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When Do Psychological Differences Predict Political Differences? Engagement and the
Psychological Bases of Political Polarization

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With the rise of sharp partisan and ideological divides in both the United States and other nations, social scientists have labored to make sense of why we seem further apart than before. In this vein, a sizable body of research has focused on the role of political parties and the ‘elites’ who lead them. According to these accounts, citizens have diverged from one another in their political attitudes and in their feelings toward their opponents as leaders of different political parties have drifted apart from one another in their ideological viewpoints (Abramowitz, 2010; Levendusky, 2009) and as parties have diverged in terms of the groups they attract (Iyengar, Sood, & Lelkes, 2012; Mason, 2018). These perspectives suggest a *top-down* process of polarization: citizens begin drift apart from one another in their attitudes and in their feelings toward political opponents when political ‘elites’ model more extreme ideological positions and appear to represent more ideologically-opposed social groups (Johnston, Lavine, & Federico, 2017; see also Zaller, 1992).

However, research also suggests that polarized political opinions may have deep psychological roots. As an influential line of research in personality and social psychology indicates, political differences can reliably be predicted from psychological differences in a *bottom-up* fashion. Individuals with varying personality traits, needs, and motives tend to adopt different political preferences (Federico & Malka, 2018; Gerber, Huber, Doherty, & Dowling, 2011; Hibbing, Smith, & Alford, 2014; Jost, 2017; Jost, Federico, & Napier, 2009; Jost, Sulloway, Glaser, & Kruglanski, 2003; Mondak, 2010). In particular, those who are dispositionally inclined to seek certainty and security are more likely to lean to the right, whereas those who are more comfortable with uncertainty, ambiguity, and risk lean to the left (Jost et al. 2003, 2009; Jost, Federico, & Napier, 2013). These findings imply that polarization at the mass level is not merely a byproduct of elite divisions; rather, it reflects fundamental variation among human beings in basic psychological motivations (Jost et al., 2003; see also Hibbing et al., 2014).

These two perspectives on political polarization have unfolded on largely parallel tracks, without speaking too extensively to one another. In part, this is due to their roots in different disciplines: the top-down perspective has its origins in political science, whereas the bottom-up perspective comes out of personality and social psychology (for reviews, see Federico & Malka, 2018; Johnston et al., 2017). Though the accounts of polarization offered by political scientists and psychologists are sometimes presented as antagonistic in their implications (e.g., Jost, 2006, 2017), they need not be. In this chapter, I review research aimed at integrating the top-down and bottom-up accounts of political differences in mass publics in an effort to develop a hybrid perspective on the bases of political polarization. Like the bottom-up psychological approach, the model I present argues that people are systematically attracted to different positions on the basis of individual differences in needs for security and certainty. However, like the top-down approach, it also contends that the tendency for those with different psychological dispositions to adopt polarized political preferences depends on exposure to elite political signals that provide information about the *content and meaning* of different ideological, partisan, and issue orientations—exposure which is likely to be more pronounced among politically-engaged citizens (Federico & Malka, 2018; Morgan & Wisneski, 2017).

In the sections which follow, I briefly review current research on the psychological bases of political preferences, and then provide an overview of how the bottom-up perspective on the roots of political attitudes might be incorporated into a broader model of mass belief systems. Next, I review research providing evidence for various aspects of the above model. Most importantly, this research finds that individuals with different psychological dispositions are more likely to adopt polarized partisan and ideological identities if they are attentive to elite discourse that provides cues about how well different parties and ideologies symbolically mesh with their core motivations. In turn, the moderating effect of political engagement on the relationship between need for security

and certainty and partisan and ideological identities leads to relatively complex linkages between the psychological and the political in some issue domains. Specifically, in the realm of economic preferences, individuals low and high in needs for security and certainty polarize in *opposite* directions depending on whether they are politically engaged enough to sort into conservative ideological and partisan identities and follow elite cues suggesting that free-market positions are normatively appropriate for those who identify with the right.

The Psychological Bases of Political Differences

Modern inquiry into on the dispositional origins of political differences has a storied history in the social and behavioral sciences. For example, Max Weber (drawing on Johann Wolfgang von Goethe) famously discussed the notion of “elective affinities,” or patterns of linkage between types of ideas and types of people (Weber, 1948; see also Gerth & Mills, 1953; Jost et al., 2009; Lasswell, 1948). Later, systematic empirical research on how various traits correlate with political preferences took off after World War II as modern quantitative personality psychology developed (Adorno, Frenkel-Brunswik, Levinson, and Sanford, 1950; Allport, 1954; Eysenck, 1954; Rokeach, 1960; Tomkins, 1963; Wilson, 1973; see also Lipset, 1960; McClosky, 1958, for similar conceptualizations in political science). Interest in the topic has waxed and waned over the decades, but a series of literature reviews (both narrative and quantitative) by social psychologist John Jost and his colleagues starting in the 2000s reinvigorated work in this area (e.g., Jost et al., 2003; see also Jost et al., 2009, 2013). This renaissance has reverberated in other disciplines as well (see Federico & Malka, 2018; Gerber et al., 2011; Hibbing et al., 2014; Mondak, 2010).

As noted previously, much of this new body of research has focused on individual variation in traits, needs, and motives pertaining to “existential needs to maintain safety and security and to minimize danger and threat” and “epistemic needs to attain certainty, order, and structure” (Jost et al., 2013, p. 236). Though there are other clusters of individual differences that predict political

attitudes and beliefs (such as those related to competitiveness; Duckitt, 2001; Duckitt & Sibley, 2010), these ‘needs for security and certainty’ have emerged as the prime focus of most contemporary theorizing and research on the dispositional foundations of political orientations (Johnston et al., 2017; Jost, 2017). Though this literature is voluminous, its overall conclusion is simple: strong (versus weak) needs for security and certainty are associated with greater conservatism (versus liberalism). Federico and Malka (2018) characterize the core message as such:

...individuals with strong needs to reduce insecurity and minimize uncertainty are said to be attracted to the political right and its emphases on stability and hierarchy, whereas those who are more tolerant of insecurity and uncertainty are said to gravitate toward the left and its openness. (p. 6)

