

To appear in J. T. Crawford, & L. Jussim (Eds.) *Frontiers of Social Psychology: Politics of Social Psychology*. Psychology Press: New York.

Rethinking the Rigidity of the Right Model: Three Suboptimal Methodological Practices and  
Their Implications

Ariel Malka<sup>1</sup>, Yphtach Lelkes<sup>2</sup>, and Nissan Holzer<sup>1</sup>

<sup>1</sup>Yeshiva University

<sup>2</sup>University of Pennsylvania

The dominant psychological account of political ideology is an unflattering one for conservatives. Relative to liberals, they are said to be closed-minded, averse to novelty, highly attuned to threat, dogmatic, conformist, and disinclined toward complex thinking (Jost, Glaser, Kruglanski, & Sulloway, 2003). Perspectives along these lines – collectively dubbed the “Rigidity of the Right” Model (RR Model) (Tetlock, 1984) – go back over half a century (Adorno, Frenkel-Brunswik, Levinson, & Sanford, 1950). After receiving sporadic attention for a number of years, they were revived and integrated in an influential review by Jost et al. (2003), who argued that people who are intolerant of uncertainty and sensitive to threat tend to have a cognitive-motivational affinity for right-wing ideology. It is fair to say that this viewpoint has become conventional wisdom within the psychological study of political ideology.

That this would strike many as an unsympathetic characterization of conservatives should not trouble anyone committed to accumulating knowledge through the scientific method. What does warrant greater attention, we presently argue, is that a non-negligible portion of the research considered supportive of the RR Model possesses one or more suboptimal methodological features, and that the implications of these methodological issues for the RR Model have been insufficiently recognized. This, we contend, has resulted in a partial – but theoretically consequential – mischaracterization of the psychological origins of political ideology.

This chapter delineates three recurring suboptimal methodological practices within research on the psychological origins of political ideology, and explores their implications by considering findings from studies in which they are not present. We offer a three-item checklist of methodological shortcomings and associated interpretive problems with the hope that scholars will use this checklist when (a) evaluating empirical findings relevant to the psychological

origins of political ideology, and (b) selecting and operationalizing methodological moderators in meta-analyses of such findings. Although we believe that these methodological issues have tended to bias conclusions in support of the RR model's central premise, we make no claim that ideological bias plays a role in any of them (cf, Duarte et al., 2015). We leave that as a matter for other scholars to debate.

### **The Three-Item Checklist**

The three methodological issues that we highlight are:

- A) Content overlap between putatively pre-political measures and putatively political measures,
- B) Inadequate attention to the multidimensional structure – and, in particular, the central economic aspects – of political attitudes, and
- C) Inadequate attention to variation in political discourse exposure

### **The Rigidity of the Right Model**

Many psychological perspectives on the origins of political ideology share a common theoretical core, which has been referred to as the RR Model. The crux of this view is that a constellation of psychological attributes and evocable states – including dogmatism, closed-mindedness, intolerance of ambiguity, preference for order and structure, aversion to novelty and stimulation, valuing of conformity and obedience, and relatively strong concern with threat – leads to a preference for right-wing over left-wing political ideology. Three features of this general viewpoint are worth emphasizing.

First, the diverse attributes and states said to underlie conservatism may be efficiently described as falling within two broad families: uncertainty intolerance and threat sensitivity (Jost et al., 2003; Jost et al., 2007). Hibbing, Smith, and Alford (2014) argued that these various

attributes and states may be distilled into a single construct which they referred to as “negativity bias,” but the manifestations of negativity bias in their model correspond closely with Jost et al.’s (2003) two families of pre-political characteristics. For expository purposes we refer to these attributes and states collectively as Needs for Security and Certainty [NSC] (cf, Hetherington & Weiler, 2009; Johnston & Wronski, 2015; Malka & Soto, 2015).

Second, the diverse attitudes and policy preferences said to comprise conservative vs. liberal ideology are often assumed to converge on a small number of core attributes. In Jost et al.’s (2003) model, these core attributes are opposition to change and tolerance of inequality. Putting these together, the central ideology-defining difference between conservatives and liberals is said to concern *change in the direction of equality promotion*; thus “liberals are invariably more supportive than conservatives of initiatives that are designed to increase social and economic equality, such as welfare, social security, affirmative action, universal health care, progressive forms of taxation, and same-sex marriage” (Jost, Federico, & Napier, 2013, p. 235-236). This is consistent with other perspectives that conceptualize the core aspects of conservatism in terms of preferences and values within particular policy domains, most commonly economic and cultural (Carmines, Ensley, & Wagner, 2012; Treier & Hillygus, 2009). Across these conceptual frameworks, as in the RR Model, conservatism (relative to liberalism) is defined as more culturally traditional and less economically redistributive.

