importance: including it as a covariate and as a moderator.

The exploratory study also investigated the primary thrust of the proposed research—whether or not dialectical thinking (vs. analytical thinking) is related to centrist (vs. extremist) political orientation. Because the use of a broader, cognitive holism-based scale (e.g., the AHS Choi, et al., 2007) may not be appropriate, dialectical thinking was assessed using the DSS (Spencer-Rodgers, et al., 2015). The DSS assesses the extent to which one tolerates contradiction and change in one's attitudes, beliefs, and behaviors. Because I posit that political orientation is an expression of analytical or dialectical thinking in one's political *attitudes and beliefs*, the DSS falls into the appropriate domain

and should help evade the potential impact of the issue of whether dialectical thinking is a general cognitive style (i.e., cognitive holism) or a domain-specific phenomenon (i.e., naïve dialecticism). Finally, I examined whether the relationship between dialectical thinking and centrism remained while controlling for several related constructs, including the need for closure, personal need for structure, preference for consistency, and dogmatism.

**Methods**

*Participants*

Participants were recruited via Prolific, an online survey service, to participate in an online survey in exchange for $0.80. Participants were limited to U.S. residents and minority political identities were excluded (e.g., libertarians, communists). The final sample consisted of 271 participants ($M_{age} = 37.29$, $SD = 15.00$; 43.2% men, 55.7% women, 1.2% other). Participants were politically diverse (38.4% Liberal, 34.3% Conservative, 27.3% Moderate/Centrist).

*Procedure and Materials*

The study was administered online via the survey service Qualtrics. Participants completed measures of political orientation, political affiliation, party affiliation, and political importance. Next, participants completed all three subscales of the Dialectical Self Scale. Participants also completed the Need for Closure Scale, Personal Need for Structure Scale, the Preference for Consistency Scale, and the Dogmatism Scale. Finally, participants provided demographic information.

*Political Party*

Participants responded to the item, "Which political party do you most identify with? Please DO NOT indicate movements within a political party (i.e., tea party movement, democratic socialist movement)." Responses included Democrat ($n = 112$), Republican ($n = 86$), and I don't identify with a party (Independent) ($n = 87$); those who selected "Other (please specify)" and identified with minority parties (e.g., libertarian, communist, etc.) were excluded from the survey. Participants who identified with a party were asked, "How strongly do you identify with this party?" with responses ranging from 1 (strongly identify) to 5 (do not identify with at all).

*Political Identity*

Participants also identified their political identity by responding to the item, "Which label do you feel most closely represents your political beliefs?" Responses included Conservative ($n = 93$), Moderate/Centrist ($n = 74$), and Liberal/Progressive ($n = 104$).

*Political Orientation*

Political orientation was first measured using three widely used items: "What best describes your political orientation toward *social* issues?", "What best describes your political orientation toward *economic* issues?", "What best describes your *overall* political orientation?" Responses to all three items ranged from 1 (extremely conservative) to 7 (extremely liberal). Reliability was acceptable ($\alpha = .95$; $M = 3.75$, *SD* = 1.83).

*Political Importance*

Participants were asked "How important are your political beliefs to you?" ($M$ = 4.56, $SD$ = 1.72) with responses ranging from 1 (Not at all) to 7 (Extremely important).

*Dialectical Self Scale (DSS)*

This unpublished scale was developed by Spencer-Rodgers, et al. (2015). It measures the extent to which individuals think about the self in a dialectical (vs. analytic) cognitive style. It is composed of 32 items measuring three factors. The Tolerance of Contradiction subscale consists of 13 items measuring the extent to which individuals tolerate inconsistencies in the self-concept ("When I hear two sides of an argument, I often agree with both."). The Cognitive Change subscale consists of 11 items measuring the extent to which individuals view the self as fluid and changeable ("I often find that my beliefs and attitudes will change under different contexts."). Finally, the Behavioral Change subscale consists of 8 items measuring the extent to which individuals perceive themselves as acting differently across situations ("I often change the way I am depending on who I am with."). Responses ranged from 1 (strongly disagree) to 7 (strongly agree). The reliability of each factor was acceptable (Full DSS Scale, $\alpha$ = .88; contradiction, $\alpha$ = .69; cognitive change, $\alpha$ = .79; behavioral change, $\alpha$ = .71,). See Appendix A for the full scale.

*Need for Closure (NFC) – Brief*

The Need for Closure Scale was developed to measure the extent to which one is averse to ambiguity and shows the tendency to find and maintain cognitive closure (Kruglanski, 1990). The shortened version of this scale (Roets & Van Hiel, 2011) is

composed of 15 items ("I dislike unpredictable situations.") with responses ranging from 1 (strongly disagree) to 7 (strongly agree). The reliability for this scale was acceptable ($\alpha$ = .85). See Appendix B for the full scale.

### Personal Need for Structure (PNS)

The Personal Need for Structure Scale was developed to measure individuals' preference to for cognitive simplicity and structure (Neuberg & Newsom, 1993). It is composed of 11 items ("I become uncomfortable when the rules in a situation are not clear.") with responses ranging from 1 (strongly disagree) to 7 (strongly agree). The reliability for this scale was acceptable ($\alpha$ = .74). See Appendix C for the full scale.

### Preference for Consistency (PFC)

The Preference for Consistency Scale was developed to measure the extent to which individuals desire consistency in the actions and beliefs in the self and in in others (Cialdini et al., 1995). It is composed of 18 items ("I prefer to be around people whose reactions I can anticipate") with responses ranging from 1 (strongly disagree) to 7 (strongly agree). The reliability for this scale was acceptable ($\alpha$ = .89). See Appendix D for the full scale.

### Dogmatism

The Dogmatism Scale was developed to measure the extent to which one holds "relatively unchangeable, unjustified [attitude] certainty." (Altemeyer, 2002). It is composed of 20 items ("The things I believe in are so completely true, I could never doubt them.") with responses ranging from 1 (strongly disagree) to 7 (strongly agree). The reliability for this scale was acceptable ($\alpha$ = .88). See Appendix F for the full scale.

**Results**

***Relations Among Political Measures***

      Consistent with the existing literature on political models, the social, economic and global political orientation items showed strong positive correlations ($r$s ranging from .83 to .91, $p$'s < .001), and as such were averaged to create a single political orientation score ($\alpha$ = .95).

      To investigate the relationship between political identity and political orientation, a one-way ANOVA was conducted with political identity (conservative, centrist, liberal) as the predictor and political orientation as the outcome. The model was significant, $F(2, 268) = 551.21$, $p < .001$, $\eta^2 = .80$. All follow up tests were significant, $p$s < .001. Those who identified as "Conservative" rated their political orientation as most conservative ($M = 5.71$ $SD = .91$), followed by "Moderate/Centrist" ($M = 3.91$, $SD = .61$), and "Liberal" ($M = 1.88$, $SD = .84$).

      In order to investigate the relationship between political party and political orientation, a one-way ANOVA was conducted with political party (democrat, republican, independent) and political orientation. The model was significant, $F(2, 268) = 155.66$, $p < .001$, $\eta^2 = .54$. All follow up tests were significant, $p$s < .001. Those who identified as "Republican" rated their political orientation as most conservative ($M = 5.55$ $SD = 1.14$), followed by "Independent" ($M = 3.71$, $SD = 1.15$), and "Democrat" ($M = 2.40$, $SD = 1.38$).

*Dialectical Thinking and Political Orientation*

  Because the primary interest of this project is centrism, and not left-right orientation, the political orientation measure was recoded to represent the absolute distance from the center point of the scale. Lower scores represent more centrist political orientations whereas higher scores represent more partisan (liberal or conservative) political orientations.

  Correlations provided initial support for the hypothesized relationships between dialectical thinking and centrism. The full DSS scale ($r = -.22$, $p = .00$), and the subscales Tolerance of Contradiction ($r = -.21$, $p = .001$) and Cognitive Change ($r = -.25$, $p = .00$) were significantly related to centrism in the predicted directions. However, Behavioral Change was unrelated to centrism ($r = -.05$, $p = .40$). See Table 1 for all correlations.

**Table 1**

*Descriptive Statistics and Correlations for Exploratory Study*

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | *M* (*SD*) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. DSS – Full Scale | - | | | | | | | | | 3.52 (.68) |
| 2. DSS – Behavioral | .79*** | - | | | | | | | | 3.20 (.90) |
| 3. DSS – Contradiction | .83*** | .46*** | - | | | | | | | 3.87 (.68) |
| 4. DSS – Cognitive | .90*** | .62*** | .62*** | - | | | | | | 3.31 (.86) |
| 5. Importance | -.34*** | -.23*** | -.26*** | -.36*** | - | | | | | 4.56 (1.72) |
| 6. Centrism⁺ | -.22*** | -.05 | -.21** | -.25*** | .66*** | - | | | | 1.53 (1.03) |
| 7. Need for Closure | -.21*** | -.13* | -.17** | -.19** | .10 | .11 | - | | | 4.62 (.75) |
| 8. Personal Need for Structure | -.24*** | -.22*** | -.16** | -.22** | .08 | .10 | .73*** | - | | 4.84 (.75) |
| 9. Preference for Consistency | -.40*** | -.31*** | -.28*** | -.39*** | .18** | .16** | .64*** | .61*** | - | 4.89 (.78) |
| 10. Dogmatism | -.41*** | -.27*** | -.41*** | -.54*** | .24*** | .15* | .26*** | .12* | .32*** | 3.31 (.81) |

Note: *p* < .05; **p* < .01; ***p* < .001; two-tailed. ⁺lower scores indicate a more centrist orientation; DSS = Dialectical Self Scale

*Controlling for Political Importance*

A series of multiple regression analyses were conducted to further investigate the potential relationships between the DSS and centrism. To address the "centrism-as-non-answer" issue (see discussion of Rodon, 2015), two analytic strategies were employed. In the first, political importance was entered as a moderator of the DSS-centrism relationship using Model 1 in PROCESS (Hayes, 2018); Those low in importance might be considered "non-answer-centrists" while those with higher levels of importance might be considered "true centrists." In the second strategy, political importance was entered as a covariate of the DSS-centrism relationship.

To investigate the effect of importance as a moderator of the DSS-centrism relationship, a regression analysis was conducted using Model 1 in PROCESS (Hayes, 2018). DSS was entered as the predictor, centrism was entered as the outcome, and political importance was entered as the moderator. The interaction between DSS and political importance was not significant, $B$ = -.02, $SE$ = .05, $p$ = .63. As such, I conducted a second hierarchal regression analysis to investigate the main effect of DSS on centrism and the role of importance as a covariate. In the first step, DSS was entered as a predictor and centrism was entered as the outcome. DSS was a significant predictor of centrism, $B$ = -.33, $SE$ = .09, $p$ = .000, $R^2$ = .05. However, when political importance was entered in the second step as a covariate, DSS was no longer a significant predictor of centrism, $B$ = .02, $SE$ = .07, $p$ = .82 and political importance was a significant predictor, $B$ = .40, $SE$ = .03, $p$ = .00.

*Controlling for Related Variables*

To investigate the unique effect of DSS on centrism controlling for other related variables, a hierarchal multiple regression analysis was conducted with political centrism as the outcome variable. In the first step, NFC, PNS, PFC, and Dogmatism were simultaneously entered as predictors. To investigate the unique contribution of dialectical thinking, DSS was entered in the second step. Controlling for the other variables in the model, DSS was a significant predictor ($B = -.25$, $SE = .11$, $p = .03$) and explained a significant amount of additional variance, $F(1, 265) = 4.86$, $p = .03$, $R^2$ change = .02). None of the other predictors were significantly related to centrism (see Table 2 for all coefficients).

**Table 2**

*Hierarchal Regression Predicting Centrism – Exploratory Study*

| Variables | B | SE | p | F | df | $R^2$ |
|---|---|---|---|---|---|---|
| Step 1 | | | | 2.63* | 4, 266 | .04 |
| Need for Closure | -.01 | .13 | .91 | | | |
| Personal Need for Structure | .02 | .13 | .91 | | | |
| Preference for Consistency | .17 | .11 | .13 | | | |
| Dogmatism | .14 | .08 | .08 | | | |
| Step 2 | | | | 3.11* | 5, 265 | .06 |
| Need for Closure | .03 | .13 | .82 | | | |
| Personal Need for Structure | -.02 | .13 | .86 | | | |
| Preference for Consistency | .11 | .11 | .34 | | | |
| Dogmatism | .05 | .09 | .59 | | | |
| DSS | -.25* | .11 | .03 | | | |

*$p < .05$, [+]lower scores indicate a more centrist orientation; DSS = Dialectical Self Scale

**Discussion**

The results of this study are generally consistent with what one would expect from the literature. Further, these analyses help answer some critical questions. First, the various measures of political attitudes were highly related to one another; it seems that individuals treat items asking their political identity (e.g., categorical labels), political orientation (e.g., a self-placed position on a continuous left-right dimension), and political party in much the same way, indicating that these items are likely tapping the same underlying construct. Second, dialectical thinking was significantly related to centrism and that relationship persisted even after controlling for other contradiction and structure related constructs (e.g., NFC, PNS, PFC, and dogmatism). These constructs primarily assess the extent to which individuals express affective or evaluative preferences concerning ambiguity and contradiction (Cialdini et al., 1995; Kruglanski et al., 1997; Neuberg & Newsom, 1993). In contrast, dialectical thinking is a construct that concerns epistemological beliefs about the nature of contradiction (Koo et al., 2018). It is likely these beliefs, that contradiction is a natural and necessary part of the world, that allow dialectical thinkers to adopt centrist political attitudes.