On the psychological side of the equation, researchers have focused on a number of specific variables reflecting differences in existential and epistemic needs. An exhaustive listing of these variables is beyond the scope of this chapter (see Federico & Malka, 2018; and Jost, 2017, for recent reviews), but a few core constructs that predict more right-leaning (versus left-leaning) preferences are worth highlighting. These include *authoritarianism* (Adorno et al., 1950; Altemeyer, 1998; Duckitt, 2001; Duckitt & Bizumic, 2013; Stenner, 2005), a tendency to value deference to group authority and conventional ingroup norms (Federico, Fisher, & Deason, 2011; Federico, Hunt, & Ergun, 2009; Feldman, 2003; Hetherington & Weiler, 2009; Jost et al., 2009); the *need for cognitive closure* (Kruglanski, 2004; Kruglanski & Webster, 1996; Kruglanski, Pierro, Mannetti, & DeGrada, 2006), a tendency to avoid uncertainty by “seizing” more strongly on available information to reach conclusions about the world and by “freezing” on those conclusions even when faced with new information (Federico, Deason, & Fisher, 2012; Federico & Goren, 2009; Jost et al., 2003, 2008, 2009; Kimmelmeier, 1997; Van Hiel, Pandelaere, & Duriez, 2004; Van Hiel et al., 2010); high *Conscientiousness* and low *Openness to Experience* in the context of the Big Five model of personality (e.g., Carney, Jost, Gosling, & Potter, 2008; Gerber et al., 2010, 2011; McCrae, 1996; Mondak, 2010); a preference for *conservation values* (i.e., tradition, conformity, and security) over a functionally-

opposed set of *openness values* (i.e., stimulation and self-direction; Caprara, Schwartz, Capanna, Vecchione, & Barbaranelli, 2006; Goren, 2012; Malka, Soto, Inzlicht, & Leles, 2014; Schwartz, 1992, 2007; Thorisdottir et al., 2007); and a tendency to prioritize *binding* moral concerns linked to ingroup loyalty, respect for authority, and the maintenance of moral purity, all of which reflect a desire for the security and certainty provided by strong social ties (Graham, Haidt, & Nosek, 2009; Haidt, 2012; Koleva, Graham, Iyer, Ditto, & Haidt, 2012).

Thus, across a variety of variables, those with differing existential and epistemic orientations tend to polarize in their political preferences: stronger needs for security and certainty are reliably associated with right-leaning orientations, whereas weaker needs for security and certainty are associated with left-leaning ones. This point is reinforced by recent meta-analyses of this literature (Jost, 2017). With respect to existential concerns, Jost, Stern, Rule, and Sterling (2017b) examined data from 134 studies including 369,525 participants and found “small-to-moderate” relationships between variables linked to the salience of fear and threat and support for right-wing policies, parties, and leaders. With respect to epistemic concerns, Jost, Sterling, and Stern (2017a) aggregated results from 181 samples including 133,796 participants and observed significant relationships between needs for structure and order, need for closure, intolerance of ambiguity, rigidity, and dogmatic and right-wing preferences and between integrative complexity, analytic thinking, need for cognition, and uncertainty tolerance and liberal preferences.

Though the tendency for those with varying needs for security and certainty to adopt politically-polarized preferences is robust, it is also subject to important boundary conditions. One of these pertains to whether needs for security and certainty are conceptualized in *subjective* or *objective* terms. Though the findings reviewed above suggest a general tendency for needs for security and certainty—which reflect a kind of psychological ‘rigidity’—to go with the politics of the right, Van Hiel, Onraet, and DePauw (2010) and Van Hiel, Onraet, Crowson, and Roets (2016) find that

‘objective’ behavioral measures of intolerance of ambiguity and rigidity that assess participants’ ability to perform cognitive operations requiring flexibility and attention to multiple, inter-related aspects of a problem are more weakly related to conservatism than ‘subjective’ self-report measures that explicitly ask participants to indicate how well various statements describe them (e.g., “I enjoy having a clear and structured mode of life”; Webster & Kruglanski, 1994). Reinforcing this, recent studies have failed to replicate earlier results (e.g., Oxley et al., 2008) indicating a correlation between political preferences and strong physiological responses to objective tasks in which participants are exposed to threatening stimuli (Bakker, Schumacher, Gothreau, & Arceneaux, 2020; Osmundsen et al., 2020; Smith & Warren, 2020).

A second boundary condition involves political issue domain. In this vein, a good deal of research suggests that social attitudes (i.e., those related to morality and culture) and economic attitudes (i.e., those related to redistribution, the role of government, and so on) represent empirically-distinct and variably-correlated dimensions of citizens’ political preferences (Carmines, Ensley, & Wagner, 2012; Duckitt & Sibley, 2010; Evans, Heath, & Lalljee, 1996; Feldman & Johnston, 2014; Fleishman, 1988; Knoke, 1979; Malka, Lelkes, & Soto, 2019; Shafer & Claggett, 1995; Treier & Hillygus, 2009; see also Braithwaite, 1997; Duckitt, 2001; Schwartz, 1992; Stangor & Leary, 2006). In general, psychologically-different individuals are more likely to polarize on social issues than on economic ones: needs for security and certainty more strongly and consistently predict right-wing preferences in the social domain than the economic domain (Federico, Johnston, & Lavine, 2014; Federico & Malka, 2018; Johnston et al., 2017; Malka & Soto, 2015). This asymmetry appears with respect to numerous variables tapping existential and epistemic needs, including authoritarianism (e.g., Cizmar et al. 2014; Federico et al., 2011; Feldman & Johnston, 2014), need for closure (e.g., Chirumbolo, Areni, & Sensales, 2004; Federico, Ergun, & Hunt, 2014; Kossowska & Van Hiel, 2003; Van Hiel et al., 2004; Yilmaz & Saribay, 2016), and support for

conservation versus openness values (e.g., Duckitt, 2001; Duriez, Van Hiel, & Kossowska, 2005; Malka et al., 2014).¹ However, as research I review below suggests, the apparent weakness of the relationship between these variables and economic preferences may be misleading. Rather than being completely unrelated to economic preferences, needs for security and certainty may be related to them in opposite directions among different subsets of the electorate due to distinct processes of polarized opinion formation among those low and high in political engagement.

How (and When) do Psychological Differences Predict Political Differences?

Connecting Needs, Traits, and Motives with Belief Systems

While the bottom-up dispositional approach pioneered by psychologists has shed important light on the nature of political differences, one of its shortcomings is that it relies on a relatively simple model of how ‘elective affinities’ connect needs, traits, and motives with political positions. It tends to assume that the symbolic meanings of different political identities and positions are intuitively comprehensible enough to most people to ‘resonate’ with their underlying psychological dispositions and elicit an attraction (e.g., Jost et al., 2003). In doing so, the bottom-up approach has little to say about the social and institutional contexts in which the meanings of different political orientations are constructed, leaving the dominant psychological model of political differences somewhat under-specified.