Third, this is a viewpoint about an *organic* and *functional* relationship between a set of traits and states, on the one hand, and a broad, encompassing *social and economic* ideology, on the other. As Thorisdottir, Jost, Liviatan, and ShROUT (2007, p. 179-180) put it, “there is a special resonance or match between motives to reduce uncertainty and threat, and the two core aspects of right-wing ideology, resistance to change and acceptance of inequality” (p. 179). This

“special resonance” between underlying psychological characteristics and political ideology is sometimes described in connection with a system justification motive, or “motivation to defend, bolster, and justify existing social, economic, or political institutions and arrangements” (Jost, Federico, & Napier, 2013, p. 236). Noting various belief systems that are connected with right-wing politics, Jost and Hunyady (2005, p. 260) posited that while some of these belief systems “focus purely on social and cultural issues, whereas others concern economic matters,” the finding that they are intercorrelated “suggests that they may serve a similar ideological function, namely to legitimize existing social arrangements” (Jost & Hunyady, 2005, p. 260-261).

Personality-based and situationally induced NSC are said to yield a preference for preserving and justifying existing social and economic arrangements, because doing so avoids destabilization of prevailing modes of conduct and economic hierarchy. This, as the theory goes, satisfies needs to avoid uncertainty and deal with threat. Such functional coherence between personality attributes and both cultural and economic conservatism is the defining feature of the RR model, and can be traced to the central thesis of *The Authoritarian Personality* “that the political, economic, and social convictions of an individual often form a broad and coherent pattern . . . and that this pattern is an expression of deep-lying trends in his personality.” (Adorno et al., 1950, p. 1).

### **Evaluating Research on the Psychological Origins of Political Ideology**

We now describe three recurring methodological shortcomings within this area of research and their implications for understanding the psychological origins of political ideology.

We begin with the long-recognized problem of content overlap.

#### **Content Overlap Between Pre-Political and Political Measures**

Before reporting the results of their meta-analysis, Jost et al. (2003) noted that “too many measures of individual differences have conflated psychological and political variables in an

attempt to measure a construct that is really a hybrid of the two” (p. 340). Indeed, the problem of content overlap has been present in many investigations of ideology’s origins since the classic work of Adorno et al. (1950). Their F-Scale, intended to measure authoritarianism, overlapped in content with scales examined as correlates, such as measures of political-economic values and prejudice (e.g., Altemeyer, 1981; Hyman & Sheatsley, 1954). And as we will show below, this problem persists today in several widely cited studies on the psychological origins of ideology. Its recurrence reflects a guiding assumption in much of this research: that right-wing political opinion, threat sensitivity, novelty aversion, dogmatism, and prejudice all go together naturally as components of a *conservative syndrome* (e.g., Wilson, 1973). Quite problematically, measurement practices guided by this assumption are used to test the very idea that NSC characteristics relate to political conservatism.

*Inclusion of NSC and related non-political content within political measures.* The content overlap problem most often involves the inclusion within political measures of psychological content that is not directly political. Scales treated as indicators of conservative vs. liberal ideology often contain content pertaining to religious sentiment, cognitive rigidity, orientation toward authority, and/or intolerance, in addition to (mostly cultural) political content. The use of these scales as ideology measures is based on the *ex-ante* assumption that such traits and styles are an inherent part of conservatism vs. liberalism (c.f., Crawford & Pilanski, 2014; Layman & Green, 2006). This is tautological when one is attempting to address the empirical question of whether, and to what degree, such traits and styles correlate with conservatism.

Consider, first of all, the F Scale, which was the measure of conservatism in six of the findings summarized in Jost et al. (2003). In addition to socially conservative political content, it contains content condemning bad manners, expressing belief that people should “talk less and

work more”, asserting that everyone should “have complete faith in some supernatural power”, and pertaining to a variety of other attributes that are reflective of rigidity, religious fundamentalism, and related characteristics (see Adorno et al., 1950, pp. 255 – 257, Table 7).

Next consider the Wilson-Patterson Conservatism scale (C-Scale). As Jost et al. (2003, pp. 340) noted:

Wilson and Patterson’s (1968) Conservatism Scale (C-Scale)— which is the psychological instrument that has been most widely used to measure conservatism—combines nonpolitical stimuli that are meant to elicit general attitudes concerning uncertainty avoidance (e.g., modern art, jazz music, horoscopes) and stimuli that have explicitly political referents (e.g., death penalty, legalized abortion, socialism, religion).