When political importance was entered as a covariate, dialectical thinking no longer significantly predicted political centrism. These are the only data in the present line of research where this occurred. In previous pilot data the relationship between dialectical thinking and centrism held when controlling for political importance; the significant regression coefficients predicting centrism from dialectical thinking, while controlling for importance, ranged from -.12 to -.21. Additionally, in the studies that

follow, dialectical thinking remained a significant predictor of centrism when controlling

for importance This may be due to the stronger correlation between importance and

centrism ($r = .66$) in this study compared to the other studies ($r$s range from .46 to .58)

coupled with the lower sample size of the exploratory study compared to the primary

studies.

**Primary Studies**

Following the exploratory study, several important steps remained to be investigated. First, I aimed to replicate the association between centrism and dialectical thinking with larger sample sizes that provided higher statistical power. Second, I tested the causal relationship between dialectical thinking via a simple, powerful experimental manipulation (Studies 1 and 4). Third, I investigated the mechanism by which this relationship occurs. van Prooijen and Krouwel (2019) proposed that individuals adopt simplistic, extreme political positions in order to resolve threat and the resulting psychological distress. According to this perspective, centrists adopt more moderate positions because they do not experience such distress. However, I propose that centrists may indeed experience threat and distress, but instead resolve it via a dialectical cognitive style. Individuals who think about political beliefs in a manner that allows for tolerance of contradictions and fluid change may experience less negative affect and, as a result of this cognitive style, adopt a more centrist political orientation. To investigate this prediction, Study 3 manipulates individuals' ability to utilize dialectical strategies to examine these strategies' effects on individuals' distress. Finally, the downstream consequences of the dialectical thinking-centrism relationship on behavioral intentions are investigated; Study 4 examines whether the dialectical cognitive style of centrists allows them to adopt strategies that reconcile conflicting political positions and avoid strategies that employ an "either-or" approach.

**Study 1**

Because I propose a causal relationship between dialectical cognitive style and centrism, this study tested this basic relationship. This study used a simple experimental design to examine the effect of manipulating dialectical thinking on centrist political orientation. I hypothesized that increasing (vs. decreasing) one's dialectical cognitive style scores would lead to a more centrist political orientation.

*Participants*

Participants were recruited via the psychology subject pool at Ohio University to participate in an online survey in exchange for course credit. An a priori power analysis using *G\*Power* (Faul et al., 2007) and the effect sizes observed in the pilot studies ($r = -.29$, $\alpha = .05$, $\beta = .80$) showed that a minimum sample of 304 participants would be needed. Participants with minority political identities (e.g., libertarians, communists) were excluded from recruitment for this study. To compensate for potential response problems (failed attention checks, missing data, etc.), a large sample of 484 participants ($M_{age} = 20.53$, $SD = 5.74$) was recruited. Participants were a mostly women (77.3% women, 20.9% men, 1.8% other) and politically diverse (49.6% Liberal, 23.8% Conservative, 26.7% Moderate/Centrist).

*Procedure and Materials*

After completing informed consent procedures, participants were randomly assigned to one of two conditions meant to manipulate dialectical cognitive style (see next section). Afterward, participants completed measures of political orientation. As in the exploratory study, demographic measures were completed last.

**Dialectical Thinking Manipulation Task.** Participants completed the dialectical self scale (DSS) used in in the exploratory study. However, this scale was modified across conditions using the *always/sometimes* manipulation. In this technique, participants complete an established scale, in the present case the DSS, modified depending on the condition to which they are assigned. Those in the always condition complete scale items modified to include absolute qualifiers ("always"). Because the items are phrased to be absolute, participants in the always condition should be less likely to agree and thus their scores on the DSS should be attenuated (see Salancik & Conway, 1975). Those in the sometimes condition complete scale items modified to include relative qualifiers ("sometimes"). Participants in the sometimes condition should be *more* likely to agree with the items and thus their scores on the DSS should be enhanced.

Aside from the added qualifiers, the DSS administered to participants was identical to the scale used in the exploratory study. It included 32 items measuring the three factors, Tolerance of Contradiction ("When I hear two sides of an argument, I [always/sometimes] agree with both."), Cognitive Change ("I [always/sometimes] find that my beliefs and attitudes will change under different contexts."), and Behavioral Change ("I [always/sometimes] change the way I am depending on who I am with."). Responses ranged from 1 (strongly disagree) to 7 (strongly agree). These factors served as both manipulation checks and predictors, and they showed acceptable reliability (Tolerance of Contradiction, $\alpha = .74$; Cognitive Change, $\alpha = .75$; Behavioral Change, $\alpha = .70$; DSS-Full, $\alpha = .87$)

**Political Measures.** Participants' political orientation was measured using the same three-item political orientation scale from the exploratory study ($\alpha = .95$).

*Attitude Strength and Identification.* Participants' political attitude strength was assessed in a variety of ways. First, participants were asked, "How important are your political beliefs to you?" with responses ranging from 1 (Not at all important) to 7 (Extremely important). Additionally, participants were asked which political social identity most closely represents their beliefs ("Conservative", "Moderate/Centrist", "Liberal/Progressive", "Other") and how strongly they identify with this identity, with responses ranging from 1 (Not at all) to 7 (Extremely). A similar item also asked which political party participants identify with ("Democrat", "Republican", "Independent", "Libertarian", "Green", "Other") and the degree to which they identify with this party, with responses ranging from 1 (Not at all) to 7 (Extremely).

### Results

As expected, dialectical thinking (and its subscales) showed a negative relationship(s) with centrism. See Table 3 for descriptives and correlations. As a manipulation check, an ANCOVA was conducted to examine the effect of condition on the dialectical self scale, controlling for political importance. As expected, those in the *always* condition scored lower on tolerance of contradiction, cognitive change, behavioral change, and the full DSS scale than those in the *sometimes* condition, controlling for importance. As a test of the primary hypothesis that increasing dialectical thinking (vs. decreasing dialectical thinking) would lead to more centrist political orientations, a second ANCOVA was conducted to investigate the effect of condition on centrism scores

controlling for importance. Contrary to my hypothesis, condition did not have a

significant effect on centrism when controlling for importance ($p = .73$). See Table 4 for a

full report of both ANCOVAs.

**Table 3**

*Descriptive Statistics and Correlations for Study 1*

| Variable | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| 1. DSS-Full | - | | | | | |
| 2. Tolerance of Contradiction | .86* | - | | | | |
| 3. Cognitive Change | .85* | .58* | - | | | |
| 4. Behavioral Change | .84* | .56* | .63* | - | | |
| 5. Centrism+ | -.27* | -.20* | -.34* | -.15* | - | |
| 6. Political Importance | -.29* | -.23* | -.31* | -.24* | .58* | - |
| *M (SD)* | 3.97 | 4.37 | 3.55 | 3.78 | 1.82 | 6.61 |
| | (.98) | (1.02) | (1.26) | (1.24) | (1.12) | (1.53) |

*$p < .001$, +lower scores indicate a more centrist orientation

**Table 4**

*ANCOVAs Comparing Variables Across Sometimes/Always Conditions Controlling for*

*Importance*

| Variable | Sometimes | | Always | | | | |
|---|---|---|---|---|---|---|---|
| | M | SE | M | SE | F | df | $\eta^2$ |
| DSS – Full | 4.46 | .05 | 3.50 | .05 | 165.84* | 1, 481 | .26 |
| Tolerance for Contradiction | 4.95 | .05 | 3.81 | .05 | 239.40* | 1, 481 | .33 |
| Cognitive Change | 3.93 | .07 | 3.19 | .07 | 49.36* | 1, 481 | .09 |
| Behavioral Change | 4.24 | .07 | 3.35 | .07 | 72.87* | 1, 481 | .13 |
| Centrism+ | 1.80 | .60 | 1.83 | .60 | .13 | 1, 481 | .00 |

*$p < .001$, two-tailed; +lower scores indicate a more centrist orientation; all values are
evaluated at importance = 6.61

To investigate the indirect effect of condition on centrism via dialectical cognitive style, a series of mediational analyses were conducted using model 4 in PROCESS (Hayes, 2018). Condition (dummy coded, 1 = sometimes, 0 = always) was entered as the predictor, the DSS scales were entered as the mediators, and political centrism was entered as the outcome.

Additionally, political importance was entered as a covariate in each analysis. Because the nature of the manipulation was such that participants were responding to slightly different items in the always and sometimes conditions, I tested whether or not the relationship between the DSS and centrism differed between conditions; if such a difference occurred, it would not be appropriate to use the DSS scores a mediator. A moderation analysis using Model 1 in PROCESS (Hayes, 2018) showed that the interaction between DSS and condition on centrism was not significant, $B = .01$, $SE = .10$, $p = .88$, indicating that the effect of DSS on centrism was not significantly different across conditions. As such, the mediation analyses using Model 4 in PROCESS are reported below.

In the first analysis, condition was a significant predictor of the full DSS scale, $B = .96$, $SE = .17$, $p = .00$, and DSS was a significant predictor of political centrism, $B = -.16$, $SE = .05$, $p = .00$. (See Figure 1). Controlling for DSS and political importance, condition had no direct effect on centrism, $B = -.03$, $SE = .08$, $p = .72$. However, a test of the indirect effect using a bootstrapped estimation approach with 1000 samples was significant, $B = -.15$, $SE = .05$, $CI = -.26$, $-.05$. The remaining analyses employed each subscale as the mediator and produced similar results for Tolerance of Contradiction and

Cognitive Change. However, Behavioral Change did not serve as a significant mediator

(See Table 5).

**Figure 1**

*Depiction of the Two-Way Analysis of Variance in Study 2*

**Table 5**

*Mediation Analyses Predicting Centrism from Condition for Study 1*

| Mediator | Effect of Condition on Mediator (SE) | Unique Effect of Mediator (SE) | Indirect Effect | | |
| --- | --- | --- | --- | --- | --- |
| | | | Estimate (SE) | Lower CI | Upper CI |
| DSS Full | .96 (.07)*** | -.16 (.05)** | -.15 (.05) | -.26 | -.05 |
| Tolerance of Contradiction | 1.15 (.07)*** | -.11 (.05)* | -.13 (.06) | -.24 | -.01 |
| Cognitive Change | .73 (.10)*** | -.17 (.04)*** | -.13 (.03) | -.20 | -.06 |
| Behavioral Change | .88 (.10)*** | -.03 (.04) | -.02 (.03) | -.09 | .05 |

Note: $*p < .05$; $**p < .01$; $***p < .001$; two-tailed; lower values on the outcome variable indicate a more centrist orientation; condition, 1 = sometimes, 0 = always

*Discussion*

As expected, dialectical thinking, and its subscales, showed a negative relationship with centrism (*r*s ranged from -.20 to -.42). Those who thought about themselves more dialectically were more likely to have a centrist political orientation. However, the main hypothesis of this study was not confirmed. Although the manipulation successfully affected dialectical thinking scores, those who were induced to think more dialectically (vs. less dialectically) did not report a more centrist political orientation. However, this study did provide further support for a relationship between dialectical thinking and centrism. Those who scored higher on a measure of dialectical thinking were more likely to report a centrist orientation. The results of this study extend the exploratory study by demonstrating larger, more consistent correlations with the DSS even when controlling for political importance, which is an important step in identifying the characteristics of "true" centrists. This is likely due to the larger, potentially higher quality sample.

**Study 2**

A dialectical cognitive style may lead to a centrist political orientation because dialectical thinkers prefer positions that allow a "compromise" between opposing contradictory positions on issues. In contrast, analytical thinkers should prefer a strategy that deals with contradiction by choosing a more polarized position (an "either-or" strategy that favors one position over the other). As such, dialectical positions on political issues should be a function of the anchor positions. Dialectical thinkers tend to choose moderate positions when given opposing positions (Peng & Nisbett, 1999), and centrists

are more sensitive to anchors compared to partisans (Brandt et al., 2015). As such, dialectical thinkers should shift their position based on the position of two opposing anchors, such that they minimize their distance from the center.

Specifically, I hypothesized that centrists would shift to maintain a position equidistant from the anchors when the anchors of an issue are shifted. Use of this strategy would demonstrate that "centrist" positions are driven by a dialectical cognitive style. If the alternatives are true (i.e., that "centrists" are either neutral or driven by ideology per se), then centrists should maintain a position at the center of *scale,* not the center of the *anchor points*. In contrast, I hypothesized that the positions of liberals and conservatives should shift *only* when the anchor associated with their identity shifts.

### *Participants*

Participants were recruited via Prolific, an online survey service, to participate in an online survey in exchange for $1.27. Participants were limited to U.S. residents and minority political identities were excluded (e.g., libertarians, communists). To match previous effect sizes and account for potential response problems (failed attention checks, missing data, etc.), a larger sample was recruited than previously proposed. The final sample consisted of 555 participants ($M_{age} = 32.93$, $SD = 12.26$; 49.7% men, 48.8% women, 1.6% other). Participants were politically diverse (49.7% Liberal, 25.6% Conservative, 24.7% Moderate/Centrist).