The perspective my colleagues and I have developed attempts to remedy this situation by integrating the bottom-up approach with key elements of the top-down model of polarized opinion

¹ There are of course exceptions to this pattern, with some studies showing robust relationships between variables related to needs for security and certainty and attitudes in both the social and economic domains (see Jost et al., 2017b; see also Azevedo et al., 2019; Gerber et al., 2010; Hennes, Nam, Stern, & Jost, 2012). However, as Federico and Malka (2018, p. 14) note in their review of this literature, many of these analyses (1) still show a *stronger* relationship between needs for security and certainty and social (versus economic) attitudes and (2) use measures of threat or insecurity that include explicit political content, thereby introducing potential artifacts.

formation mentioned at the beginning of this chapter. This perspective starts from the core premise that “ideologies are not facts of nature” (Federico & Malka, 2018, p. 23). The assorted ideological belief systems—left versus right, liberal versus conservative—available to individuals in different political contexts do not exist merely as a function of inherent logical coherence (Converse, 1964). They are discursively assembled. In this regard, the packages of beliefs, values, and stances that comprise different ideologies are constructed disproportionately by a small group of political elites—namely, party leaders, elected officials, and pundits (Campbell, Converse, Miller, & Stokes, 1960; Kinder, 2006; Zaller, 1992; see also Noel, 2013). In other words, elites play the dominant role in putting together the ‘menu’ of options available to voters (Sniderman & Bullock, 2004). Even more importantly, not all members of mass public learn what sets of beliefs, values, and attitudes make up different ideologies or what it means to be a ‘liberal,’ a ‘conservative,’ a ‘socialist,’ and so on. This information is most likely to be picked by citizens who are relatively high in political engagement, i.e., political interest and knowledge (Converse, 1964; Federico, 2015; Kalmoe, 2020; Sniderman, Brody, & Tetlock, 1991). Given that a sizable segment of the population is relatively low in political engagement (Converse, 1964; Delli Carpini & Keeter, 1996; Kinder, 1998) and not overly concerned about what their political attitudes and beliefs say about them (Johnston et al., 2017; Kahan, 2015), many individuals may not be immersed enough in politics for different political positions to meaningfully resonate with their basic needs, traits, and motives.

These findings imply that citizens in the mass public are more likely to polarize when elites from different parties ideologically diverge from one another and when they are engaged enough to see this divergence (Lelkes, 2016, 2018). With respect to elite differences, research suggests that elites (e.g., members of Congress) have ideologically polarized in recent decades (McCarty, Poole & Rosenthal, 2006; see also Layman et al., 2010) and that individuals who believe that leaders of competing parties are more ideologically far apart are more likely to be ideologically ‘sorted’—i.e., to

hold ideological identities that match their partisan identities (e.g., identifying as liberal if one is Democrat; Abramowitz, 2010; Levendusky, 2009). With respect to engagement, research suggests that engaged citizens are more likely to be ‘polarized’ in various ways. For example, citizens with different partisan and ideological identities are more likely to adopt the divergent issue positions that go along with those identities when they are more engaged (Abramowitz, 2010; Baldassari & Gelman, 2008; Layman & Carsey, 2002; McClosky & Zaller, 1984; Sniderman & Bullock, 2004; Zaller, 1992). Moreover, partisans who are relatively high in engagement are also more likely to adopt ideological labels that match their partisan identities (Abramowitz, 2010; Levendusky, 2009). Finally, citizens are more likely to evaluate the out-party more negatively than the in-party if they are more engaged (e.g., Lelkes, 2018).

The hybrid approach my colleagues and I have taken argues that political engagement should have similar consequences for whether citizens with different psychological dispositions adopt different political preferences. In addition to knowing and caring more about ‘what goes with what’ in political terms, the highly engaged should also be more aware of how well the content and symbolic meaning of different political identities and positions aligns with whatever traits, needs, or motives they possess (Federico et al., 2014; Federico & Malka, 2018). For example, while the preservation of traditional, established institutions promised by conservative political parties may potentially be attractive to individuals who are high in authoritarianism or need for closure, only those who are engaged enough to receive elite signals about which party is more conservative or what it means to be ‘conservative’ will sort into the correct ideological and partisan identities.

This argument leads to a core hypothesis: individuals who are low and high in needs for security and certainty should polarize in their political preferences to the extent that they are engaged enough to understand and care about the differences between available political options. Put another way, different political positions should resonate more strongly with citizens’ underlying

psychological motivations when the meaning and implications of those positions for their motives is clear. In the sections which follow, I review the research my collaborators and I have conducted in an effort to test this hypothesis.

Engagement and the Psychological Bases of Partisan and Ideological Differences

Perhaps the most important political preferences adopted by citizens are *partisanship* and *ideology* (Campbell et al., 1960; Goren, 2012; Malka & Lelkes, 2010; Zaller, 1992). These ‘symbolic predispositions’ can be thought of as broad social identifications, either with a party coalition that organizes to seek office or with an abstract ideological grouping (Campbell et al., 1960; Sears, 1993; see also Ellis & Stimson, 2012; Mason, 2018). If the approach outlined above is correct, then the politically engaged should be more aware of how different parties and ideologies thematically differ from one another and how well the priorities of each aligns with basic needs, traits, and motives.

But which of themes associated with various parties and ideologies are needs for security and certainty likely to key in on? Party platforms and ideological frameworks incorporate concerns across a variety of political domains, including social and cultural issues and economic concerns (Carsey & Layman, 2002; Malka et al., 2019). In this regard, recall that needs for security and certainty are more predictive of preferences in the social domain than the economic domain. Debates about whether to preserve or depart from traditional values and practices or how much diversity in culture and belief is desirable are more likely to divide those with different existential and epistemic needs (Feldman & Johnston, 2014; Johnston et al., 2017). In general, partisan and ideological groupings in the United States and Western Europe are clearly differentiated along this social axis; the right and parties of the right favor tradition and tighter cultural norms, whereas the left and parties of the left are more open to change and normative diversity (Ellis & Stimson, 2012; Hetherington & Weiler, 2009; Kitschelt, 2004). To the extent that the engaged are more aware of these distinctions between political-menu options, then we should find that engaged citizens are

more polarized in their partisan and ideological identifications as a function of differences in needs for security and certainty.

With respect to partisanship, work by my colleagues and I provides ample evidence for this prediction. For example, Federico and Reifen-Tagar (2014) examined the relationship between authoritarianism and party identification in the 2004 and 2008 American National Election Studies. They found that respondents low and high in authoritarianism were more likely to diverge in their partisan identifications when they were higher in educational attainment (a variable linked to political awareness; Sniderman et al., 1991). Among those with greater education, low authoritarians were more Democratic and high authoritarians were more Republican. Similarly, Johnston, Lavine, and Federico (2017) found that the tendency for those low in authoritarianism to identify with the Democratic Party and those high in authoritarianism to identify with the Republican Party was stronger among individuals who scored higher on a composite measure of political engagement (reflecting both knowledge and interest) in the 2000, 2004, 2008, and 2012 American National Election Studies.

Parallel results emerge for other psychological variables. Johnston, Lavine, and Federico (2017) also examined the moderating effects of engagement on the relationship between other existential and epistemic variables and partisanship in multiple representative samples of American adults. In their data, individuals differing in need for closure, endorsement of conservation values (versus openness values) and binding moral concerns, and the Openness to Experience and Conscientious dimensions of the Big Five were more likely to polarize in their partisan preferences when they were high in engagement. Among the more-engaged, those high in need for closure, conservation values, binding morality, and Conscientiousness were more likely to gravitate toward the GOP, whereas those low on these dimensions were more likely to identify with the Democratic

Party. In contrast, those low in Openness were more Republican and those high in Openness were more Democratic at the upper end of the engagement spectrum.