But despite this acknowledgement, the Jost et al. (2003) meta-analysis included 40 findings (amounting to 26 percent of the findings summarized in their meta-analysis) involving the C-scale as the conservatism measure. Testing a measure containing a substantial number of “nonpolitical stimuli that are meant to elicit general attitudes concerning uncertainty avoidance” (p. 340) as a correlate of uncertainty avoidance and threat sensitivity is, of course, tautological, and would be expected to inflate estimated associations between psychological and political variables (see Van Hiel, Onraet, & De Pauw, 2010)

Also less than ideal is the heavy reliance on Altemeyer’s (1981) Right Wing Authoritarianism (RWA) scale as a measure of conservatism. This scale is now generally regarded as a measure of culturally conservative ideology (e.g., Duckitt, 2001) as its items do tap into culturally conservative content. But it is a particular kind of culturally conservative content involving an aggressiveness and paranoia directed at the unconventional; for example, longing for a leader who will “destroy the radical new ways and sinfulness that are ruining us” and expressing the urgent necessity of “smash[ing] the perversions eating away at our moral fiber and traditional beliefs.” And like the F-Scale and the C-Scale, the RWA scale contains content

pertaining directly to religiosity and fundamentalism, which ought to be viewed as correlates (rather than inherent components) of political ideology (e.g., Layman & Green, 2006).

The problem of content overlap has been widely recognized within political psychology (e.g., Sniderman & Tetlock, 1986; Stenner, 2005; Van Hiel, et al., 2010), and one might be inclined to assume that the voluminous psychological literature guided by the RR Model since 2003 has largely used uncontaminated measures of political ideology. Unfortunately there are many instances in which this is not the case. In a widely cited longitudinal study, for example, Block and Block (2006) included in their composite measure of ideology a political information scale, a political activism scale, and items assessing preferences regarding social stability, religion, and tolerance of political opponents. Those who knew more facts about politics, who engaged in more political activity, who were tolerant of political opponents, and who placed lower priority on social stability and religion, were coded as politically liberal. In a study of the origins of right vs. left political orientation, Kandler, Bleidorn, & Riemann (2012) included in their ideological conservatism measures position on “rebelliousness-conformity” and “tolerance-intolerance.” These types of indicators should be treated as potential *correlates* of political views, with potentially complex ties to the latter – not as indicators of political conservatism itself (e.g., Brandt, Reyna, Chambers, Crawford, & Wetherell, 2014; Duckitt, 2001). Thorisdottir et al. (2007) documented intriguing differences in the origins of attitudes between Eastern and Western Europe, but they did use a particular item to gauge an aspect of rightist political ideology that would have been better treated as a pre-political indicator: “Tradition is important to him. He tries to follow the customs handed down by his religion or his family.” Similarly, Aspelund, Lindeman and Verkasalo (2013) measured political conservatism with value measures tapping openness to change and self-enhancement, measures that should be (and

usually are) treated as indicators of “basic values” as opposed to political ideology (Caprara, Schwartz, Capanna, Vecchione, & Barbaranelli, 2006). Van Hiel et al. (2010) included “religiosity,” “adherence to authoritarian parent-child relationships,” and “dogmatism” among the variables “included as ‘proxies’ for socio-cultural conservative attitudes” (p. 1767) in a meta-analysis of behaviorally-assessed predictors of social conservatism. While it is true that the dogmatism measure they used contains a good deal of political content, it is best described as a hybrid measure that combines a particular form of conservatism with non-political content (more on this below).

*Inclusion of political content within pre-political measures.* Sometimes political content is included in measures of putatively pre-political attributes. For example, associations between political group memberships (e.g., ideological and partisan groups) and the F scale – which blends cultural conservatism with non-political content– were long taken as support of the RR Model, based on the assumption that the F-Scale assessed rigidity (cf, Jost et al., 2003). Acknowledging problems with the F Scale as a rigidity indicator, Rokeach (1960) developed a “dogmatism” scale, but unfortunately this measure contains political content, such as anti-Communist sentiment, pro-American nationalism, and a hawkish foreign policy posture. Those taking a hardline cold war stance and expressing nationalism in this measure were assumed to be dogmatic, and dogmatism measured this way was examined as a correlate of (other) political attitudes. After a fleeting reference to this problem in a widely cited review, Stone (1980) proceeded to present evidence that right-wing and left-wing groups differ on the Rokeach dogmatism scale and then conclude primarily from this “that authoritarianism is a personality and attitudinal syndrome characteristic of right-wingers alone” (p. 14). The problematic reasoning here was thrown into sharp relief in a recent study by Conway et al. (2015). They

noted correctly that the Rokeach dogmatism scale is a “measurement of dogmatism that captures domains on which conservatives are more dogmatic” (p. 4), and found that left-wingers were more dogmatic when the items were adjusted to query assertions of left-wing dogmatism (e.g., an environmental group tolerating diversity of opinion).

Inclusion of conservatism content within pre-political measures is not the most prevalent methodological flaw in personality-politics research, but it does lurk unnoticed in certain parts of the literature. For example, Jost et al. (2007, Study 3) used items assessing concern about crime victimization and the threat of terrorism (p. 1000) to study relations between threat sensitivity and conservatism. But these are two politicized threats associated with contemporary American conservatism (in contrast, for example, to climate change threat or threats from police violence, which are associated with contemporary American liberalism). Similarly, Thorisdottir and Jost (2011, Study 2) manipulated threat of terrorism to specifically examine “the effect of threat on political conservatism” (p. 785).