### *Procedure and Materials*

First, participants completed the same measures of dialectical cognitive style (DSS) used in the exploratory study and the same political measures (orientation,

importance, identity) used in the exploratory study and Study 1. The dialectical self scale

(Tolerance of Contradiction, $\alpha = .73$; Cognitive Change, $\alpha = .79$; Behavioral Change, $\alpha$

$=.69$; DSS-Full, $\alpha = .88$) and political orientation measures ($\alpha = .95$) both showed

acceptable reliability. Centrism was computed by taking the absolute distance from the

center of the political orientation scale. Participants were then randomly assigned to one

of three conditions in the Shifted Anchoring Task. Participants responded to their issues

on a variety of political issues on a unidimensional, liberal-conservative scale. Each

condition had different anchors (see details in next section). Afterward, participants

completed basic demographic information.

**Shifted Anchoring Task.** Participants were randomly assigned to one of three

conditions, all of which consisted of political issue items. In the *control condition*,

participants received a set of items with no anchors; in this condition, the typical poles of

the liberal-conservative scale served as natural anchors. In the shifted conditions,

participants received a set of items with anchors indicating the "average response" of

self-identified liberals and conservatives; the exact positions of anchors differed slightly

for each item to increase the realism of the manipulation. In the liberal-shifted condition,

the liberal anchor was within .5 of the -2.5 position and the conservative anchor was

within .5 of the +5 point. In the conservative-shifted condition, the liberal anchor was

within .5 of the -5 point and the conservative anchor was within .5 of the +2.5 point. In

all conditions, participants responded to the same issues and potential responses ranged

from -5 (extremely liberal) to +5 (extremely conservative). Participants' scores on this

task were calculated by taking the average of the absolute distance from the center of

scale. The anchoring items showed an acceptable level of reliability ($\alpha = .91$). See

Appendix F for the full set of political issue items and the anchors in each condition.

### *Results*

Zero-order correlations replicated the negative relationship between the full DSS

(and each of its subscales) and political centrism. See Table 6 for descriptives and

correlations. Additionally, a multiple regression analysis confirmed that the DSS

remained a significant predictor of centrism ($B = -.20$, $SE = .05$, $p = .00$) when controlling

for importance, $F(2, 551) = 132.07$, $p = .00$, $R^2 = .32$. Initially, I proposed using Model

14 in the PROCESS macro (Hayes, 2018) to investigate a moderated mediation model

where DSS would predict categorical political identity (mediator), political identity

would predict anchoring scores (outcome), and condition would moderate the political

identity-anchoring score relationship. Unbeknownst to me at the time, PROCESS cannot

handle multicategorical mediators, only multicategorical predictors and moderators.

Thus, as an alternative to the previously proposed model, I will only be testing the

moderation of condition on the political identity-anchoring score relationship.

**Table 6**

*Descriptive Statistics and Correlations for Study 2*

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| 1. DSS-Full | - | | | | | | |
| 2. Tolerance of Contradiction | .84* | - | | | | | |
| 3. Cognitive Change | .91* | .62* | - | | | | |
| 4. Behavioral Change | .82* | .48* | .71* | - | | | |
| 5. Centrism+ | -.31* | -.29* | -.30* | -.18* | - | | |
| 6. Political Importance | -.32* | -.29* | -.32* | -.21* | .58* | - | |
| 7. Anchoring Score | -.24* | -.17* | -.24* | -.22* | -.25* | -.06 | - |
| M (SD) | 3.56 | 3.84 | 3.39 | 3.35 | 1.51 | 4.51 | -1.14 |
| | (.70) | (.72) | (.87) | (.89) | (.99) | (1.68) | (2.79) |

*p < .001, +lower scores indicate a more centrist orientation

Thus, in order to investigate the hypothesis that centrists will change their policy positions according to both group anchors, and that extremists will only change in the direction of their ingroup, a two-way analysis of variance was conducted investigating the effects of condition (control, liberal-shifted, conservative-shifted) and political label (liberal, conservative, centrist) on anchoring task score. The interaction was not significant, $F(4, 546) = .17, p = .95, \hat{\eta}^2 = .001$. The main effect of condition trended significant, $F(2, 546) = 2.49, p = .08, \hat{\eta}^2 = .009$, and the main effect of label was significant $F(2, 546) = 629.46, p = .00, \hat{\eta}^2 = .697$. Post-hoc tests revealed that conservatives scored the highest on the anchoring task (*M* = 2.31, *SD* = .13), followed by centrists (*M* = -.46, *SD* = .13), and liberals (*M* = -3.26, *SD* = .09). All comparisons were significant (*p's* = .00). See Figure 1.

Because the primary analyses were nonsignificant, a series of exploratory analyses were conducted. First, since condition trended significant, exploratory post-hoc

comparisons were conducted. Those in the conservative-shift condition ($M = -.69$, $SD = .12$) scored significantly lower on the anchoring task than those in the control condition ($M = -.36$, $SD = .11$) and marginally lower on the task than those in the liberal-shift condition ($M = -.37$, $SD = .12$). Those in the liberal shift and control conditions were not significantly different from one another. Additionally, a second two-way analysis of variance was conducted with political importance entered as a covariate. It yielded identical results.

### *Discussion*

Dialectical thinking was again negatively related to political centrism in the expected direction. Contrary to predictions, centrists did not shift their anchoring task scores according to condition, nor did those who identified as liberals and conservatives. Instead, liberals were uniformly liberal, centrists were uniformly centrist, and conservatives were uniformly conservative in their anchoring scores across conditions. One potential explanation for these results is that centrists respond to political issues according to ideology per se, instead of expressing their attitudes as a function of the provided anchors. However, liberals and conservatives also showed no movement as their average in-group responses (liberal-shift condition or conservative-shift condition) moved, which is in contrast to some previous findings showing that political attitudes can be experimentally "nudged" in one direction or the other (Grewenig et al., 2020). In light of this, another potential alternative explanation is that the manipulation was too weak to impact participants' responses. In order to maintain realism, I limited the manipulation of the "average" liberal or conservative to a shift from +5 (-5) to +2.5 (-2.5) on an 11-point

scale of -5 to +5. It is possible that this change was not extreme enough to elicit changes in participants' scores. Though this is speculative, it might be the case that a manipulation that utilizes a larger, more sensitive response scale (and thus allows more extreme changes) would be more effective. One could also argue that political attitudes in the current sociopolitical environment are more difficult to move, given the recent increase in the strength of political attitudes (Dimock et al., 2014). A potential solution to this problem could be to use a state-based, rather than trait-based, measure of political attitudes. Though somewhat uncommon, such state-based measures have been demonstrated to be valid measures of political attitudes (Schneider et al., 2014). However, in the current data, controlling for political importance – an indication of attitude strength – had no impact on the results.

**Study 3**

Dialectical thinkers tend to fare better than analytical thinkers in coping with negative affect (Lu et al., 2019). This may be because of their greater use of "compromise" approaches when presented with opposing propositions (Peng & Nisbett, 1999). Because I posit that political centrism is a kind of dialectical expression of political attitudes, centrists should also experience less negative affect when allowed to utilize the same "compromise" approaches. Thus, Study 3 investigates whether manipulating the use of compromise responses will affect centrists' affect when presented with opposing political positions and whether this affect is driven by dialectical thinking. If centrists are dialectical thinkers, then they should report more distress when prevented from using their preferred "compromise" approach to contradiction. This effect

should occur because of dialectical thinking's influence on centrism; specifically, I expect that dialectical thinking will predict centrism and that centrism will be related to more negative affect when prevented from using compromise. In contrast, partisans should be unaffected by limiting their use of compromise, as this type of response is less favored by analytical thinkers and political extremists (Peng & Nisbett, 1999; van Prooijen & Krouwel, 2019). This approach examines the mechanism of the relationship by manipulating the suppression of the proposed mechanism. Such "moderator models" of examining mechanisms have many advantages compared to the typical statistical "mediator models" where the mechanism is simply measured and set in a regression path analysis (Vancouver & Carlson, 2015). I expect that dialectical thinkers will experience less negative affect and dissonance, and more positive affect, when allowed to use a compromise response (vs. when prevented from using a compromise response). Further, I expect that centrists will also experience less negative affect and dissonance, and more positive affect, when allowed to use a compromise response (vs. when prevented from using a compromise response); comparing the conditional indirect effects of dialectical thinking on affect via centrism between conditions will provide a test of whether the relationship between dialectical thinking and centrism predicts centrists' use of compromise to regulate affect.

*Participants*

Participants were recruited via Prolific, an online survey service, to participate in an online survey in exchange for $1.27. Participants were limited to U.S. residents, and minority political identities were excluded (e.g., libertarians, communists). In the final

sample, 520 participants ($M_{age}$ = 34.27, $SD$ = 13.30; 51.3% women, 47.5% men, 1.2% other) were recruited. Participants were politically diverse (49.7% Liberal, 25.6% Conservative, 24.7% Moderate/Centrist).

### Procedure and Materials

Participants completed a political orientation measure and the DSS scale. Immediately following, participants completed the Forced Response Conflict Task (see below) meant to cause distress and then allow or prevent use of a dialectical strategy for resolving the distress. Finally, participants' level of distress was measured.

**Political Orientation.** Participants completed the same three item measure of political orientation used in previous studies ($\alpha$ = .94). Centrism was computed by taking the absolute distance from the center of this scale.

**Dialectical Thinking.** Participants completed the original version of the DSS used in the exploratory study and Study 2. The dialectical self scale showed acceptable reliability (Tolerance of Contradiction, $\alpha$ = .75; Cognitive Change, $\alpha$ = .80; Behavioral Change, $\alpha$ =.69; DSS-Full, $\alpha$ = .88).

**Forced Response Conflict Task**. This task was created to allow participants to engage in a compromise-behavior or force a non-compromise behavior. First participants read the following scenario:

"*Imagine that you are with two of your close friends. You like both friends equally, but Friend One is liberal and Friend Two is conservative. They are engaged in a heated argument about politics. They are arguing about a particular topic which you find very important. Friend One and Friend Two have very different beliefs and opinions*

*about the topic. They continue to argue for several minutes and are clearly very upset.*

*They ask you to weigh in on the conversation. How would you respond?"*

Afterward participants were randomly assigned to receive one of two response sets. In the *non-forced condition*, participants were provided with three potential responses, "I express an opinion that agrees with Friend One, but not Friend Two", "I express an opinion that agrees with Friend Two, but not Friend One", and "I express an opinion that agrees with some of what both Friend One and Friend Two believe." In the *forced condition*, participants were only provided with the first two responses, making it impossible for participants to choose a compromise position.

**Affect & Dissonance.** Participants completed a measure of affect and dissonance emotions developed by Elliot and Devine (1994). This scale contains of four factors (discomfort, negself, positive affect, and embarrass) consisting of fourteen total items. Participants were asked to how they are feeling "right now" on a scale from 1 (does not apply at all) to 7 (applies very much). All four factors showed acceptable reliability (discomfort, $\alpha = .93$; negself, $\alpha = .93$; positive affect, $\alpha = .92$; embarrass, $\alpha = .83$). See Appendix G for the full scale.

*Results*

The full DSS and its subscales were again significantly related to centrism. See Table 7 for descriptives and correlations. Additionally, a multiple regression analysis confirmed that the DSS remained a significant predictor of centrism ($B = -.12$, $SE = .05$, $p = .03$) when controlling for importance, $F(2, 517) = 77.05$, $p = .00$, $R^2 = .33$. As a manipulation check, a series of independent t-tests were conducted to examine the effect

of condition on each of the dissonance and affect scales. Those in the forced condition experienced more dissonance ($M = 2.24$, $SD = 1.52$) than those in the non-forced condition ($M = 1.96$, $SD = 1.32$), $t(499) = 2.21$, $p = .03$. However, there was no significant difference between the forced ($M = 1.65$, $SD = 1.11$) and non-forced ($M = 1.57$, $SD = .97$) conditions on negative affect, $t(486) = .88$, $p = .38$. Similarly, there was no significant difference between the forced ($M = 4.12$, $SD = 1.38$) and non-forced ($M = 4.13$, $SD = 1.42$) conditions on positive affect, $t(509) = -.05$, $p = .96$.