With respect to ideological self-placement, engagement has analogous polarizing effects. For instance, Federico, Fisher, and Deason (2011) and Johnston, Lavine, and Federico (2017) found that the relationship between authoritarianism and ideology was stronger among those higher in political knowledge and interest. Among the highly-engaged, those high in authoritarianism were more likely to adopt the conservative label and those low in authoritarianism were more likely to state that they were liberal. As before, these patterns extend to other variables related to existential and epistemic needs. In a sample of students, Federico, Ergun, and Hunt (2009) found that individuals who differed on a key existential dimension—whether they believed the world to be a dangerous place (Duckitt & Sibley, 2010)—diverged more in their ideological identifications among those who were higher (versus lower) in political knowledge. At high knowledge, those who saw the world as a relatively safe place were more liberal, whereas those who saw the world as more perilous indicated more conservative identifications; these differences were more muted among those low in knowledge. Federico and Goren (2009) found a similar pattern with respect to the relationship between need for closure and ideology among individuals low and high in political engagement (see Johnston et al., 2017, for similar results). Finally, echoing their results for partisanship, Johnston, Lavine, and Federico (2017) found that respondents who differed in their support for conservation (versus openness) values and binding moral concerns and on the Openness to Experience and Conscientiousness trait dimensions were more likely to diverge from one another in ideological self-placement among those who were higher (versus lower) in knowledge and interest.

Importantly, these findings have been replicated by other researchers and in contexts other than the United States. For example, Malka, Soto, Inzlicht, and Lelkes (2014) used data from the 2005-2008 World Values Survey (including respondents from 51 nations) examine the relationship

between a preference for conservation (over openness) values and identification with the political right. Among those higher in political interest, the relationship between endorsement of conservation values over openness values and identification with the right was stronger; engaged respondents with different value orientations were more likely to be ideologically polarized.

Similarly, Osborne and Sibley (2012; see also Osborne & Sibley, 2015) uncovered a similar pattern of polarization with respect to personality traits in representative samples of adults in the United States and New Zealand. In particular, in their American sample, they found that individuals differing in Openness to Experience and Conscientiousness were more likely to differ in partisanship and ideology when they were high (versus low) in political knowledge.

In sum, consistent with the hybrid approach to the link between psychology and politics that I describe in this chapter, there is considerable evidence that individuals differing in existential and epistemic needs are more polarized in partisanship and ideology at higher levels of political engagement. The pattern obtains across multiple operationalizations of needs for security and certainty in numerous datasets, and it also replicates across national political contexts and research groups.

Engagement and the Psychological Bases of Issue-Attitude Formation

As central as identities like partisanship and ideology are, political differences do not end there. Citizens also differ in their attitudes toward specific issues. A key finding of research on political belief systems is that engagement leads those with different partisan and ideological identities to adopt different issue positions as well (Zaller, 1992). This is because engaged citizens are more able and willing to take cues from partisan and ideological opinion leaders about what positions ‘go with’ their political identities (Converse, 1964). If the logic outlined previously holds, then engagement may also lead individuals differing in needs for security and certainty to diverge

more in their issue positions—in part because it should lead them to be more effectively sorted into parties and ideologies holding divergent issue positions.

In analyses that collapse across a number of specific issue domains, my colleague Pierce Ekstrom and I have found support for this prediction (Federico & Ekstrom, 2018). Specifically, in a large, representative sample of U.S. adults, we found that respondents low and high in the need for closure diverged more in the relative liberalism versus conservatism of their issue positions when they were higher in political knowledge. Among the well-informed, low need-for-closure respondents took more liberal issue positions and high need-for-closure respondents took more conservative positions.

However, there is good reason to believe that this dynamic may not be consistent across issue domains. As noted above, research suggests that needs for security and certainty are more weakly related to opinions in the economic domain (Federico & Malka, 2018). A likely reason for this is that economic issues are ‘hard’ compared to social issues—i.e., they involve relatively complex judgments about sometimes-technical matters (Carmines & Stimson, 1980). To the extent that they acquire a symbolic meaning that is capable of resonating with underlying psychological needs, it comes from how political elites thematically tie economic issues to broader ideological or partisan agenda (Johnston et al., 2017). This is only likely to occur among individuals who are highly engaged and who have learned from political elites that free-market positions go with a ‘conservative,’ status-quo orientation and that support for redistribution and a stronger government hand in economic life is a ‘liberal’ position that challenges the status quo in the name of greater social justice (Federico et al. 2014). But what about those who are not politically engaged? Absent elite signals defining more left-wing economic positions as a symbolic challenge to the status quo or to ‘traditional’ norms about economic life, government intervention aimed at restraining exploitative economic behavior and providing a safety net may be seen as an instrumental means of *reducing* insecurity, uncertainty,

and risk. Among these individuals, we might expect the relationship between needs for security and certainty to *reverse*, such that those high in needs for security and certainty are more left-wing in their economic preferences.

Consistent with this ‘reversal’ hypothesis, Johnston, Lavine, and Federico (2017) found that individuals low and high in needs for security and certainty polarize in *opposite* ideological directions depending on their level of political engagement. They examined this prediction in ten nationally-representative datasets of American adults, using a range of existential and epistemic variables (including authoritarianism, need for closure, dispositional risk aversion, conservation versus openness values, and the Openness and Conscientiousness dimensions of the Big Five). Among engaged individuals, 21 out of 21 tests indicated that those differing in needs for security and certainty polarized in the ‘traditional’ ideological direction: those low in needs for security and certainty preferred a more interventionist government, whereas those high in needs for security and certainty preferred a more market-oriented approach. In contrast, among those low in engagement, individuals with different existential and epistemic dispositions polarized in the opposite ideological direction: those low in needs for security and certainty preferred free markets and those high in needs for security and certainty preferred that the government step in to provide economic security.

Again, this result has been replicated internationally by other researchers. Specifically, using the same 51-nation World Values Survey dataset referred to earlier, Ariel Malka and his colleagues (2014) found that a preference for conservation (over openness) values predicted right-wing, market-oriented economic attitudes among those high in political interest but left-wing, interventionist economic attitudes among those low in interest. Thus, both our research and that of others broadly suggests that engagement may polarize issue attitudes as a function of psychological needs, but that this effect may be somewhat complex in the realm of economics.

Conclusion

In this chapter, I have reviewed work suggesting that psychological perspectives on polarization need to account for the roles of both ‘bottom up’ and ‘top-down’ processes in the emergence of political differences. Like a growing body of work in personality and social psychology (Jost et al., 2009, 2013), the approach I outline here argues that a variety of individual differences in needs for security and certainty intuitively prepare people to be more attracted to some political identities and preferences than others. At the same time, drawing on a venerable line of research in political science on elite opinion leadership, it also suggests that differences in existential and epistemic needs will not express themselves in terms of polarized political positions unless individuals are politically engaged to learn what positions ‘match’ their underlying needs, traits, and motives. In support of this hybrid model, I have reviewed research suggesting that individual variation in needs for security and certainty is more likely to be associated with polarized partisan and ideological affinities among the politically engaged. Moreover, my colleagues and I have also found that the moderating role of engagement extends to the relationship between existential and epistemic needs and issue attitudes, with the nature of pattern being especially complex in the ‘hard’ domain of economics. In the latter case, engagement does not merely amplify the relationship between psychological dispositions and issue preferences. Rather, it actually *reverses* them, such that needs for security and certainty are associated with right-wing economic preferences among the engaged and left-wing economic preferences among the less engaged.