To summarize, when one looks into the measurement details of research cited in support of the RR Model, it is far too common to find NSC-related content in political measures, and one will sometimes find political content within what are supposed to be measures (or manipulations) of pre-political attributes (or psychological states). This would be expected to yield overestimates of the relationship between NSC and conservative political attitudes.

### **Inadequate Attention to the Multidimensional Structure – and the Central Economic Aspects -- of Right vs. Left Political Ideology**

When it comes to political policy, two dimensions of right vs. left conflict are most prominent: the economic dimension, having to do with views about government economic intervention and redistributive social welfare policy, and the cultural (or “social”) dimension, having to do with views about traditional morality and treatment of cultural outsiders and

transgressors (Benoit & Laver, 2006; Carmines et al., 2012; Duckit & Sibley, 2009; Treier & Hillygus, 2009). Despite its well-established multidimensional structure, most research on ideology's psychological origins relies on a unidimensional operationalization of ideology. This implies, in a manner consistent with the RR model, that cultural and economic forms of conservatism (vs. liberalism) cohere naturally due to common underlying psychological and biological influences (e.g., Alford, Funk, & Hibbing, 2005; Amodio, Jost, Master, & Yee, 2007; Jost et al., 2003). But, as Feldman and Johnston (2014) noted:

[t]heoretical accounts of ideology must not assume what they seek to explain; namely, the foundations of ideological constraint in biological and psychological antecedents. Many of these recent studies have relied upon unidimensional operationalizations of ideology only to extrapolate their findings backwards to explain the effects of prepolitical orientations on multiple dimensions of ideology and thus on ideological constraint. In our view, this puts the proverbial cart before the horse. While such theories are both reasonable and well-grounded, they must hold up to closer empirical scrutiny.

Some work has indeed provided such scrutiny, by employing a multidimensional conceptualization of ideology when seeking to understand the psychological origins of political attitudes (Duckit & Sibley, 2009; Feldman & Johnston, 2014; Malka, Soto, Inzlicht, & Lelkes, 2014; Johnston, Federico, & Lavine, 2016). Within psychology, this type of perspective dates back to the work of Eysenck (1954) and Middendorp (1978), but the Dual Process Model proposed by Duckitt and colleagues (e.g., Duckitt, 2001; Duckitt & Sibley, 2009) has perhaps been the most influential contemporary perspective along these lines. This model distinguishes a cultural ideological dimension said to be best operationalized by RWA, and an egalitarianism-economic dimension said to be best represented by social dominance orientation (SDO). According to the Dual Process Model, high RWA is rooted in closed-mindedness, social conformity, and perceptions of the world as a dangerous place, along the lines of NSC; SDO,

however, is rooted in dispositional tough-mindedness and a view of the world as a “competitive jungle.”

Thus, like the RR Model, the Dual Process Model posits that NSC characteristics underlie attitudes regarded as conservative. But unlike the RR Model, the Dual Process Model posits that such NSC characteristics only underlie the cultural dimension, not the egalitarianism-economic dimension, the latter of which emerges from a distinct set of motivational goals. We will argue that, although SDO and economic attitudes ought not be treated interchangeably as in the Dual Process Model, the balance of evidence is consistent with the fundamental contention of this model that NSC does not yield a functional affinity for right-wing economic attitudes.

But first, why should one care? After all, as Hibbing et al. (2014, p. 305) note, “modern polities deal with an amazing array of issues and categories and it is foolhardy to expect a single trait . . . to account for all political variations.” We contend that a failure of NSC to reliably predict economic conservatism would, in fact, constitute evidence against the RR Model.

Economic matters are central to right-left policy competition within nations around the world (e.g., Bakker, Jolly, & Polk, 2012; Benoit & Laver, 2006; Huber & Inglehart, 1995; Lefkofridi, Wagner & Willmann, 2013; McCarty, Poole, & Rosenthal, 2008), as societies face fundamental trade-offs concerning the priorities of promoting growth and incentivizing productive activity, on the one hand, and providing for the needy, promoting economic equality, and harnessing economic activity for socially beneficial goals, on the other. According to the RR Model, those who especially prioritize security, threat avoidance, order, structure, and so on will, on average, be drawn to right-wing economic policies because those policies resist disruption of the economic hierarchy. Our view, quite simply, is that the balance of evidence runs against the RR Model when it comes to the ideologically central economic domain.

In considering this case, it is first of all important to recognize that most studies cited in support of the RR Model are unsuitable for examining the origins of economic attitudes. This is often because unidimensional conservative vs. liberal ideology measures or cultural conservatism indicators are used as the dependent variable (e.g., Fraley, Griffin, Belsky, & Roisman, 2012). Also, many studies assess a broad construct dealing with views about “equality” – such as SDO or other measures of generalized inegalitarianism– with implications for both cultural and economic forms of equality (e.g., Van Berkel, Crandall, Eidelman, & Blanchard, 2015). But there are now enough published studies with uncontaminated economic attitude measures to test whether the RR Model applies to the economic domain.