**Table 7**

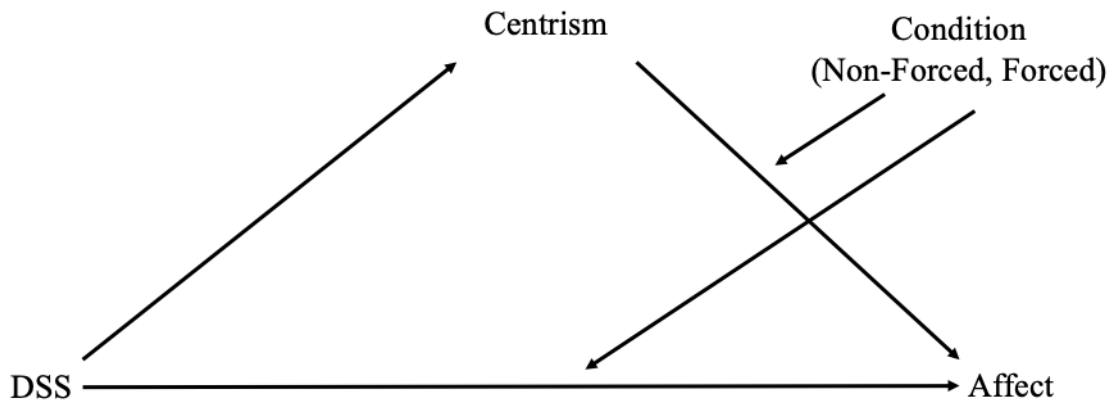*Descriptive Statistics and Correlations for Study 3*

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. DSS-Full | - | | | | | | | | | |
| 2. Tolerance of Contradiction | .84*** | - | | | | | | | | |
| 3. Cognitive Change | .91*** | .60*** | - | | | | | | | |
| 4. Behavioral Change | .80*** | .45*** | .70*** | - | | | | | | |
| 5. Centrism+ | -.26*** | -.25*** | -.26*** | -.13** | - | | | | | |
| 6. Political Importance | -.33*** | -.26*** | -.37*** | -.19*** | .57*** | - | | | | |
| 7. Dissonance | .30*** | .21*** | .25*** | .32*** | .16 | -.07 | - | | | |
| 8. Negative Affect | .27*** | .16*** | .25*** | .29*** | .09* | -.06 | .47*** | - | | |
| 9. Positive Affect | -.23*** | -.14** | -.19*** | -.29*** | -.01 | .08 | -.31*** | -.27*** | - | |
| 10. Embarrassment | .21*** | .12* | .21*** | .22*** | -.09* | -.07 | 5.2*** | -.56*** | -.17*** | - |
| *M (SD)* | 3.50 (.69) | 3.87 (.75) | 3.23 (.86) | 3.28 (.84) | 1.57 (.95) | 4.64 (1.65) | 2.09 (1.43) | 1.61 (1.40) | 4.13 (1.40) | 1.50 (.97) |

*p < .05, **p < .01, ***p < .001, +lower scores indicate a more centrist orientation

**Centrism and Forced Response Conflict Task.** To examine the hypothesis that centrists will experience more negative affect when they are prevented from using dialectical thinking strategies, a series of regression analyses were conducted using Model 15 in PROCESS (Hayes, 2018). See Figure 2 for a conceptual depiction of the model.

**Figure 2**

*Conceptual Depiction of Moderated Mediation Model for the Effect of Condition by Centrism and DSS in Study 3*



In the first analysis, DSS was entered as the predictor, political centrism was entered as the mediator, and dissonance was entered as the outcome. Additionally, condition was entered as a moderator of the DSS-dissonance path and the centrism-dissonance path. Political importance was entered as covariate. See Figure 3 for a depiction of the statistical model. DSS was a significant predictor of centrism, $B = -.11$, $SE = .05$, $p = .04$. Centrism was not a significant predictor of dissonance, $B = -.12$, $SE =$
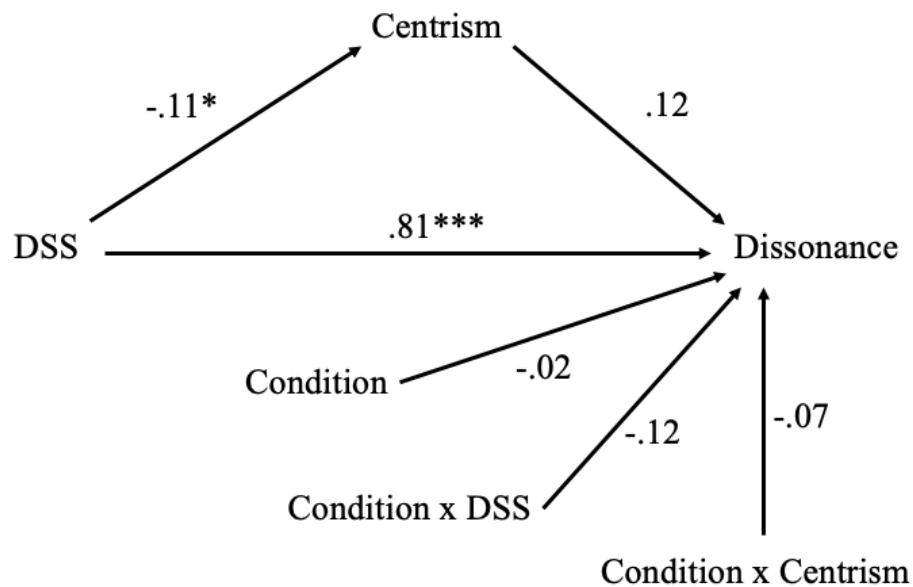
.21, *p* = .54, but DSS was significantly related to dissonance, *B* = .81, *SE* = .28, *p* = .04.

The interactions effects of DSS by condition, *B* = -.12, *SE* = .18, *p* = .51, and centrism by

condition, *B* = -.08, *SE* = .13, *p* = .56, on dissonance were not significant. The conditional

indirect effects of DSS on dissonance via centrism were not significant in the forced

condition, *B* = .01, *SE* = .02, CI [-.03, .04], or the non-forced condition, *B* = -.00, *SE* =

.01, CI [-.04, .02].

**Figure 3**

*Statistical Depiction of the Moderated Mediation Model Predicting Dissonance in Study*

*3*



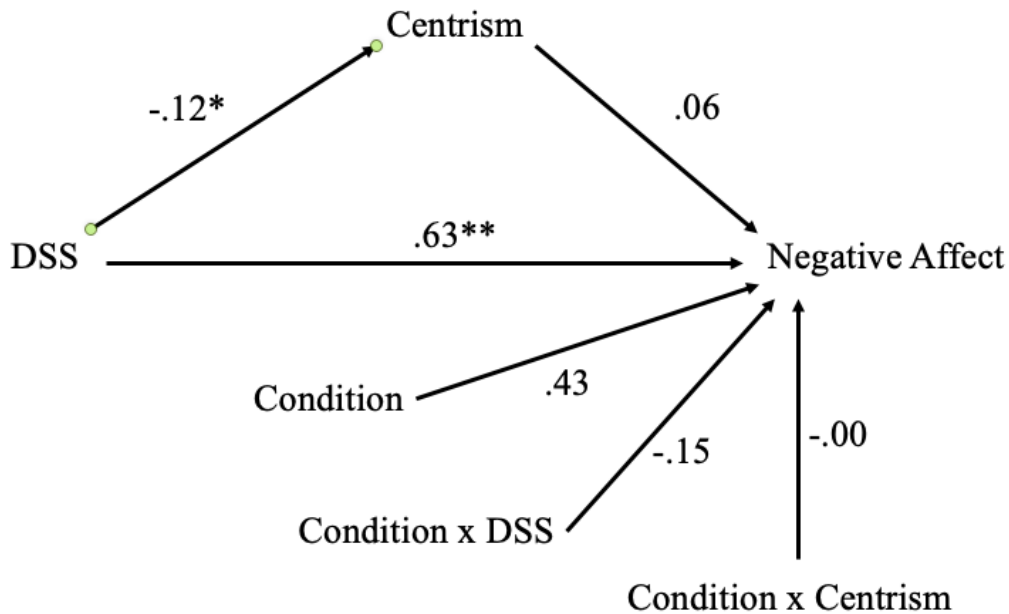*Note.* *p < .05, **p < .01, ***p < .001

In the second analysis, DSS was entered as the predictor, political centrism was entered as the mediator, and negative affect was entered as the outcome. Additionally, condition was entered as a moderator of the DSS-dissonance path and the centrism-dissonance path. Political importance was entered as covariate. See Figure 4 for a depiction of the statistical model. DSS was a significant predictor of centrism, $B = -.12$, $SE = .05$, $p = .03$. Centrism was not a significant predictor of negative affect, $B = -.06$, $SE = .16$, $p = .71$, but DSS was significantly related to negative affect, $B = .63$, $SE = .21$, $p < .001$. The interaction effects of DSS by condition, $B = -.15$, $SE = .14$, $p = .27$, and centrism by condition, $B = -.00$, $SE = .10$, $p = .97$, on negative affect were not significant. The conditional indirect effects of DSS on negative affect via centrism were not significant in the forced condition, $B = .01$, $SE = .01$, CI [-.01, .03], or the non-forced condition, $B = .01$, $SE = .01$, CI [-.01, .04].

**Figure 4**

*Statistical Depiction of the Moderated Mediation Model Predicting Negative Affect in*

*Study 3*
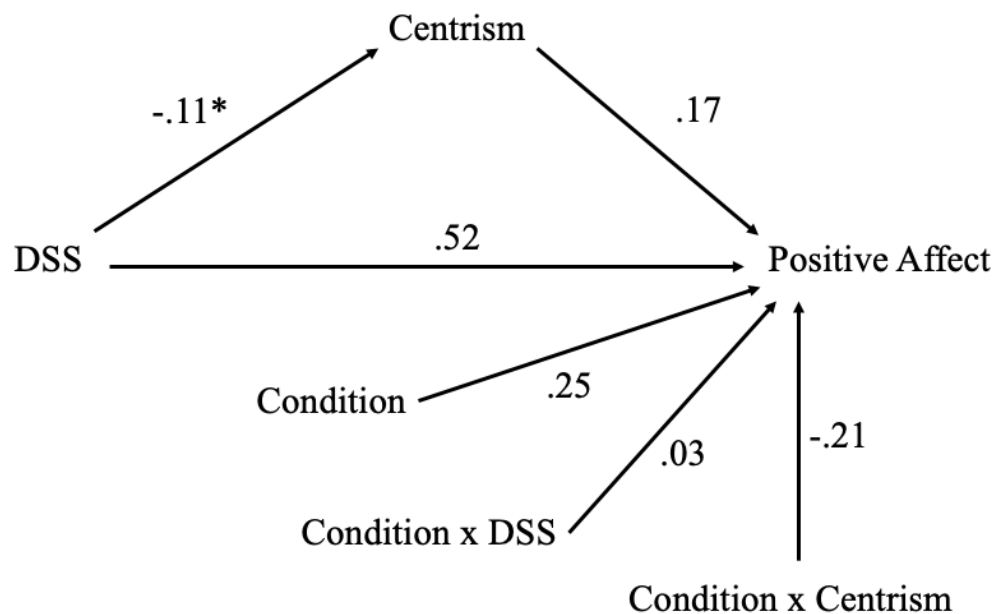


Note. *$p < .05$, **$p < .01$, ***$p < .001$

In the third analysis, DSS was entered as the predictor, political centrism was

entered as the mediator, and positive affect was entered as the outcome. Additionally,

condition was entered as a moderator of the DSS-dissonance path and the centrism-

dissonance path. Political importance was entered as covariate. See Figure 5 for a

depiction of the statistical model. DSS was a significant predictor of centrism, $B = -.11$,

$SE = .05$, $p = .04$. Centrism was not a significant predictor of positive affect, $B = .17$, $SE$

$= .21$, $p = .41$, but DSS was marginally related to positive affect, $B = -.52$, $SE = .28$, $p =$

.07. The interaction effects of DSS by condition, $B = .03$, $SE = .18$, $p = .87$, and centrism

by condition, *B* = -.21, *SE* = .13, *p* = .12, on positive affect were not significant. The

conditional indirect effects of DSS on positive affect via centrism were not significant in

the forced condition, *B* = .00, *SE* = .01, CI [-.02, .03], or the non-forced condition, *B* =

.02, *SE* = .02, CI [-.01, .07].

**Figure 5**

*Statistical depiction of the moderated mediation model predicting positive affect in Study*

*3*



Note. *p < .05, **p < .01, ***p < .001

*Discussion*

While Study 3 provides additional evidence for the association between

dialectical thinking and centrism, the primary hypotheses received no support. Centrism

was unrelated to affect and this did not change when participants were prevented or allowed to choose a compromise response. In contrast, dialectical thinking was associated with affect in all analyses. Interestingly, dialectical thinkers experienced more dissonance and negative affect, and less positive affect, than analytical thinkers, though this did not differ between conditions. Past research consistently shows that dialectical thinkers typically experience *less* negative affect in conflict scenarios (Cheng, 2009) and are better able to regulate those emotions (Lu et al., 2019). However, the current results should be interpreted with caution. Based on the means and standard deviations, the vast majority of participants scored below the midpoint on dissonance and negative affect. Additionally, most participants were at or around the midpoint on positive affect. One potential explanation of these lower affect scores is that the scenario was not threatening enough to evoke a sufficiently negative reaction from participants; even in the case of dissonance, when the condition had a significant effect, the differences were relatively small and restricted to the bottom end of the scale. In support of this explanation, the relationship between DSS and affect did not significantly differ between conditions. Past research has demonstrated that dialectical thinkers prefer compromise solutions (Koo et al., 2018; Peng & Nisbett, 1999). Because condition had no effect on the DSS-affect relationship, it is likely the manipulation did not sufficiently capture a forced choice scenario. Alternatively, the lower affect scores could be due to the measures themselves. Self-report measures of affect sometimes yield floor effects due to social desirability (Keeley et al., 2013) and this is could be especially true for measures that assess negative affect. Subtle measures of affect, such as the Implicit Positive and Negative Affect Test

(IPANAT; Quirin et al., 2018), might yield more variance and produce the predicted effects of compromise on affect for dialectical thinkers. Regardless of the cause of these low affect scores, restriction of range can present serious difficulties in detecting a relationship between variables (Wyse, 2015).