Together, the findings reviewed here suggest a number of broader implications. First, though they reinforce the general argument that psychological differences matter for the formation of political preferences, they also suggest that these differences are translated into political differences via multiple mechanisms (Federico & Malka, 2018). Sometimes the connection is direct, such that individuals with strong needs for security and certainty seek the symbolic ‘safety’ of the status quo by gravitating to the right and those who are less sensitive to threat and uncertainty are more open

to the change implied by positions on the left. This process appears to be at work in relationship between existential and epistemic needs and social-issue preferences, as well as the relationship between these needs and political identities (such as partisanship and ideology) that have become discursively linked to social-issue disagreements. The research reviewed here also suggests that this process is at work in the relationship between strong needs for security and certainty and *left-wing* economic preferences found among those low in political engagement. In other cases, the connection is indirect or ‘menu-dependent’ (Malka & Soto, 2015; see also Johnston et al., 2017), such that individuals with different needs for security and certainty adopt different political positions mainly because they have sorted into different political identities and take cues about issue positions from elites who share those identities. This process is the one at work in the relationship between strong needs for security and certainty and right-wing economic preferences among the engaged.

Of course, the model I develop here (like others) is not without its limitations. In particular, it speaks primarily to the political implications of ‘subjective,’ self-report measures of psychological dispositions; none of the studies in question examined whether engagement also moderates the relationship between ‘objective’ behavioral measures of rigidity and threat sensitivity and political preferences. As noted previously, subjective measures are more strongly related than objective measures to political preferences (Van Hiel et al., 2016). Thus, the patterns predicted by the approach outlined in this chapter may or may not generalize to objective psychological measures. On one hand, it may be the case that the relatively-implicit cognitive and motivational differences tapped by objective measures are simply more difficult for individuals to connect with politics than the differences measured by self-reports. In this case, the cognitive ‘boost’ provided by political engagement may be especially impactful with respect to objective measures, leading to even stronger moderating effects of engagement.

On the other hand, the asymmetry between subjective and objective psychological dispositions may be more fundamental, leaving objective indices unrelated to political preferences even among the engaged. One crucial difference between the two types of measures potentially points in this direction. Self-reports of needs for security and certainty—like survey items inquiring about partisan and ideological identifications or issue attitudes—ask individuals to consciously agree or disagree with symbol-laden content that has evaluative implications. In contrast, behavioral measures usually involve tasks that do not ask participants to make subjective semantic judgments (Van Hiel et al., 2010). This suggests that psychological dispositions measured by self-reports may be more matched with political preferences in terms of compatibility or similarity (in that both ask for evaluative responses; Kraus, 1995). As such, the self-perceptions and worldviews tapped by self-report psychological measures may be more easily connected with (and integrated into) different symbolically-laden political belief systems. Indeed, for the politically engaged, the perceptions and self-characterizations that comprise responses to self-report measures of existential and epistemic needs may be thought of extended, distal elements of political belief systems. Conversely, the explicitly-political aspects of these belief systems may become more important aspects of the self for those who are more politically aware (Federico & Ekstrom, 2018).

Another potential boundary condition on the model developed here is that it might not apply equally to all variables indicative of ‘rigidity’ or ‘sophistication.’ As I note above, the present model is intended specifically as an approach to understanding the interplay between ‘rigidity’ in the form of subjective individual-difference measures of needs for security and certainty and ‘sophistication’ in the form of domain-specific political knowledge and interest (e.g., Federico & Malka, 2018). But there are other forms of rigidity and sophistication, and they might exhibit dynamics different from those in my model. In particular, rigidity can also be conceptualized as an *outcome* of investing the self in specific political commitments, as opposed to a general trait prior to

politics. In this case, individuals with views that are polarized to the right *and* the left may display forms of *motivated rigidity* reflecting a defensive commitment to their political preferences and a tendency to parse the political world in black-and-white terms—outcomes that are often regarded as signs of *low sophistication* (see Zmigrod, Rentfrow, & Robbins, 2020)

Along these lines, when the scope of inquiry is extended beyond self-reported traits, individuals at both extremes may show signs of rigidity, such as higher levels of defensive bias (Ditto et al., 2019; Washburn & Skitka, 2017), greater avoidance of opposing opinions (Frimer, Skitka, & Motyl, 2017), greater intolerance of those in opposing political coalitions (van Prooijen & Krouwel, 2017; van Prooijen, Krouwel, Boiten, & Edeebak, 2015; see also Brandt & Crawford, 2020), a stronger tendency to overclaim knowledge that one does not objectively possess (van Prooijen & Krouwel, 2019), a greater preference for simple solutions to problems (accompanied by greater judgmental certainty; van Prooijen, Krouwel, & Emmer, 2018), and a more-pronounced tendency to rigidly categorize political stimuli (Lammers, Koch, Conway, & Brandt, 2017). Moreover, even generalized trait-like measures of rigidity are associated with extremity to both the left and right (rather a right-wing orientation) when extremity is operationalized as strength of partisan social identification as opposed to simple left-right self-placement (Luttig, 2018; Zmigrod et al., 2020). These findings—taken together with the theory and research that are the primary focus of this chapter—suggest the need for several crucial conceptual distinctions. First, it is important for researchers to distinguish between rigidity in the sense of subjective needs for security and certainty and rigidity in the sense of motivated defensiveness or simplicity of perception. The former may elicit sorting into conservative identities, especially among the politically engaged, whereas the latter may result from committing the self to identities and preferences on either the right or left. Second, it is necessary to distinguish between political engagement as a domain-specific form of sophistication and generalized indicators of cognitive sophistication. The former may act primarily

as a moderator, amplifying the sorting of individuals with different existential and epistemic needs into polarized political camps. In contrast, the latter may reflect the aforementioned rigidity that comes from having political commitments at all, whether they be on the right or the left. With these points in mind, researchers may find it easier to integrate the various strands of an increasingly-complex body of inquiry in the link between psychological variables and political preferences.

References

- Abramowitz, A. I. (2010). *The disappearing center: Engaged citizens, polarization, and American democracy*. New Haven, CT: Yale University Press.
- Adorno, T. W., Frenkel-Brunswik, E., Levinson, D. J., & Sanford, R. N. (1950). *The authoritarian personality*. New York, NY: Harper.
- Allport, G. W. (1954). *The nature of prejudice*. Cambridge, MA: Addison-Wesley.
- Altemeyer, B. (1998). The other “authoritarian personality”. *Advances in Experimental Social Psychology*, 30, 47-92.
- 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, 49-88.
- Bakker, B. N., Schumacher, G., Gothreau, C., & Arceneaux, K. (2020). Conservatives and liberals have similar physiological responses to threat. *Nature Human Behavior*.
- Baldassari, D., & Gelman, A. (2008). Partisans without constraint: Political polarization and trends in American public opinion. *American Journal of Sociology*, 114, 408-446.
- Braithwaite, V. (1997). Harmony and security value orientations in political evaluation. *Personality and Social Psychology Bulletin*, 23, 401-414.
- Brandt, M. J., & Crawford, J. T. (2020). Worldview conflict and prejudice. *Advances in Experimental Social Psychology*, 61, 1-66.
- Campbell, A., Converse, P., Miller, W., & Stokes, W. (1960). *The American voter*. New York: Wiley.
- Caprara, G. V., Schwartz, S., Capanna, C., Vecchione, M., & Barbaranelli, C. (2006). Personality and politics: Values, traits, and political choice. *Political Psychology*, 27, 1–28.
- Carmines, E. G., Ensley, M. J., & Wagner, M. W. (2012). Political ideology in American politics: One, two, or none? *The Forum*, 10, 1-18.