Six sources reported in Jost et al. (2003) dealt with economic attitudes, and several of these possessed problematic methodological features described in this chapter. The evidence from these six studies was inconsistent and inconclusive. Also, some studies omitted from the review showed null (Ray, 1973) or negative (Johnston & Tamney, 2001) relationships between NSC and economically right-wing views. But what does research since 2003 say about the link between NSC and economic attitudes?

One commonly used NSC indicator is “authoritarianism,” which reflects “a set of personality traits associated with aversion to difference and conformity to authority” (Cizmar, Layman, McTague, Pearson-Merkowitz, and Spivey, 2014, p. 71). Unlike Altemeyer’s RWA scale, measures dealing directly with valuing of obedience and uniformity gauge a trait that is devoid of political content and thus can be examined as a psychological predictor of political attitudes in a non-tautological way (Feldman & Stenner, 1997; Stenner, 2005). Analyses involving this type of authoritarianism measure show reliable relations with social conservatism, but small and directionally inconsistent relations with economic attitudes (Cizmar et al., 2014;

Clifford, Jewell, Waggoner, 2015; Feldman & Johnston, 2014; Hetherington & Weiler, 2009; Napier & Jost, 2008; Stenner, 2005).

When one considers a broader range of uncertainty intolerance indicators, including openness to experience, uncertainty avoidance, and need for cognitive closure – it would appear that these measures have reliably correlated with cultural, but not economic, conservatism (e.g., Carney, Jost, Gosling, & Potter, 2008, Study 1; Chirumbolo, Arena, & Sensales, 2004; Crowson, 2009; Feldman & Johnston, 2014; Van Hiel, Pandelaere, & Duriez, 2004 ). Some studies have found (mostly with American samples) that uncertainty intolerance indicators relate to economic conservatism (e.g., Gerber, Huber, Doherty, Dowling, & Ha., 2010; Hennes, Nam, Stern, & Jost, 2012) and other studies have found mixed evidence in this regard across samples or measures (e.g., Cichocka, Bilewicz, Jost, Marrouch, & Witkowska, 2016; Clifford et al., 2015; Kossowska & Van Hiel, 2003). Meanwhile, the balance of evidence suggests that the related characteristic of low intelligence correlates with culturally right-wing but economically left-wing attitudes (Carl, 2015; Kimmelmeier, 2008; Morton, Tyran & Wengström; 2011; Stankov, 2009). And Cichocka et al. (2016) found that preference for use of nouns in communication (theorized to “satisfy psychological needs for order, stability, and predictability”, p. 3) correlated with social and “general” conservatism, but not with economic conservatism.

It is fair to say that threat sensitivity indicators have failed to reliably predict economic conservatism (Feldman and Huddy, 2015). As it turns out, some studies show links between threat sensitivity indicators and left-wing economic views (Gerber et al., 2010; Janoff-Bulman, Sheikh, & Baldacci, 2008, Study 2). Other studies show no relationship between threat sensitivity indicators and economic attitudes (Carney et al., 2008; Clifford et al., 2015; Crowson, 2009; Oxley et al., 2008).

Other research has examined changes in political attitudes following threatening events or threat manipulations (e.g., Bonanno & Jost, 2006; Heatherington & Suhay, 2011; Lambert et al., 2010; Nail & McGregor, 2009; Peterson & Gerstein, 2005). Although this work provides evidence that certain kinds of threat increase cultural or “general” conservatism, it has not provided reliable evidence that threat increases economic conservatism. Moreover, recent studies suggest that experimentally generated threats to control (Luguri & Napier, 2016), feelings of low economic status (Brown-Iannuzzi, Lundberg, Kay, & Payne, 2015), and disgust experience (Petrescu & Parkinson, 2014) might yield *left-leaning* economic preference.

The latter of these experiences, disgust, has been examined in the context of political ideology in quite a bit of recent research. Some research has demonstrated that inducing disgust leads to particular forms of cultural conservatism, especially regarding sexual morality (e.g., Inbar, Pizzaro, & Bloom, 2012). But, as described above, manipulated disgust might yield left-wing economic attitudes (Petrescu & Parkinson, 2014). Individual difference studies also suggest that disgust sensitivity relates to cultural but not economic conservatism (Inbar, Pizzaro, and Bloom, 2009, Study 2 (see footnote 2, p. 720); Smith, Oxley, Hibbing, Alford, & Hibbing, 2011, Online Supplemental Material; Terrizzi, Shook, and Ventis, 2010, Study 1) – consistent with findings that self-identified libertarians ascribe low moral significance to purity and other “binding” moral foundations (e.g., Graham Haidt, & Nosek; 2009, Study 3; Iyer, Koleva, Graham, Ditto, & Haidt, 2012).