**Study 4**

The fourth study examined the potential behavioral consequences of the dialectical thinking-centrism relationship. In particular, I hypothesized that centrists should engage in conflict resolution strategies consistent with a dialectical thinking style more often than extremists. De Dreu and Knippenberg (2005) found that individuals who incorporate their positions into their self-concept are threatened by opposing arguments and engage in more competitive conflict resolution strategies. Similarly, partisans identify with their ideological position, using it to interpret their world, while centrists do not (Adams et al., 2017). Further, partisans perceive counterattitudinal positions or groups as a threat more often than centrists (van Prooijen et al., 2015). I expected that centrists' positions are not based in ideology per se and are instead a result of their dialectical cognitive style. Thus, centrists should be less likely to use competitive conflict resolution strategies, which involve employing attempts at persuasion, force, and entrenchment in one's position; such strategies are in opposition to dialectical thinking, which allows for contradiction, change, and fluidity in cognition. Further, centrists should be *more* likely to employ strategies that involve the incorporation of two or more opposing positions. According to the dual-concern model, both problem solving and compromise strategies involve equal consideration of the positions of the self and other

(De Dreu et al., 2001). Problem solving involves high concern for both self and other and entails determining each other's greater and lesser concerns and maximizing each other's *highest* priorities. Compromise involves moderate concern for self and other and thus is thought of as an attenuated version of problem solving where both parties cede ground to settle on a trade-off solution. If centrists are dialectical thinkers, they should favor these conflict resolution styles because they allow for the co-existence of opposing positions. In sum, I expected that political centrism would mediate the relationship between dialectical thinking and competitive conflict resolution strategies in a political conflict, such that greater centrism will leader to lesser use of this style. In contrast, I predicted that centrism would mediate the relationship between dialectical thinking and problem solving and compromise strategies, such that greater centrism would lead to *greater* use of these strategies in a political conflict.

### *Participants*

Participants were recruited via Prolific, an online survey service, to participate in an online survey in exchange for $1.27. Participants were limited to U.S. residents, and minority political identities were excluded (e.g., libertarians, communists). In the final sample, 401 participants ($M_{age}$ = 36.37, *SD* = 14.56; 47.9% women, 44.6% men, 7.5% other) were recruited. Participants were politically diverse (39.4% Liberal, 31.9% Conservative, 28.7% Moderate/Centrist).

*Procedure and Materials*

Participants completed the same dialectical thinking manipulation used in Study 1 and the same political orientation measures used in previous studies. Afterward, participants completed the Conflict Management Task.

**Dialectical Thinking Manipulation.** Participants completed the dialectical thinking manipulation task used in Study 1. The DSS showed acceptable reliability (DSS-Full, $\alpha = .90$).

**Political Measures.** Participants completed the same political measures used in previous studies including political orientation ($\alpha = .96$), identity, and importance.

**Conflict Management Task.** Participants read a short vignette about engaging in a conversation about politics with a co-worker that resulted in disagreement. The vignette read,

> "*Imagine that you are on lunch break at your place of work. You sit down next to a co-worker who you have never met before and strike up a conversation. This person is the same gender as you. During your conversation, you and your co-worker begin to talk about a current political issue. You and your co-worker end up getting into a debate and disagree with each other on this issue. In this part of the study, we are interested in how you would manage conflict in this situation. Please rate how likely you would be to do each of the following things if you and your co-worker disagreed on a political issue.*"

Afterward participants completed a series of questions assessing how they would resolve the conflict between the co-workers. These scales were developed by De Dreu et

al. (2001) and assess five different conflict styles, including competition (e.g., "I would push my own point of view."), compromising (e.g., "I would try to realize a middle-of-the-road solution."), problem solving (e.g., "I would examine ideas from both sides to find a mutually optimal solution."), avoiding (e.g., "I would try to avoid confrontation with the other person."), and yielding (e.g., "I would try to accommodate the other person."). Responses for all items ranged from 1 (very unlikely) to 7 (very likely). These scales showed acceptable reliability (competition, $\alpha = .76$; compromising, $\alpha = .85$; problem solving, $\alpha = .82$; avoiding, $\alpha = .75$; yielding, $\alpha = .79$)

### *Results*

The full DSS again showed a zero-order correlation with centrism. See Table 8 for descriptives and correlations. Additionally, a multiple regression analysis confirmed that the DSS remained a significant predictor of centrism ($B = -.16$, $SE = .05$, $p = .00$) when controlling for importance, $F(2, 398) = 89.17$, $p = .00$, $R^2 = .28$. As a manipulation check, an ANCOVA was conducted to examine the effect of condition on dialectical thinking, controlling for importance. Those in the always condition scored lower on the DSS ($M = 3.17$, $SE = .07$) than those in the sometimes condition ($M = 4.26$, $SE = .06$), $F(1, 398) = 143.49$, $p < .001$. A second ANCOVA was conducted to examine the effect of condition on centrism scores, controlling for importance. There was no significant difference in centrism between the always condition ($M = 1.98$, $SE = .08$) and the sometimes condition ($M = 1.85$, $SE = .08$), $F(1, 398) = 1.43$, $p = .23$.

**Table 8**

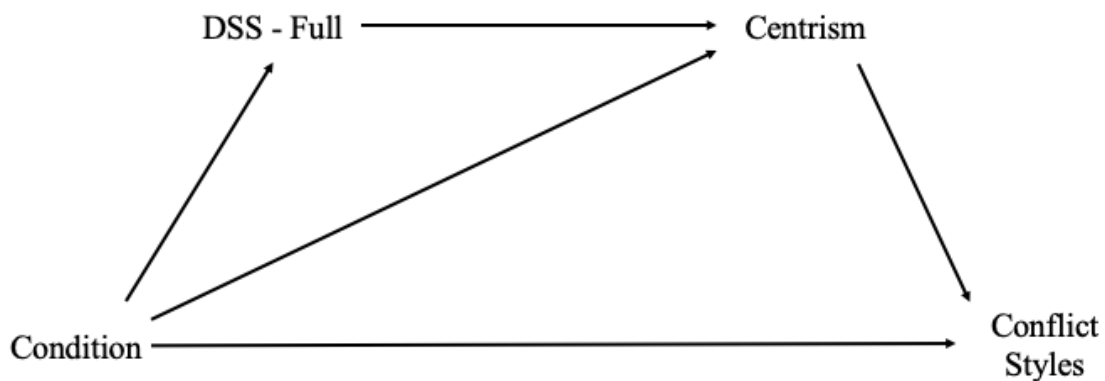*Descriptive Statistics and Correlations for Study 4*

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| 1. DSS-Full | - | | | | | | | |
| 2. Avoiding | .13** | - | | | | | | |
| 3. Yielding | .45*** | .30*** | - | | | | | |
| 4. Competing | -.01 | -.39*** | -.03 | - | | | | |
| 5. Compromising | .35*** | .25*** | .43*** | .04 | - | | | |
| 6. Problem Solving | .26*** | .14** | .30*** | .11* | .72*** | - | | |
| 7. Centrism⁺ | -.22*** | -.12* | -.24*** | .13** | -.24*** | -.18*** | - | |
| 8. Political Importance | -.17*** | -.14** | -.21*** | .24*** | -.17** | -.06 | .52*** | - |
| *M (SD)* | 3.73 | 5.09 | 3.10 | 3.69 | 4.19 | 4.51 | 1.91 | 6.72 |
| | (1.07) | (1.15) | (1.15) | (1.21) | (1.32) | (1.20) | (1.25) | (1.57) |

*p < .05, **p < .01, ***p < .001, ⁺lower scores indicate a more centrist orientation

To investigate the indirect effect of dialectical thinking on conflict style via political centrism, a series of three mediation analyses were conducted using Model 6 in PROCESS (Hayes, 2018). See Figure 6 for a depiction of the models. Similar to Study 1, it would not be appropriate to use the DSS scores a mediator if the relationship between DSS scores and centrism differed between conditions. As such, I tested if there was an interaction between DSS and condition on centrism using Model 1 in PROCESS (Hayes, 2018). The results showed that the interaction between DSS and condition on centrism was not significant, $B = -.17$, $SE = .11$, $p = .14$, indicating that the effect of DSS on centrism was not significantly different between conditions. As such, the mediation analyses using Model 6 in PROCESS are reported below.

**Figure 6**

*Depiction of mediational models for the effect of condition on conflict style, via DSS and centrism in Study 4*

In the first analysis condition was entered as the predictor, DSS was entered as the first mediator (predicted by condition only), centrism was entered as the second mediator (predicted by condition and DSS), and competitive conflict style was entered as the outcome (predicted by condition, DSS, and centrism); additionally, political importance was entered as a covariate. Condition was a significant predictor of DSS, $B = 1.09$, $SE = .09$, $p = .00$, but was not a significant predictor of centrism, $B = .07$, $SE = .12$, $p = .60$. However, DSS was a significant predictor of centrism, $B = -.18$, $SE = .06$, $p = .00$. However, in the final step of the mediation, none of the predictors significantly predicted competitive conflict style (all $ps > .05$).

In the second analysis, condition was entered as the predictor, DSS was entered as the first mediator (predicted by condition only), centrism was entered as the second mediator (predicted by condition and DSS), and compromise conflict style was entered as the outcome; additionally, political importance was entered as a covariate. Again, condition was a significant predictor of DSS, $B = 1.09$, $SE = .09$, $p = .00$, but condition had no effect on centrism, $B = .07$, $SE = .12$, $p = .60$. DSS was a significant predictor of centrism, $B = -.18$, $SE = .06$, $p = .00$. In the final step of the mediation, condition, $B = -.55$, $SE = .14$, $p = .00$, DSS, $B = .51$, $SE = .07$, $p = .00$, and centrism, $B = -.16$, $SE = .06$, $p < .001$, were significant predictors of compromise conflict style. A test of the indirect effect of condition on compromise via DSS and centrism using a bootstrapped estimation approach with 1000 samples was significant, $B = .03$, $SE = .02$, $CI = .01, .07$.

In the final analysis, condition was entered as the predictor, DSS was entered as the first mediator (predicted by condition only), centrism was entered as the second

mediator (predicted by condition and DSS), and problem-solving conflict style was entered as the outcome; additionally, political importance was entered as a covariate. Again, condition was a significant predictor of DSS, $B = 1.09$, $SE = .09$, $p < .001$, but condition had no effect on centrism, $B = .07$, $SE = .12$, $p = .60$. DSS was a significant predictor of centrism, $B = -.18$, $SE = .06$, $p = .00$. In the final step of the mediation, condition, $B = -.36$, $SE = .13$, $p = .00$, DSS, $B = .36$, $SE = .06$, $p = .00$, and centrism, $B = -.15$, $SE = .05$, $p = .00$, were significant predictors of problem-solving conflict style. A test of the indirect effect of condition on problem solving via DSS and centrism using a bootstrapped estimation approach with 1000 samples was significant, $B = .03$, $SE = .02$, $CI = .00, .06$.

## *Discussion*

Study 4 again replicated the relationship between dialectical thinking and centrism. Additionally, this study replicated the results of Study 1. Manipulating dialectical thinking successfully affected scores on the dialectical self scale, but the same manipulation of dialectical thinking did not affect more centrist political orientations. Thus, the primary hypotheses of this study were only partially confirmed. Participants who scored higher on dialectical thinking reported a more centrist political orientation. This more centrist orientation was in turn was related to greater use of conflict management styles that accounted for both parties of the conflict (problem solving and compromise styles). Though centrism showed a small zero-order correlation with competitive conflict style, dialectical thinking was not related to competition; when entered into the mediation analysis, neither centrism nor dialectical thinking were related

to competitive conflict style. This finding is unexpected for several reasons. First,

dialectical thinkers, compared to analytical thinkers, tend *not* to use "either-or" strategies

that emphasize one position over another, which is a key feature of the competitive

conflict style that forces one's viewpoint on another (De Dreu et al., 2001; Peng &

Nisbett, 1999). Second, extremists, compared to centrists, tend to be less tolerant of

others' attitudes (van Prooijen & Krouwel, 2019) and such intolerance typically leads to

more forceful behavioral intentions (van Prooijen & Krouwel, 2017), which could be

argued are analogous to a competitive conflict style.

**General Discussion**

Across the four primary studies, those who thought dialectically (vs. analytically) were more likely to report a centrist political orientation. This relationship was consistent across all studies and held for each subscale of dialectical thinking as well ($r$s were typically around -.25 but ranged from -.13 to -.42). With the exception of the exploratory study, this relationship held when controlling for political importance, supporting the notion that dialecticism is related to "true" centrism. However, Studies 1 and 4 failed to provide evidence of a causal relationship between dialectical thinking and centrist political orientation. Though the manipulations successfully affected dialectical thinking, and measures of dialectical thinking were related to centrism in the expected direction, manipulations of dialectical thinking did not cause participants to take a more centrist political orientation.

By accounting for the measurement issue regarding centrists and by experimentally manipulating dialectical thinking, the present research provides a clearer picture of who "true" centrists are with regard to one important psychological characteristic: centrists are dialectical thinkers. Individuals can respond as "centrist" for a variety of reasons. While some who identify as centrist actually hold moderate political attitudes and policy preferences, others may identify as centrist as a kind of "non-answer" (Rodon, 2015). In other words, this latter group might instead be more accurately described as "political nones" that do not hold clear or strong opinions on political topics. Most of the previous literature on political centrism fails to take into account that unidimensional political orientation items can potentially conflate those who hold true

centrist beliefs with those who do not feel strongly about politics. By controlling for political importance, the present line of research is one of few that accurately illustrates the psychology of "true centrists". In four of the five studies reported, dialectical thinking was significantly associated with political centrism controlling for importance. To my knowledge, this is the first line of research to demonstrate this relationship.