- Carmines, E. G., & Stimson, J. A. (1980). The two faces of issue voting. *The American Political Science Review*, 74(1), 78–91.
- Carney, D.R., Jost, J.T., Gosling, S.D., & Potter, J. (2008). The secret lives of liberals and conservatives: Personality profiles, interaction styles, and the things they leave behind. *Political Psychology*, 29, 807-840.
- Chirumbolo, A., Areni, A., & Sensales, G. (2004). Need for cognitive closure and politics: Voting, political attitudes and attributional style. *International Journal of Psychology*, 39, 245-253.
- Cizmar, A. M., Layman, G. C., McTague, J., Pearson-Merkowitz, S., & Spivey, M. (2014). Authoritarianism and American political behavior from 1952 to 2008. *Political Research Quarterly*, 67(1), 71-83.
- Converse, P. (1964). The nature of belief systems in mass publics. In D. Apter (Ed.), *Ideology and Discontent*. New York: Free Press.
- Delli Carpini, M. X., & Keeter, S. (1996). *What Americans know about politics and why it matters*. New Haven, CT: Yale University Press.
- Ditto, P. H., Liu, B. S., Clark, C. J., Wojcik, S. P., Chen, E. E., Grady, R.H., . . . 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, 273–291. <http://dx.doi.org/10.1177/1745691617746796>
- Duckitt, J. (2001). A dual process cognitive-motivational theory of ideology and prejudice. *Advances in Experimental Social Psychology*, 22, 41-113.
- Duckitt, J., & Bizumic, B. (2013). Multidimensionality of right-wing authoritarian attitudes: Authoritarianism-conservatism-traditionalism. *Political Psychology*, 34, 841-862.
doi:10.1111/pops.12022
- Duckitt, J., & Sibley, C. G. (2010). Personality, ideology, prejudice, and politics: A dual

- process motivational model. *Journal of Personality*, 78, 1861-1894.
- Duriez, B., Van Hiel, A., & Kossowska, M. (2005). Authoritarianism and social dominance in Western and Eastern Europe: The importance of the sociopolitical context and of political interest and involvement. *Political Psychology*, 26(2), 299-320.
- Evans, G., Heath, A., & Lalljee, M. (1996). Measuring left-right and libertarian-authoritarian values in the British electorate. *British Journal of Sociology*, 47, 93–112.
- Eysenck, H. J. (1954). *The psychology of politics*. New York: Praeger.
- Federico, C. M. (2015). The structure, foundations, and expression of ideology. In A. Berinsky (Ed.), *New directions in public opinion* (2nd ed., pp. 81-103). New York: Routledge.
- Federico, C. M., Deason, G., & Fisher, E. L. (2012). Ideological asymmetry in the relationship between epistemic motivation and political attitudes. *Journal of Personality and Social Psychology*, 103, 381-398. doi: 10.1037/a0029063
- Federico, C. M., & Ekstrom, P. D. (2018). The political self: How identity aligns preferences with epistemic needs. *Psychological Science*, 29, 901-913. doi: 10.1177/0956797617748679
- Federico, C.M., Fisher, E.L., & Deason, G. (2011). Expertise and the ideological consequences of the authoritarian predisposition. *Public Opinion Quarterly*, 75, 686-708.
- Federico, C. M., & Goren, P. (2009). Motivated social cognition and ideology: Is attention to elite discourse a prerequisite for epistemically motivated political affinities? In J. T. Jost, A. C. Kay, and H. Thorisdottir (Eds.), *Social and psychological bases of ideology and system justification* (pp. 267-291). New York: Oxford University Press.
- Federico, C. M., Hunt, C. V., & Ergun, D. (2009). Political expertise, social worldviews, and ideology: Translating “competitive jungles” and “dangerous worlds” into ideological reality. *Social Justice Research*, 22(2-3), 259-279.

- Federico, C. M., Johnston, C. D., & Lavine, H. G. (2014). Context, engagement, and the (multiple) functions of negativity bias. *Behavioral and Brain Sciences*, 37(03), 311-312.
- Federico, C. M., & Malka, A. (2018). The contingent, contextual nature of the relationship between needs for security and certainty and political preferences: Evidence and implications. *Advances in Political Psychology*, S1, 3-48. doi: 10.1111/pops.12477
- Federico, C. M., & Reifen Tagar, M. (2014). Zeroing in on the right: Education and the partisan expression of authoritarianism. *Political Behavior*, 36, 581-603. doi: 10.1007/s11109-013-9250-4
- Feldman, S. (2003). Enforcing social conformity: A theory of authoritarianism.” *Political Psychology*, 24, 41-74.
- Feldman, S., & Johnston, C. (2014). Understanding the determinants of political ideology: Implications of structural complexity. *Political Psychology*, 35(3), 337-358.
- Feldman, S., & Stenner, K. (1997). Perceived threat and authoritarianism. *Political Psychology*, 18(4), 741–770.
- Fleishman, J. A. (1988). Attitude organization in the general public: Evidence for a bidimensional structure. *Social Forces*, 67, 159-184.
- Frimer, J. A., Skitka, L. J., & Motyl, M. (2017). Liberals and conservatives are similarly motivated to avoid exposure to one another’s opinions. *Journal of Experimental Social Psychology*, 72, 1–12.
<http://dx.doi.org/10.1016/j.jesp.2017.04.003>
- Gerber, A. S., Huber, G. A., Doherty, D., Dowling, C. M., & Ha, S. E. (2010). Personality and political attitudes: Relationships across issue domains and political contexts. *American Political Science Review*, 104(01), 111-133.
- Gerber, A. S., Huber, G. A., Doherty, D., & Dowling, C. M. (2011). The Big Five personality traits in the political arena. *Annual Review of Political Science*, 14, 265-287.