The balance of evidence described above is consistent with the view that while NSC indicators predict right-wing cultural attitudes, they do not reliably predict right-wing economic attitudes. Recently, Malka and colleagues carried out the largest cross-national study of these associations to date (Malka et al, 2014; Malka, Lelkes, & Soto, 2016). Using data from Wave 5

of the World Values Survey (WVS; 2005-2007), Malka et al. (2014) found that while a composite indicator of NSC reliably predicted culturally conservative attitudes, it was actually a small predictor of *left-wing* economic attitudes, on average. In a recent paper (Malka et al., 2016), this effect replicated within the Wave 6 WVS data set (2010-2014). In that paper, Malka et al. (2016) reported the zero-order correlations between NSC and two economic attitude measures for all Wave 5 and 6 samples with available data. One of the economic attitude measures assessed views concerning government responsibility for reducing economic inequality and promoting social welfare (“social welfare conservatism”), and the other assessed views about government vs. private ownership of business and industry (“ownership conservatism”). Across the two waves only 5.3% of the within nation correlations between NSC and social welfare conservatism were positive and statistically significant. Meanwhile, almost nine times as many of these within nation-correlations were *negative* and statistically significant (44.6%). The within-nation correlations between NSC and business ownership conservatism were positive and significant in 12.0% of the cases but negative and significant in 39.8% of the cases. Thus within nations around the world, NSC more often went with left-wing than with right-wing attitudes in the ideologically-central economic domain, although this association was typically small. In contrast, NSC often related to right-wing cultural views, such as traditional sexual morality. Like prior research, this suggests that when it comes to the cultural domain, there is a great deal of truth to the RR Model. However, given the centrality of economic matters to right vs. left political ideology around the world, these findings raise serious doubts about the RR Model’s scope of applicability.

### **Inadequate Attention to Variation in Discourse Exposure**

Most psychological studies aim to draw inferences about a large population from which study participants are sampled. But it is also true that most psychological studies are not conducted with a sample drawn randomly from a discernable population. The degree to which this mismatch yields misleading conclusions will vary based on a number of factors, including topic area. As for the topic of this chapter, it has been recognized that there are various forms of contextual variability in the relation between dispositions and political attitudes (Hibbing et al., 2014; Federico & Goren, 2009 ). However, as we will argue in this section, researchers have under-appreciated the implications of this contextual variability for the conclusions that can be drawn from particular research samples. In particular, we argue that inadequate attention to certain forms of contextual variability has biased conclusions in support of the RR Model.

Psychological samples tend to be “WEIRD” – Western, educated, industrialized, rich and democratic (Henrich, Heine, & Norenzayan, 2010). This applies to most psychological studies on the origins of ideology. These studies are usually conducted with American samples or samples from other developed and democratic Western nations. Furthermore, many of these studies are conducted with samples whose characteristics would generally incline them toward a higher than average level of political involvement and knowledge: in particular, relatively high education or wealthy samples. And it is rare for variation across cultural or discursive context to be examined as a moderator of dispositional effects on political attitudes (cf, Duriez, Van Hiel, & Kossowska, 2005; Federico & Goren, 2009; Thorisdottir et al., 2007).

To understand how this could overstate support for the RR Model, it is necessary to focus on the construct of political engagement – or the tendency to follow politics, to be interested in politics, and to be politically knowledgeable (e.g., Abramowitz, 2010). As political scientists have long been aware, a unidimensional right-left organization of diverse political attitudes is

mainly, if not exclusively, characteristic of politically engaged people (Converse, 1964). This is likely because politically engaged people tend to be committed to political identities (e.g., Huddy, Mason, & Aaroe, 2015) and to know information about what political positions are left-wing and what political positions are right-wing (e.g., Zaller, 1992). Those with political identities and the requisite exposure to political cues then employ “motivated reasoning” strategies (Kunda, 1990) to justify and bolster attitudes consistent with their political identities (e.g., Kahan, Peters, Dawson, & Slovic, 2013; Malka & Lelkes, 2010; Morgan, Mullen, & Skitka, 2010).

This has implications for the way in which basic dispositions translate into political attitudes. In particular, those high in political engagement often display the strongest relations between NSC and a unidimensional conservative vs. liberal ideology (e.g., Federico & Goren, 2009; Jost et al., 2009). This in and of itself would suggest that evidence in support of the RR Model has been overstated by disproportionately sampling high political engagement groups, such as relatively educated and wealthy individuals, or, worse yet, political elites. But this problem is compounded when lack of attention to variation in political discourse is coupled with failure to take a suitable measure of economic political attitudes. Recently, two research groups have addressed this matter and proposed modifications to the RR Model based on their findings (Johnston et al., 2016; Malka et al., 2014; Malka & Soto, 2015).