Study 4 also provides evidence that the relationship between dialectical thinking and centrism is associated with theoretically relevant and practically important behavioral intentions. Those who reported a more dialectical thinking style, compared to analytical thinking style, were more likely to be centrist and engage in problem solving and compromise conflict management styles. These conflict management styles are thought to be endorsed when one is equally concerned about the positions of both parties of a conflict, albeit to different degrees (De Dreu et al., 2001). Dialectical thinkers tend to engage in similar "compromise" strategies when confronted with two opposing propositions (Peng & Nisbett, 1999). In the context of the present study, dialectical thinkers were more centrist, and centrists were more likely to engage in these types of strategies in a hypothetical argument with someone who holds dissimilar political attitudes. The fact that centrists were reporting behavioral intentions that are concerned with reconciling two opposing viewpoints not only supports the novel theoretical link between dialectical thinking and centrism, but also has important practical consequences. The current U.S. political climate is highly polarized, and such polarization is leading to strong negative attitudes toward the outgroup from both the left and right (Dimock et al., 2014). While there are some polarized issues where there is clearly a correct position

(e.g., the existence of climate change), the dialectical strategies favored by centrists may provide a potential path for reaching sociopolitical environment without excessive conflict. This possibility warrants further investigation. Future research might examine the extent to which dialectical strategies can successfully "de-polarize" the positions of extremists. For example, experimentally inducing liberals and conservatives to reach their existing positions on an issue using dialectical strategies might make them more amenable to dialectical thinking in general, and lead to less extreme positions overall.

Unexpectedly, dialectical thinkers and centrists were *not* more or less likely to engage in what could be considered a very "un-dialectical" strategy, competition, than analytical thinkers or extremists. Competitive conflict management styles involve emphasizing only one's own point of view, to the point of being forceful and pushy. Past research has shown that tendencies in which only one side is taken in an argument are more common among analytical thinkers than dialectical thinkers (Peng & Nisbett, 1999). Further, extremists are more likely to express intolerance of other's attitudes, which is usually associated with subsequently intolerant behaviors and behavioral intentions (van Prooijen & Krouwel, 2017). Thus, the lack of a relationship between dialectical cognitive style, centrism, and competition in Study 4 conflicts not only with predictions made by the present research, but previous findings as well.

The present research did not find support for the proposed mechanisms explaining the relationship between dialectical cognitive style and centrism. I proposed that dialectical thinkers are more likely to take centrist political positions because such a cognitive style emphasizes taking "compromise" approaches that attempt to retain

elements of two opposing propositions (Koo et al., 2018). Additionally, there is evidence that centrists are affected by environmental anchors, while extremists are not (Brandt et al., 2015); extreme messages tend to have a moderating effect in general (Conroy-Krutz & Moehler, 2015; Simonivits, 2016), and if centrists are especially sensitive to such information, then opposing propositions should have a greater effect on them. However, when the anchors of various issues, in the form of the "average liberal" and the "average conservative," were systematically shifted, centrists maintained a position in the absolute center of the scale, rather than the center of the anchors. There are several possibilities for this null result. First, it might be that, though centrists are dialectical thinkers, their political positions represent truly centrist attitudes, rather than attitudes that are primarily a function of their social environment. The role of anchors in centrists' political attitudes warrants further study, as it has important implications. If centrists are dialectical thinkers, as is indicated by the current research, the contexts in which anchors affect their political positions might affect the degree to which centrists shift their attitudes. It is possible, for example, that only long term, global shifts in the left-right positions of one's political environment may cause centrists to shift to maintain a position equidistant from the anchors. Small, situationally based manipulations like what was used in Study 2 may not impact centrists' policy preferences. Instead, chronic changes in political anchors (the average position of the left and right groups in one's social environment) might be necessary to shift centrists' attitudes.

However, the manipulation used in Study 2 also failed to shift the positions of liberals and conservatives. These groups typically maintain attitudes consistent with cues

from their in-group (Ditto et al., 2019). For example, both liberals and conservatives can be made to agree with the same policy if it is described as "liberal" or "conservative" (Grewenig et al., 2020). Because there was no movement among any political identity, it is likely that the manipulation used in Study 2 was not effective. To maintain the realism of the stimuli, the anchors were only shifted 2.5 points on an 11-point scale; it would be unrealistic, for example, to indicate that the "average conservative" is quite moderate on affirmative action issues. It is possible that an alternative short-term experimental manipulation that allows for greater shifts between the control condition and a shifted condition would more effectively manipulate the positions of political groups. One alternative might employ the "average liberal/conservative" preferences for the budgets of welfare programs or the military, rather than self-report items, as the scale of these could be shifted more dramatically from condition to condition without creating realism issues.

The present research also failed to provide evidence for the link between centrism and the use of dialectical strategies to resolve threat. Centrism was unrelated to affect, and this did not change when individuals were prevented or allowed to use a dialectical "compromise" response. Unexpectedly, dialectical cognitive style showed zero-order relationships with each affect outcome in the opposite direction than was predicted. Dialectical thinkers, compared to analytical thinkers, showed more negative affect, less positive affect, and more dissonance. This not only contrasts with the predictions of the present research, but with most evidence on dialectical thinking and emotion. Dialectical thinkers usually experience less negative affect than analytical thinkers and are better

able to regulate that affect when they *do* experience it. For example, dialectical thinkers tend to be more flexible in their choice of coping strategies for stressful events and tend to choose strategies that better fit the demands of the situation (Cheng, 2009). One potential issue may help explain both the null findings; specifically, the conflict scenario used in Study 3 may not have been sufficiently distressing to participants. All participants within one standard deviation of the mean for negative affect and dissonance fell below the midpoint on the scale, indicating floor effects for these measures. Participants also fell around the midpoint on positive affect. In other words, most participants felt fairly neutral in response to this scenario. Restriction of range in outcome measures can make detecting effects difficult or impossible (Wyse, 2015). Thus, Study 3 may not have provided an appropriate test of the hypotheses; a manipulation that sufficiently evokes a range of responses in response to political conflict might better indicate whether or not dialectical strategies resolve threat for political centrists.

**Future Directions**

As with any novel findings, the link between dialectical thinking and political centrism should be replicated with alternative methods and by other researchers. Future researchers might consider using such alternative measures of dialectical thinking to examine whether the dialectical thinking-centrism relationship replicates with those scales. This research failed to find a causal relationship between dialectical thinking and centrism. However, dialectical thinking has been manipulated in a variety of ways (Cheng, 2009). Future research might investigate whether these methods might successfully show a causal relationship between dialectical thinking and centrism.

Importantly, the mechanisms that lead dialectical thinkers to reach centrist political

positions remains an unresolved issue. Future research might address the degree to which,

and the contexts in which, left and right anchors play a role in dialectical thinkers

reaching centrist positions. More impactful manipulations that provide a larger range of

movement on issues might be able to demonstrate how short-term, situationally based

shifts in anchors can cause centrists to shift in order to maintain their moderate position.

Additionally, longitudinal studies might be able to reveal an effect of more global, long-

term changes in the anchors of one's political environment on centrists' attitude changes.

How dialectical thinking affects centrists' affect also remains unresolved. Future

investigations could investigate how the use of compromise strategies affects centrists'

affect using implicit measures. Such measures have many advantages over self-reported

affect (Quirin et al., 2018).

## Conclusion

The present research provides the first evidence that centrists display an important psychological characteristic not shown by partisans: a dialectical cognitive style. Dialectical thinking was consistently associated with a more centrist political orientation. However, manipulations of dialectical thinking failed to provide evidence of a direct causal relationship. The dialectical thinking-centrism relationship had associations with theoretically and practically important behavioral intentions (conflict management styles). Despite this, many steps remain in the investigation of these relationships. In particular, future research should continue to investigate the potential causal relationship between dialectical thinking and centrism and that relationship's relevant mechanisms, so as to advance understanding of how and why centrist attitudes and identities are formed.

.

## References

Adams, J., Engstrom, E., Joeston Martin, D., Stone, W. J., Rogowski, J., & Shor, B.

    (2017). Do moderate voters weigh candidates' ideologies? Voters' decision rules

    in the 2010 congressional elections. *Political Behavior, 39*(1), 205–227.

    https://doi-org.proxy.library.ohio.edu/10.1007/s11109-016-9355-7

Ahler, D. J., Roush, C. E., & Sood, G. (2020). The micro-taks market for lemons: Data

    quality on Amazon's Mechanical Turk. *Presented at the 12$^{th}$ Annual NYU-CESS*

    *Experimental Political Science Conference, February 8, 2019.*

    http://www.gsood.com/ research/papers/turk.pdf?source=post_page

Altemeyer, B. (2002). Dogmatic behavior among students: Testing a new measure of

    dogmatism. *The Journal of Social Psychology, 142*(6), 713–721. https://doi-

    org.proxy.library.ohio.edu/10.1080/00224540209603931

Azevedo, F., Jost, J. T., Rothmund, T., & Sterling, J. (2019). Neoliberal ideology and the

    justification of inequality in capitalist societies: Why social and economic

    dimensions of ideology are intertwined. *Journal of Social Issues, 75*(1), 49–88.

    https://doi-org.proxy.library.ohio.edu/10.1111/josi.12310

Baker, J. O., & Smith, B. (2009). None too simple: Examining issues of religious

    nonbelief and nonbelonging in the United States. *Journal for the Scientific Study*

    *of Religion, 48*(4), 719–733. https://doi-

    org.proxy.library.ohio.edu/10.1111/j.1468-5906.2009.01475.x

Brandt, M. J., Evans, A. M., & Crawford, J. T. (2015). The unthinking or confident

    extremist? Political extremists are more likely than moderates to reject

experimenter-generated anchors. *Psychological Science, 26*(2), 189–202.

https://doi-org.proxy.library.ohio.edu/10.1177/0956797614559730

Brown, C. M., Goto, N., Tsukamoto, S., & Karasawa, M. (2020). Understanding

collective guilt: Tolerance for contradiction and state-trait dissociations in

perceived overlap between ingroup members. *Current Psychology: A Journal for

Diverse Perspectives on Diverse Psychological Issues.* https://doi-

org.proxy.library.ohio.edu/10.1007/s12144-020-00684-6

Butz, S., Kieslich, P. J., & Bless, H. (2017). Why are conservatives happier than liberals?

Comparing different explanations based on system justification, multiple group

membership, and positive adjustment. *European Journal of Social Psychology,

47*(3), 362–372. https://doi-org.proxy.library.ohio.edu/10.1002/ejsp.2283

Čavojová, V., Šrol, J., & Adamus, M.  (2017). My point is valid, yours is not: Myside

bias in reasoning about abortion. *The Journal of Cognitive Psychology, 30*(7),

656-669. https://doi-org.proxy.library.ohio.edu/10.1080/20445911.2018.1518961

Cheng, C. (2009). Dialectical thinking and coping flexibility: A multimethod approach.

*Journal of Personality, 77*(2), 471-494. https://doi-

org.proxy.library.ohio.edu/10.1111/j.1467-6494.2008.00555.x

Choi, I., Dalal, R., Kim-Prieto, C., & Park, H. (2003). Culture and judgment of causal

relevance. *Journal of Personality & Social Psychology, 84*(1), 46-59.

http://dx.doi.org/10.1037/0022-3514.84.1.46

Choi, I., Koo, M., & Choi, J. (2007). Individual differences in analytic versus holistic thinking. *Personality & Social Psychology Bulletin. 33*. 691-705. https://doi.org/10.1177/0146167206298568

Cialdini, R. B., Trost, M. R., & Newsom, J. T. (1995). Preference for consistency: The development of a valid measure and the discovery of surprising behavioral implications. *Journal of Personality and Social Psychology, 69*(2), 318–328. https://doi-org.proxy.library.ohio.edu/10.1037/0022-3514.69.2.318

Cohen, G. L. (2003). Party over policy: The dominating impact of group influence on political beliefs. *Journal of Personality and Social Psychology, 85*(5), 808–822. https://doi-org.proxy.library.ohio.edu/10.1037/0022-3514.85.5.808

Conway, L. G. III, Thoemmes, F., Allison, A. M., Towgood, K. H., Wagner, M. J., Davey, K., Salcido, A., Stovall, A. N., Dodds, D. P., Bongard, K., & Conway, K. R. (2008). Two ways to be complex and why they matter: Implications for attitude strength and lying. *Journal of Personality and Social Psychology, 95*(5), 1029–1044. https://doi-org.proxy.library.ohio.edu/10.1037/a0013336

Conroy-Krutz, J. and Moehler, D. C. . (2015). Moderation from bias: A field experiment on partisan media in a new democracy. *Journal of Politics, 77*(2). 575-587

Cheng, C. (2009). Dialectical thinking and coping flexibility: A multimethod approach. *Journal of Personality, 77*(2), 471–494. https://doi-org.proxy.library.ohio.edu/10.1111/j.1467-6494.2008.00555.x

De Dreu, C. K. W., Evers, A., Beersma, B., Kluwer, E. S., & Nauta, A. (2001). A theory-based measure of conflict management strategies in the workplace. *Journal of

*Organizational Behavior, 22*(6), 645–668. https://doi-

org.proxy.library.ohio.edu/10.1002/job.107

De Dreu, C. K. W., & van Knippenberg, D. (2005). The possessive self as a barrier to

conflict resolution: Effects of mere ownership, process accountability, and self-

concept clarity on competitive cognitions and behavior. *Journal of Personality

and Social Psychology, 89*(3), 345–357. https://doi-

org.proxy.library.ohio.edu/10.1037/0022-3514.89.3.345

de Witte, M. (2019, December 11). *Are search results biased along partisan lines?*

Stanford Engineering Magazine.

https://engineering.stanford.edu/magazine/article/are-search-results-biased-along-

partisan-lines

Dimock, M., Kiley, J., Keeter, S., & Doherty, C. (2014). *Political polarization in the

American public: How increasing ideological uniformity and partisan antipathy

affect politics, compromise and everyday life.* Pew Research Center.

https://www.pewresearch.org/ politics/wp-content/uploads/sites/4/2014/06/6-12-

2014-Political-Polarization-Release.pdf

Ditto, P. H., Liu, B. S., Clark, C. J., Wojcik, S. P., Chen, E. E., Grady, R. H., Celniker, J.