- Gerth, H., & Mills, C. W. (1953). *Character and social structure*. New York: Harcourt, Brace, & World.
- Goren, P. (2012). *On voter competence*. New York: Oxford University Press.
- Graham, J., Haidt, J., & Nosek, B. (2009). Liberals and conservatives use different sets of moral foundations. *Journal of Personality and Social Psychology*, 96, 1029-1046.
- Haidt, J. (2012). *The righteous mind: Why good people are divided by politics and religion*. New York, NY: Random House.
- Hennes, E. P., Nam, H. H., Stern, C., & Jost, J. T. (2012). Not all ideologies are created equal: Epistemic, existential, and relational needs predict system-justifying attitudes. *Social Cognition*, 30(6), 669-688.
- Hetherington, M. J., & Weiler, J. D. (2009). *Authoritarianism and polarization in American politics*. New York, NY: Cambridge University Press.
- Hibbing, J. R., Smith, K. B., & Alford, J. R. (2014). Differences in negativity bias underlie variations in political ideology. *Behavioral and Brain Sciences*, 37, 297–307.
- Iyengar, S., Sood, G., and Lelkes, Y. (2012). Affect, not ideology: A social identity perspective on polarization. *Public Opinion Quarterly*, 76, 405-431.
- Johnston, C. D., Lavine, H. G., & Federico, C. M. (2017). *Open versus closed: Personality, identity, and the politics of redistribution*. Cambridge, UK: Cambridge University Press.
- Jost, J. T. (2006). The end of the end of ideology. *American Psychologist*, 61, 651–670.
<https://doi.org/10.1037/0003-066X.61.7.651>
- Jost, J. T. (2017). Ideological asymmetries and the essence of political psychology. *Political Psychology*, 38, 167–208. <https://doi.org/10.1111/pops.12407>
- Jost, J. T., Federico, C. M. & Napier, J. L. (2009). Political Ideology: Its structure, functions, and elective affinities. *Annual Review of Psychology*, 60, 307-333.

- Jost, J. T., Federico, C. M., & Napier, J. L. (2013). Political ideologies and their social psychological functions. In M. Freeden, L. T. Sargent, & M. Stears (Eds.), *Handbook of Political Ideologies* (pp. 232-250). New York: Oxford University Press.
- Jost, J. T., Glaser, J., Kruglanski, A. W., & Sulloway, F. (2003). Political conservatism as motivated social cognition. *Psychological Bulletin*, 129, 339–375.
- Jost, J. T., Sterling, J., & Stern, C. (2017). Getting closure on conservatism, or the politics of epistemic and existential motivation. In C. Kopetz & A. Fishbach (Eds.), *The motivation-cognition interface; From the lab to the real world: A Festschrift in honor of Arie W. Kruglanski*. New York: Psychology Press.
- Jost, J. T., Stern, C., Rule, N. O., & Sterling, J. (2017). The politics of fear: Is there an ideological asymmetry in existential motivation? *Social Cognition*, 35, 324–353.
- Kahan, D. M. (2015). What is the 'science of science communication'? *Journal of Science Communication*, 14 (3), 1-12.
- Kalmoe, N. P. (2020). Uses and abuses of ideology in political psychology. *Political Psychology*.
- Kinder, D. R. (1998). Opinion and action in the realm of politics. In D. T. Gilbert, S. T. Fiske, & Lindzey, G. (Eds.), *The handbook of social psychology* (Vol. 2, pp. 778-867). Boston: McGraw-Hill.
- Kinder, D. R., & Kalmoe, N. P. (2017). *Neither liberal nor conservative: Ideological innocence in the American public*. University of Chicago Press.
- Kitschelt, H., Hawkins, K. A., Luna, J. P., Rosas, G., & Zechmeister, E. J. (2010). *Latin American party systems*. Cambridge University Press.
- Knoke, D. M. (1979). Stratification and the dimensions of American political orientations. *American Journal of Political Science*, 23, 772-791.

- Koleva, S. P., Graham, J., Iyer, R., Ditto, P. H., & Haidt, J. (2012). Tracing the threads: How five moral concerns (especially purity) help explain culture war attitudes. *Journal of Research in Personality*, 46, 184-194.
- Kossowska, M. & Van Hiel, A. (2003). The relationship between need for closure and conservative beliefs in western and eastern Europe. *Political Psychology*, 24, 501-508.
- Kraus, S. J. (1995). Attitudes and the prediction of behavior: A meta-analysis of the empirical literature. *Personality and Social Psychology Bulletin*, 21, 58–75. doi:10.1177/0146167295211007
- Kruglanski, A. W. (2004). *The psychology of closed-mindedness*. New York: Psychology Press.
- Kruglanski, A.W., Pierro, A., Mannetti, L., & DeGrada, E. (2006). Groups as epistemic providers: Need for closure and the unfolding of group centrism. *Psychological Review*, 113, 84-100.
- Kruglanski, A. W., & Webster, D. M. (1996). Motivated closing of the mind: “Seizing” and “freezing.” *Psychological Review*, 103, 263–283.
- Lammers, J., Koch, A., Conway, P., & Brandt, M. J. (2017). The political domain appears simpler to the politically extreme than to political moderates. *Social Psychological & Personality Science*, 8, 612–622. <http://dx.doi.org/10.1177/1948550616678456>
- Lasswell, H. D. (1948). *Power and personality*. New York: Norton.
- Layman, G. C., & Carsey, T. M. (2002). Party polarization and “conflict extension” in the American electorate. *American Journal of Political Science*, 46, 786-802.
- Layman, G., Carsey, T. M., Green, J. C., Herrera, R., & Cooperman, R. (2010). Activists and conflict extension in American Party politics. *American Journal of Political Science*, 104, 324–346.
- Lelkes, Y. (2016). Mass polarization: Manifestations and measurements. *Public Opinion Quarterly*, 80, 392-410.
- Lelkes, Y. (2018). Affective polarization and ideological sorting: A reciprocal, albeit weak,

- relationship. *The Forum: A Journal of Applied Research in Contemporary Politics*, 16, 23-45.
- Levendusky, M. (2009). *The partisan sort: How liberals became Democrats and conservatives became Republicans*. Chicago: University of Chicago Press.
- Lipset, S. M. (1960). *Political man*. New York: Doubleday.
- Luttig, M. D. (2018). The ‘prejudiced personality’ and the origins of partisan strength, affective polarization, and partisan sorting. *Advances in Political Psychology*, 39.S1, 239-256.
- Malka, A., & Lelkes, Y. (2010). More than ideology: Conservative-liberal identity and receptivity to political cues. *Social Justice Research*, 23, 156-188.
- Malka, A., Lelkes, Y., & Soto, C.J. (2019). Are cultural and economic conservatism positively correlated? A large-scale cross-national test. *British Journal of Political Science*, 49, 1045-1069. doi:10.1017/S0007123417000072, 1-25.
- Malka, A., & Soto, C. J. (2015). Rigidity of the economic right? Menu-independent and menu-dependent influences of psychological dispositions on political attitudes. *Current Directions in Psychological Science*, 24, 137–142. <https://doi.org/10.1177/0963721414556340>
- Mason, L. (2018). *Uncivil agreement: How politics became our identity*. Chicago: University of Chicago Press.
- Soto, C. J., Inzlicht, M., & Lelkes, Y. (2014). Do needs for security and certainty predict cultural and economic conservatism? A cross-national analysis. *Journal of personality and social psychology*, 106(6), 1031.
- McCarty, N., Poole, K. T., & Rosenthal, H. (2006). *Polarized America*. Cambridge, MA: MIT Press.
- McClosky, H. (1958). Conservatism and personality. *American Political Science Review*, 52, 27-45.
- McClosky, H., & Zaller, J. (1984). *The American ethos*. Harvard University Press.
- McCrae, R. R. (1996). Social consequences of experiential openness. *Psychological Bulletin*, 120, 323-

337.