To understand this new approach, consider a person with high level of NSC. She will likely be inclined to adopt culturally conservative attitudes, in a manner consistent with the RR Model. But she might also experience a force compelling her to adopt left-wing economic attitudes, as shown in the previous section. This latter influence has been described by Johnston et al. (2016) as “instrumental” – those high in NSC should desire the material protection and

stability that left-wing economic policies are intended to provide. But what if this person is exposed to a high volume of political information suggesting that right wing cultural attitudes belong together with right wing economic attitudes as part of a broad-based right-wing ideology? A good deal of survey evidence is now consistent with the view that she would adjust her economic attitudes to the right, and that this would change the relationship between NSC and economic attitudes.

In Malka et al.'s (2014) cross-national investigation, NSC more often went with left-wing than with right-wing economic views. But there was a key exception to this pattern: among politically engaged individuals from ideologically constrained nations (in that they were characterized by a strong degree of right-left structuring of political attitudes), NSC displayed a small positive relation with right-wing economic attitudes. Coming from an ideologically constrained country (such as the United States) and having been exposed to a high volume of political discourse was associated with a reversal of the instrumental effect of NSC on left-wing economic views.

Similar findings were obtained by Johnston et al. (2016), who conducted relevant analyses with ten representative American samples and a diverse variety of NSC (what they referred to as “open” vs. “closed” personality) indicators. In the majority of cases, the relations between dispositional measures such as authoritarianism, need for cognitive closure, conservation vs. openness values, and conscientiousness had opposite effects on economic attitudes across those high and low in political engagement. In what Johnston et al. (2016) called the “reversal effect,” NSC predicted right-wing economic views among those high in political engagement but left-wing economic views among those low in political engagement. Moreover, their findings from longitudinal data were consistent with opposite causal influences of NSC on

economic attitudes across those high and low in political engagement, consistent with the reversal effect. Thus the findings presented in this section reveal how failure to account for variation in political discourse exposure can – especially when coupled with failure to cleanly measure economic attitudes – yield misleading conclusions about the psychological origins of ideology.

### **Summary and Conclusion**

We have illustrated three common, and often overlooked, sub-optimal methodological characteristics of research considered supportive of the RR Model. We recommend that consumers of research on the psychological origins of ideology consider each of these when evaluating relevant empirical findings. First, we advise readers to gauge the extent to which the findings are impacted by *content overlap* between political measures and measures of pre-political attributes or manipulations of psychological states. Second, we recommend that readers take note of whether the *economic dimension* of ideological conflict – a central aspect of right vs. left political ideology in much of the world – is independently examined as a correlate or consequence of the psychological factor. Third, we advise readers to consider whether the study oversamples WEIRD individuals or otherwise fails to account for variation in discourse exposure.

As we have shown, consideration of these features will often temper conclusions in support of the RR Model. Inclusion of content pertaining to uncertainty intolerance, religiosity, religious fundamentalism, and the like within political measures, and/or inclusion of right-wing political content within NSC measures, will inflate estimates of the link between NSC and conservative ideology. Failure to examine effects and influences on a bare-bones measure of economic attitudes will conceal the inadequacy of the RR Model when it comes to the

ideologically central economic domain. And failure to explore variation across discursive context and level of exposure to discourse will obscure the complex and discourse-contingent nature of the relationship between NSC and economic views.

A great deal of literature assumes the fundamental validity of the RR Model and cites studies as supportive of the RR Model when they in fact possess one or more of these methodological features. Therefore, we contend, it is worthwhile to go back to the cited literature and evaluate studies' methodologies based on this checklist, rather than taking their conclusions at face value. The devil is often in the methodological details.

In light of these observations, we present four straightforward methodological recommendations for research on the psychological origins of ideology. First, studies should employ a multidimensional conceptualization of ideology and take clean "bare-bones" (e.g., Stenner, 2005) measures of economic and cultural attitudes. Political measures should not contain content pertaining to uncertainty intolerance, religiosity, and other related constructs when these political measures are being examined as correlates of such constructs.

Second, studies should include measures of political engagement and should test this as a moderator of the link between psychological characteristics and political attitudes. Regrettably, this practice has been uncommon in psychological research on the origins of ideology, despite consistent evidence that political engagement relates to organization of ideological attitudes on the right-left dimension (e.g., Abramowitz, 2010) and moderates the relations between dispositions and political attitudes (e.g., Federico & Goren, 2009). Exploring how effects of dispositions on specific political attitudes differ between those high and low in political engagement has potential to illuminate the complex and often competing social and psychological processes that shape political ideology.

Third, when possible, researchers should examine differences in the correlates and causes of ideological attitudes across nations that vary in levels of development, political institutions, and aspects of the political information environment. This goes hand in hand with examining political engagement as a moderator, as both would improve understanding of the conditional and context-dependent nature of links between psychological factors and specific political attitudes.