B., & Zinger, J. F. (2019). At least bias is bipartisan: A meta-analytic comparison

of partisan bias in liberals and conservatives. *Perspectives on Psychological

Science, 14*(2), 273–291. https://doi.org/10.1177/1745691617746796

Duff, B. R.-L., & Sar, S. (2015). Seeing the big picture: Multitasking and perceptual

    processing influences on ad recognition. *Journal of Advertising, 44*(3), 173–184.

    https://doi-org.proxy.library.ohio.edu/10.1080/00913367.2014.967426

Elliot, A. J., & Devine, P. G. (1994). On the motivational nature of cognitive dissonance:

    Dissonance as psychological discomfort. *Journal of Personality and Social*

    *Psychology, 67*(3), 382-394. https://doi-org.proxy.library.ohio.edu/ 10.1037/0022-

    3514.67.3.382

Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G*Power 3: A flexible

    statistical power analysis program for the social, behavioral, and biomedical

    sciences. *Behavior Research Methods, 39*, 175-191.

Feinberg, M., Wehling, E., Chung, J. M., Saslow, L. R., & Melvær Paulin, I. (2020).

    Measuring moral politics: How strict and nurturant family values explain

    individual differences in conservatism, liberalism, and the political middle.

    *Journal of Personality and Social Psychology, 118*(4), 777–804. https://doi-

    org.proxy.library.ohio.edu/10.1037/pspp0000255.supp (Supplemental)

Gottleib, P. (2019). *Aristotle on non-contradiction.* Stanford Encyclopedia of Philosophy.

    Retrieved from https://plato.stanford.edu/entries/aristotle-noncontradiction/

Grewenig, E., Lergetporer, P., Werner, K., & Woessmann, L. (2020). Do party positions

    affect the public's policy preferences? Experimental evidence on support for

    family policies. *Journal of Economic Behavior & Organization, 179*, 523–543.

    https://doi-org.proxy.library.ohio.edu/10.1016/j.jebo.2020.09.006

Hawkins, C. B., & Nosek, B. A. (2012). Motivated independence? Implicit party identity predicts political judgments among self-proclaimed independents. *Personality and Social Psychology Bulletin, 38*(11), 1437–1452. https://doi.org/10.1177/0146167212452313

Hayes, A. F. (2018). Introduction to mediation, moderation, and conditional process analysis: A regression-based approach. Guilford Press

Holbrook, T. M ., & Mcclurg, S. (2005). The mobilization of core supporters: Campaigns, turnout and electoral composition in United States presedential elections. *American Journal of Political Science, 49* (4). 689-703. https://doi-org.proxy.library.ohio.edu 10.1111/j.1540-5907.2005.00149.x

Jost, J. J., Napier, J. L., Thorisdottir, H., Gosling, S. D., Pafai, T. P., & Ostafin, B. (2007). Are needs to manage uncertainty and threat associated with political conservatism or ideological extremity? Personality and Social Psychology Bulletin, 33, 989-1007 https://doi-org.proxy.library.ohio.edu/10.1177/0146167207301028

Jost, J. T., Glaser, J., Kruglanski, A. W., & Sulloway, F. J. (2003). Political conservatism as motivated social cognition. *Psychological Bulletin, 129*(3), 339-375. https://doi-org.proxy.library.ohio.edu/10.1037/0033-2909.129.3.339

Jost, J. T. (2006). The end of the end of ideology. *American Psychologist, 61*(7), 651-670. https://doi-org.proxy.library.ohio.edu/10.1037/0003-066X.61.7.651

Keeley, J. W., English, T., Irons, J., & Henslee, A. M. (2013). Investigating halo and ceiling effects in student evaluations of instruction. *Educational and*

*Psychological Measurement, 73*(3), 440–457. https://doi-org.proxy.library.ohio.edu/ 10.1177/0013164412475300

Klar, S. (2014). A multidimensional study of ideological preferences and priorities among the American public. *Public Opinion Quarterly, 78*(Supp 1), 344–359. https://doi-org.proxy.library.ohio.edu/10.1093/poq/nfu010

Koo, M., Choi, J. A., & Choi, I. (2018). Analytic versus holistic cognition: Constructs and measurement. In J. Spencer-Rodgers & K. Peng (Eds.), *The psychological and cultural foundations of East Asian cognition: Contradiction, change, and holism* (p. 105–134). Oxford University Press.

Kruglanski, A. W. (1990). Motivations for judging and knowing: Implications for causal attribution. In E. T. Higgins & R. M. Sorrentinio (Eds.), *The handbook of motivation and cognition: Foundation of social behavior (Vol. 2)* (pp. 333–368). New York: Guilford Press.

Kruglanski, A. W., Atash, M. N., DeGrada, E., Mannetti, L., Pierro, A., & Webster, D. M. (1997). Psychological theory testing versus psychometric nay-saying: Comment on Neuberg et al's (1997) critique of the Need for Closure Scale. *Journal of Personality and Social Psychology, 73*(5), 1005–1016. https://doi-org.proxy.library.ohio.edu/10.1037/0022-3514.73.5.1005

Laustsen, L. (2017). Choosing the right candidate: Observational and experimental evidence that conservatives and liberals prefer powerful and warm candidate personalities, respectively. *Political Behavior, 39*(4), 883–908. https://doi-org.proxy.library.ohio.edu/10.1007/s11109-016-9384-2

Leone, C., Wallace, H. M., & Modglin, K. (1999). The need for closure and the need for structure: Interrelationships, correlates, and outcomes. *The Journal of Psychology: Interdisciplinary and Applied, 133*(5), 553–562. https://doi-org.proxy.library.ohio.edu/10.1080/00223989909599762

Lu, M., Yang, X., Fung, H. H., & Hamamura, T. (2019). Is positive emotion an amplifier or a buffer? It depends: Dialectical thinking moderates the impact of positive emotion on intergroup conflicts. *Emotion.* https://doi-org.proxy.library.ohio.edu/10.1037/emo0000572.supp

Mulligan, K. (2013). Variability or moderation? The effects of ambivalence on political opinions. *Political Behavior, 35*(3), 539–565. https://doi-org.proxy.library.ohio.edu/10.1007/s11109-012-9199-8

Neuberg, S. L., & Newsom, J. T. (1993). Personal need for structure: Individual differences in the desire for simpler structure. *Journal of Personality and Social Psychology, 65*(1), 113–131. https://doi.org/10.1037/0022-3514.65.1.113

Neuberg, S. L., Judice, T. N., & West, S. G. (1997). What the Need for Closure Scale measures and what it does not: Toward differentiating among related epistemic motives. *Journal of Personality and Social Psychology, 72*(6), 1396–1412. https://doi-org.proxy.library.ohio.edu/10.1037/0022-3514.72.6.1396

Peng, K., & Nisbett, R. E. (1999). Culture, dialectics, and reasoning about contradiction. *American Psychologist, 54*(9), 741–754. https://doi-org.proxy.library.ohio.edu/10.1037/0003-066X.54.9.741

Peng, K., Spencer-Rodgres, J., & Zhong, N. (2006). Naïve dialecticism and the Tao of Chinese thought. in U. Kim & K.S. Yang (Eds.), *Handbook of indigenous and cultural psychology* (pp. 247-262). Oxford, UK: Oxford University Press.

Quirin, M., Wróbel, M., Norcini Pala, A., Stieger, S., Brosschot, J., Kazén, M., Hicks, J. A., Mitina, O., Shanchuan, D., Lasauskaite, R., Silvestrini, N., Steca, P., Padun, M. A., & Kuhl, J. (2018). A cross-cultural validation of the Implicit Positive and Negative Affect Test (IPANAT): Results from ten countries across three continents. *European Journal of Psychological Assessment, 34*(1), 52–63. https://doi-org.proxy.library.ohio.edu/ 10.1027/1015-5759/a000315

Rodon, T. (2015). Do all roads lead to the center? The unresolved dilemma of centrist self-placement. *International Journal of Public Opinion Research, 27*(2), 177–196. https://doi-org.proxy.library.ohio.edu/10.1093/ijpor/edu028

Rokeach, M. (1956). Political and religious dogmatism: An alternative to the authoritarian personality. *Psychological Monographs: General and Applied, 70*(18), 1–43. https://doi-org.proxy.library.ohio.edu/10.1037/h0093727

Salancik, G. R., & Conway, M. (1975). Attitude inferences from salient and relevant cognitive content about behavior. *Journal of Personality and Social Psychology, 32*(5), 829–840. https://doi-org.proxy.library.ohio.edu/10.1037/0022-3514.32.5.829

Schneider, F. M., Otto, L., Alings, D., & Schmitt, M. (2014). Measuring traits and states in public opinion research: A latent state–trait analysis of political efficacy.

*International Journal of Public Opinion Research, 26*(2), 202–223. https://doi-
org.proxy.library.ohio.edu/10.1093/ijpor/edu002

Seibert, S. M., & Wheelan, C. (2017). Moderates and centrists are mad as hell at both
parties. Retrieved from https://www.thedailybeast.com/moderates-and-centrists-
are-mad-as-hell-at-both-parties

Simonovits, G. (2017). Centrist by comparison: Extremism and the expansion of the
political spectrum. *Political Behavior, 39*(1), 157–175. https://doi-
org.proxy.library.ohio.edu/10.1007/s11109-016-9351-y

Spaccatini, F., Pancani, L., Richetin, J., Riva, P., & Sacchi, S. (2021). Individual
cognitive style affects flood-risk perception and mitigation intentions. *Journal of
Applied Social Psychology, 51*(3), 208–218. https://doi-
org.proxy.library.ohio.edu/10.1111/jasp.12726

Spencer-Rodgers, J., Peng, K., Wang, L., & Hou, Y. (2004). Dialectical self-esteem and
East-West differences in psychological well-being. *Personality and Social
Psychology Bulletin, 30*(11), 1416–1432. https://doi-
org.proxy.library.ohio.edu/10.1177/0146167204264243

Spencer-Rodgers, J., Boucher, H. C., Mori, S. C., Wang, L., & Peng, K. (2009). The
dialectical self-concept: Contradiction, change, and holism in East Asian cultures.
*Personality and Social Psychology Bulletin, 35*(1), 29–44. https://doi-
org.proxy.library.ohio.edu/10.1177/0146167208325772

Spencer-Rodgers, J., Srivastava, S., Boucher, H. C., English, T., Paletz, S. B., & Peng, K. (2015). The dialectical self scale. Unpublished manuscript, California Polytechnic State University, San Luis Obispo.

Spencer-Rodgers, J., Anderson, E., Ma-Kellams, C., Wang, C., & Peng, K. (2018). What is dialectical thinking? Conceptualization and measurement. In J. Spencer-Rodgers & K. Peng (Eds.), *The psychological and cultural foundations of East Asian cognition: Contradiction, change, and holism.* (pp. 1–34). Oxford University Press.

Suedfeld, P., Tetlock, P. E., & Streufert, S. (1992). Conceptual/integrative complexity. In C. P. Smith (Ed.), *Motivation and personality: Handbook of thematic content analysis* (pp. 393–400). Cambridge, MA: Cambridge University Press.

Toner, K., Leary, M. R., Asher, M. W., & Jongman-Sereno, K. P. (2013). Feeling superior is a bipartisan issue: Extremity (not direction) of political views predicts perceived belief superiority. *Psychological Science, 24*(12), 2454–2462. https://doi.org/10.1177/0956797613494848

Tsukamoto, S., Holland, E., Haslam, N., Karasawa, M., & Kashia, Y. (2015). Cultural differences in perceived coherence of the self and ingroup: A Japan-Australia comparison. *Asian Journal of Social Psychology, 18*(1), 83-89. https://doi.org/10.1111/ajsp.12090

Vancouver, J. B., & Carlson, B. W. (2015). All things in moderation, including tests of mediation (at least some of the time*). Organizational Research Methods, 18*(1), 70–91. https://doi-org.proxy.library.ohio.edu/10.1177/1094428114553059

van Prooijen, J.-W., Krouwel, A. P. M., Boiten, M., & Eendebak, L. (2015). Fear among the extremes: How political ideology predicts negative emotions and outgroup derogation. *Personality and Social Psychology Bulletin, 41*(4), 485–497. https://doi-org.proxy.library.ohio.edu/10.1177/0146167215569706

van Prooijen, J.-W., & Krouwel, A. P. M. (2017). Extreme political beliefs predict dogmatic intolerance. *Social Psychological and Personality Science, 8*(3), 292–300. https://doi-org.proxy.library.ohio.edu/10.1177/1948550616671403

van Prooijen, J.-W., & Krouwel, A. P. M. (2019). Psychological features of extreme political ideologies. *Current Directions in Psychological Science, 28*(2), 159–163. https://doi-org.proxy.library.ohio.edu/10.1177/0963721418817755

Wang, S. Y. (2018). Seeing the good and bad in culture: An exploration of the construct of cultural complexity. (Unpublished doctoral dissertation), Indiana University, Bloomington.