Mondak, J. J. (2010). *Personality and the foundations of political behavior*. Cambridge University Press.

Morgan, G. S., & Wisneski, D. C. (2017). The structure of political ideology varies within and between people: Implications for theories about ideology's causes. *Social Cognition*, 35, 395-414.

Noel, H. (2013). *Political ideologies and political parties in America*. New York: Cambridge University Press.

Osborne, D., & Sibley, C. G. (2012). Does personality matter? Openness correlates with vote choice, but particularly for politically sophisticated voters. *Journal of Research in Personality*, 46 (6), 743-751.

Osborne, D., & Sibley, C. G. (2015). Within the limits of civic training: Education moderates the relationship between openness and political attitudes. *Political Psychology*, 36 (3), 295-313.

Osmundsen, M. Hendry, D. J., Laustsen, S., Smith, K. N., & Petersen, M. B. (2020). The psychophysiology of political ideology: Replications, reanalysis, and recommendations. *Journal of Politics*.

Oxley, D.R., Smith, K.B., Alford, J.R., Hibbing, M.V., Miller, M.S., Scalora, M., et al. (2008). Political attitudes vary with physiological traits. *Science*, 321, 1667-1670.

Rokeach, M. (1960). *The open and closed mind*. New York, NY: Basic Books.

Schwartz, S. H. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. *Advances in Experimental Social Psychology*, 25, 1-65.

Schwartz, S. H. (2007). Value orientations: Measurement, antecedents and consequences across nations. In R. Jowell, C. Roberts, R. Fitzgerald & G. Eva (Eds). *Measuring attitudes cross-nationally: Lessons from the European Social Survey* (pp. 161-193). London: Sage.

Sears, D. O. (1993). Symbolic politics: A socio-psychological theory. In S. Iyengar & W. J. McGuire

- (Eds.), *Explorations in political psychology* (pp. 113-149). Durham: Duke University Press.
- Shafer, B. E., & Claggett, W. J. (1995). *The two majorities: The issue context of modern American politics*. Baltimore, MD: The John Hopkins University Press.
- Smith, K. B., & Warren, C. (2020). Physiology predicts ideology. Or does it? The current state of political psychophysiology research. *Current Opinion in Behavioral Sciences*, 34, 88-93. doi: 10.1016/j.cobeha.2020.01.001
- Sniderman, P. M., & Bullock, J. (2004). A consistency theory of public opinion and political choice: The hypothesis of menu dependence. In W. E. Saris & P. M. Sniderman (Eds.), *Studies in public opinion: Attitudes, nonattitudes, measurement error, and change* (pp. 337-357). Princeton, NJ: Princeton University Press.
- Sniderman, P. M., Brody, R. A., & Tetlock, P. E. (1991). *Reasoning and choice*. New York: Cambridge University Press.
- Stangor, C., & Leary, S. P. (2006). Intergroup beliefs: Investigations from the social side. *Advances in Experimental Social Psychology*, 38, 243-281.
- Stenner, K. (2005). *The authoritarian dynamic*. London: Cambridge University Press.
- Thorisdottir, H., Jost, J.T., Liviatan, I., & Shrout, P.E. (2007). Psychological needs and values underlying left-right political orientation: Cross-national evidence from eastern and western Europe. *Public Opinion Quarterly*, 71, 175–203.
- Tomkins, S. (1963). Left and right: A basic dimension of ideology and personality. In R. W. White (Ed.), *The study of lives: Essays on personality in honor of Henry A. Murray* (pp. 388–411). New York, NY: Atherton Press.
- Treier, S., & Hillygus, D. S. (2009). The nature of political ideology in the contemporary electorate. *Public Opinion Quarterly*, 73, 679-703.
- Van Hiel, A., Onraet, E., Crowson, H. M., and Roets, A. (2016). The relationship between right-

- wing attitudes and cognitive style: a comparison of self-report and behavioural measures of rigidity and intolerance of ambiguity. *European Journal of Personality*, 30, 523–531. doi: 10.1002/per.2082
- Van Hiel, A., Onraet, E., & De Pauw, S. (2010). The relationship between social-cultural attitudes and behavioral measures of cognitive style: A meta-analytic integration of studies. *Journal of Personality*, 78, 1765-1799.
- Van Hiel, A., Pandelaere, M., & Duriez, B. (2004). The impact of need for closure on conservative beliefs and racism: Differential mediation by authoritarian submission and authoritarian dominance. *Personality and Social Psychology Bulletin*, 30(7), 824-837.
- van Prooijen, J. W., & Krouwel, A. P. (2017). Extreme political beliefs predict dogmatic intolerance. *Social Psychological & Personality Science*, 8, 292–300.
<http://dx.doi.org/10.1177/1948550616671403>
- van Prooijen, J. W., Krouwel, A. P., Boiten, M., & Eendebak, L. (2015). Fear among the extremes: How political ideology predicts negative emotions and outgroup derogation. *Personality and Social Psychology Bulletin*, 41, 485–497. <http://dx.doi.org/10.1177/0146167215569706>
- van Prooijen, J. W., & Krouwel, A. P. M. (2019). Psychological features of extreme political ideologies. *Current Directions in Psychological Science*. <http://dx.doi.org/10.1177/0963721418817755>
- van Prooijen, J. W., Krouwel, A. P. M., & Emmer, J. (2018). Ideological responses to the EU refugee crisis: The left, the right, and the extremes. *Social Psychological & Personality Science*, 9, 143–150.
<http://dx.doi.org/10.1177/1948550617731501>
- Washburn, A. N., & Skitka, L. J. (2017). Science denial across the political divide: Liberals and conservatives are similarly motivated to deny attitude-inconsistent science. *Social Psychological & Personality Science*, 9, 927-980. <https://doi.org/10.1177/1948550617731500>

- Weber, M. (1948). *From Max Weber: Essays in sociology*. New York: Oxford University Press.
- Webster, D. M., & Kruglanski, A. W. (1994). Individual differences in need for cognitive closure. *Journal of Personality and Social Psychology*, 67, 1049–1062.
- Wilson, G. D. (1973). *The psychology of conservatism*. New York: Academic Press.
- Yilmaz, O., & Saribay, S. A. (2016). An attempt to clarify the link between cognitive style and political ideology: A non-Western replication and extension. *Judgment and Decision Making*, 11, 287–300.
- Zaller, J. (1992). *The nature and origins of mass opinion*. New York: Cambridge University Press.
- Zmigrod, L., Rentfrow, P. J., & Robbins, T. W. (2020). The partisan mind: Is extreme political partisanship related to cognitive inflexibility? *Journal of Experimental Psychology: General*, 149, 407–418.