Wyse, A. E. (2015). The issue of range restriction in bookmark standard setting. *Educational Measurement: Issues and Practice, 34*(2), 47–54. https://doi-org.proxy.library.ohio.edu/10.1111/emip.12060

Zell, E., & Bernstein, M. J. (2013). You may think you're right…Young adults are more liberal than they realize.. *Social Psychological and Personality Science, 5*(3), 326-333. https://doi-org.proxy.library.ohio.edu/ 10.1177/1948550613492825

Zell, E., Su, R., Li, H., Ringo Ho, M. H., Hong, S., Kumkale, T., Stauffer, S. D., Zecca, G., Cai, H., Roccas, S., Arce-Michel, J., de Sousa, C., Diaz-Loving, R., Botero, M. M., Mannetti, L., Garcia, C., Carrera, P., Cabalero, A., Ikemi, M., Chan, D.,

… Albarracín, D. (2013). Cultural Differences in Attitudes Toward Action and Inaction: The Role of Dialecticism. *Social psychological and personality science*, *4*(5), 521–528. https://doi.org/10.1177/1948550612468774

Zhang, R., Noels, K. A., Lalonde, R. N., & Salas, S. J. (2017). Self-consistency in bicultural persons: Dialectical self-beliefs mediate the relation between identity integration and self-consistency. *Frontiers in Psychology, 8*(321). https://doi.org/10.3389/fpsyg.2017.00321

**Appendix A: Dialectical Self Scale**

*Dialectical Self Scale*

1. I am the same around my family as I am around my friends.[B] (reversed)

2. When I hear two sides of an argument, I often agree with both. [C]

3. I believe my habits are hard to change. [B] (reversed)

4. I believe my personality will stay the same all of my life.[G] (reversed)

5. I often change the way I am, depending on who I am with. [B]

6. I often find that things will contradict each other. [C]

7. If I've made up my mind about something, I stick to it. [G] (reversed)

8. I have a definite set of beliefs, which guide my behavior at all times. [G] (reversed)

9. I have a strong sense of who I am and don't change my views when others disagree with me. [G] (reversed)

10. The way I behave usually has more to do with immediate circumstances than with my personal preferences. [B]

11. My outward behaviors reflect my true thoughts and feelings. [B] (reversed)

12. I sometimes believe two things that contradict each other. [C]

13. I often find that my beliefs and attitudes will change under different contexts. [G]

14. I find that my values and beliefs will change depending on who I am with. [G]

15. My world is full of contradictions that cannot be resolved. [C]

16. I am constantly changing and am different from one time to the next. [B]

17. I usually behave according to my principles. [B] (reversed)

18. I prefer to compromise than to hold on to a set of beliefs. [G]

19. I can never know for certain that any one thing is true. [G]

20. If there are two opposing sides to an argument, they cannot both be right. [C] (reversed)

21. My core beliefs don't change much over time. [G] (reversed)

22. Believing two things that contradict each other is illogical. [C] (reversed)

23. I sometimes find that I am a different person by the evening than I was in the morning. [B]

24. I find that if I look hard enough, I can figure out which side of a controversial issue is right. [C] (reversed)

25. For most important issues, there is one right answer. [C] (reversed)

26. I find that my world is relatively stable and consistent. [C] (reversed)

27. When to sides disagree, the truth is always somewhere in the middle. [C]

28. When I am solving a problem, I focus on finding the truth. [C] (reversed)

29. If I think I am right, I am willing to fight to the end. [G] (reversed).

30. I have a hard time making up my mind about controversial issues. [G]

31. When two of my friends disagree, I usually have a hard time deciding which of them is right. [C]

32. There are always two sides to everything, depending on how you look at it. [C]

*Note*: C = Tolerance of Contradiction; G = Cognitive Change; B = Behavioral Change

**Appendix B: Need for Closure Scale**

*Need for Closure – Brief Version*

1. I find that a well ordered life with regular hours suits my temperament.

2. I find that establishing a consistent routine enables me to enjoy life more.

3. I enjoy having a clear and structured mode of life.

4. I don't like to go into a situation without knowing what I can expect from it.

5. I don't like to be with people who are capable of unexpected actions.

6. I dislike unpredictable situations.

7. When I have made a decision, I feel relieved.

8. When I am confronted with a problem, I'm dying to reach a solution very quickly.

9. I would quickly become impatient and irritated if I would not find a solution to a problem immediately.

10. I don't like situations that are uncertain.

11. I feel uncomfortable when I don't understand the reason why an event occurred in my life.

12. I dislike it when a person's statement could mean many different things.

13. I dislike questions which could be answered in many different ways .

14. I feel irritated when one person disagrees with what everyone else in a group believes.

15. I do not usually consult many different opinions before forming my own view.

**Appendix C: Personal Need for Structure Scale**

*Personal Need for Structure*

1. I enjoy having a clear and structured mode of life.

2. I like to have a place for everything and everything in its place.

3. I find that a well-ordered life with regular hours makes my life tedious (reversed).

4. I find that a consistent routine enables me to enjoy life more.

5. It upsets me to go into a situation without knowing what I can expect from it.

6. I'm not bothered by things that interrupt my daily routine (reversed).

7. I don't like situations that are uncertain.

8. I hate to change my plans at the last minute.

9. I hate to be with people who are unpredictable.

10. I enjoy the exhilaration of being in unpredictable situations (reversed).

11. I become uncomfortable when the rules in a situation are not clear.

**Appendix D: Preference for Consistency Scale**

*Preference for Consistency*

1.  I prefer to be around people whose reactions I can anticipate.

2.  It is important to me that my actions are consistent with my beliefs.

3.  Even if my attitudes and actions seemed consistent with one another to me, it would bother me if they did not seem consistent in the eyes of others.

4.  It is important to me that those who know me can predict what I will do.

5.  I want to be described by others as a stable, predictable person.

6.  Admirable people are consistent and predictable.

7.  The appearance of consistency is an important part of the image I present to the world.

8.  It bothers me when someone I depend upon is unpredictable.

9.  I don't like to appear as if I am inconsistent.

10. I get uncomfortable when I find my behavior contradicts my beliefs.

11. An important requirement for any friend of mine is personal consistency.'

12. I typically prefer to do things the same way.

13. I dislike people who are constantly changing their opinions.

14. I want my close friends to be predictable."

15. It is important to me that others view me as a stable person.

16. I make an effort to appear consistent to others.

17. I'm uncomfortable holding two beliefs that are inconsistent.

18. It doesn't bother me much if my actions are inconsistent. (reversed)

**Appendix E: Dogmatism Scale**

*Dogmatism Scale*

1. Anyone who is honestly and truly seeking the truth will end up believing what I believe.

2. There are so many things we have not discovered yet, nobody should be absolutely certain his beliefs are right (reversed).

3. The things I believe in are so completely true, I could never doubt them .

4. I have never discovered a system of beliefs that explains everything to my satisfaction (reversed).

5. It is best to be open to all possibilities and ready to reevaluate all your beliefs (reversed)

6. My opinions are right and will stand the test of time.

7. Flexibility is a real virtue in thinking, since you may well be wrong (reversed).

8. My opinions and beliefs fit together perfectly to make a crystal-clear "picture" of things.

9. There are no discoveries or facts that could possibly make me change my mind about the things that matter most in life.

10. I am a long way from reaching final conclusions about the central issues in life (reversed).

11. The person who is absolutely certain she has the truth will probably never find it (reversed).

12. I am absolutely certain that my ideas about the fundamental issues in life are correct.

13. The people who disagree with me may well turn out to be right (reversed).

14. I am so sure I am right about the important things in life, there is no evidence that could convince me otherwise.

15. If you are "open-minded" about the most important things in life, you will probably reach the wrong conclusions.

16. Twenty years from now, some of my opinions about the important things in life will probably have changed (reversed).

17. "Flexibility in thinking" is another name for being "wishy-washy."

18. No one knows all the essential truths about the central issues in life (reversed).

19. Someday I will probably realize my present ideas about the BIG issues are wrong. (reversed).

20. People who disagree with me are just plain wrong and often evil as well.
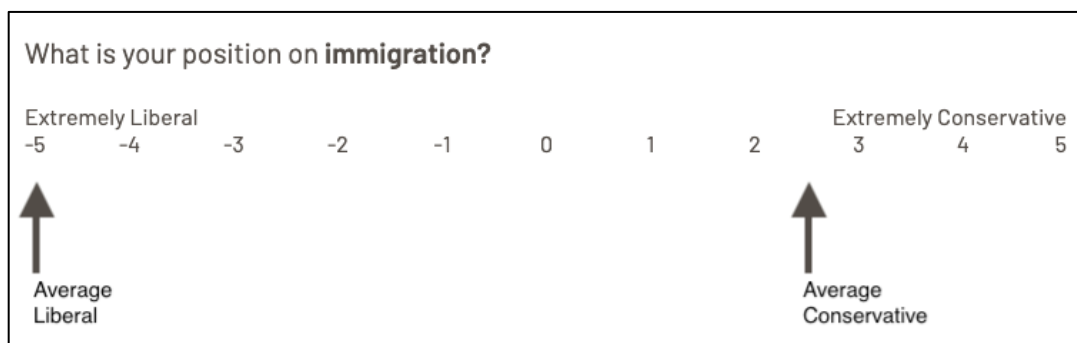
**Appendix F: Shifted Anchoring Task**

*Shifted Anchoring Task*

Instructions: Below you will find a variety of social and political issues. [*In shifted conditions only:* Each item includes markings indicating the average response of self-identified liberals and conservatives.*] Please indicate your personal position on each issue from -5 (extremely liberal) to +5 (extremely conservative).
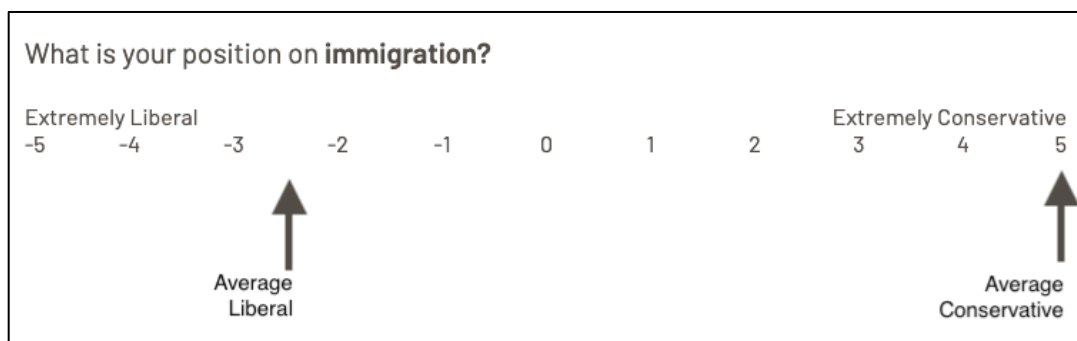*[In shifted conditions only for realism*: *As identified by researchers at the Institute for Political Institutions]

1. Immigration

2. Abortion

3. Welfare Programs

4. Taxes

5. Affirmative Action

Example item from the shifted-conservative condition:



Example item from the shifted-liberal condition:

**Appendix G: Affect and Dissonance Measures**

Affect & Dissonance Measure (Elliot & Devine, 1994)

Instructions: Please indicate how you are feeling *right now* on a scale of 1 = does not

apply at all; to 7 = applies very much

Factor 1 – Discomfort

Uncomfortable

Uneasy

Bothered

Factor 2 – Negself

Angry toward myself

Dissatisfied with myself

Disgusted with myself

Annoyed with myself

Factor 3 – Positive

Happy

Good

Friendly

Energetic

Optimistic

Factor 4 – Embarrass

Embarrassed

Shame

**Appendix H: Conflict Management Style Measures**

Conflict Management Styles Measures (De Dreu, et al., 2001)

Competing

1. I would push my own point of view.

2. I would search for gains.

3. I would fight for a good outcome for myself.

4. I would do everything to win.

Compromising

1. I would try to realize a middle-of-the-road solution.

2. I would strive whenever possible towards a fifty-fifty compromise.

3. I would emphasize that we have to find a compromise solution.

4. I would insist we both give in a little.

Problem Solving

1. I would work out a solution that serves my own as well as the other person's interests as well as possible.

2. I would examine ideas from both sides to find a mutually optimal solution.

3. I would examine the issue until I find a solution that really satisfies me and the other person.

4. I would stand for my own and the other person's goals and interests.

Note: Items measured on a 7-point Likert Scale: (7) Very Likely… …(1) Very unlikely