Our final recommendation pertains to meta-analyses on the psychological origins of political attitudes. This chapter has provided only a narrative review of prior research, and one might challenge it on the grounds that it did not quantitatively summarize prior findings. To this anticipated critique we reply that a meta-analysis that includes findings obtained with the problematic methodological features described here would be expected to overstate support for the RR Model. We recommend that within meta-analyses of findings on the psychological origins of ideology researchers include tests of potential methodological moderators in line with the checklist presented here. This would involve computing study-level measures that quantify the extent to which a particular finding involves variables with content overlap, includes a political measure reflecting a particular type of content (e.g., economic, cultural, generalized egalitarianism, unidimensional right-left ideology), and comes from a WEIRD and/or highly politically engaged sample. A rigorous test of these moderators would shed light on the extent to which the conventional wisdom about the psychological origins of ideology is the product of less-than-ideal methodological and interpretive practices.

Author Note

We are grateful to Christine Reyna and Jarret Crawford for their helpful comments on an earlier version of this chapter.

## 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.
- Alford, J. R., Funk, C. L., & Hibbing, J. R. (2005). Are political orientations genetically transmitted?. *American political science review*, 99(02), 153-167.
- Altemeyer, B. (1981). *Right-wing authoritarianism*. Manitoba: University of Manitoba Press.
- Amodio, D. M., Jost, J. T., Master, S. L., & Yee, C. M. (2007). Neurocognitive correlates of liberalism and conservatism. *Nature Neuroscience*, 10(10), 1246-1247.
- Aspelund, A., Lindeman, M., & Verkasalo, M. (2013). Political Conservatism and Left–Right Orientation in 28 Eastern and Western European Countries. *Political Psychology*, 34(3), 409-417.
- Bakker, R., Jolly, S., & Polk, J. (2012). Complexity in the European party space: Exploring dimensionality with experts. *European Union Politics*, 13(2), 219-245.
- Benoit, K., & Laver, M. (2006). *Party policy in modern democracies*. London: Routledge.
- Block, J., & Block, J. H. (2006). Nursery school personality and political orientation two decades later. *Journal of Research in Personality*, 40(5), 734-749.
- Bonanno, G. A., & Jost, J. T. (2006). Conservative shift among high-exposure survivors of the September 11th terrorist attacks. *Basic and Applied Social Psychology*, 28(4), 311-323.
- Brown-Iannuzzi, J. L., Lundberg, K. B., Kay, A. C., & Payne, B. K. (2015). Subjective status shapes political preferences. *Psychological Science*, 26(1), 15-26.

- Brandt, M. J., Reyna, C., Chambers, J. R., Crawford, J. T., & Wetherell, G. (2014). The ideological-conflict hypothesis intolerance among both liberals and conservatives. *Current Directions in Psychological Science*, 23(1), 27-34
- Carmines, E. G., Ensley, M. J., & Wagner, M. W. (2012). Political ideology in American politics: One, two, or none?. *The Forum* 10(3), 1-18.
- Caprara, G. V., Schwartz, S., Capanna, C., Vecchione, M., & Barbaranelli, C. (2006). Personality and politics: Values, traits, and political choice. *Political Psychology*, 27(1), 1-28.
- 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(6), 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(4), 245-253.
- Cichocka, A., Bilewicz, M., Jost, J. T., Marroush, N., & Witkowska, M. (2016). On the grammar of politics—or why conservatives prefer nouns. *Political Psychology*. DOI: 10.1111/pops.12327
- 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.
- Clifford, S., Jewell, R. M., & Waggoner, P. D. (2015). Are samples drawn from Mechanical Turk valid for research on political ideology? *Research & Politics*, 2(4), 1-9. doi: 10.1177/2053168015622072

- Converse, P. E. (1964). The nature of belief systems in mass publics. In D. Apter (Ed.), *Ideology and discontent* (pp. 206–261). New York, NY: The Free Press.
- Conway, L. G., Gornick, L. J., Houck, S. C., Anderson, C., Stockert, J., Sessoms, D., & McCue, K. (2015). Are conservatives really more simple-minded than liberals? The domain specificity of complex thinking. *Political Psychology*. doi: 10.1111/pops.12304
- Crawford, J. T., & Pilanski, J. M. (2014). Political intolerance, right and left. *Political Psychology*, 35(6), 841-851.
- Crowson, H. M. (2009). Are all conservatives alike? A study of the psychological correlates of cultural and economic conservatism. *The Journal of Psychology*, 143(5), 449-463.
- Duarte, J. L., Crawford, J. T., Stern, C., Haidt, J., Jussim, L., & Tetlock, P. E. (2015). Political diversity will improve social psychological science. *Behavioral and Brain Sciences*, 38, e130.
- Duckitt, J. (2001). A dual-process cognitive-motivational theory of ideology and prejudice. *Advances in Experimental Social Psychology*, 33, 41-113.
- Duckitt, J., & Sibley, C. G. (2009). A dual-process motivational model of ideology, politics, and prejudice. *Psychological Inquiry*, 20, 98-109.
- 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.
- Eysenck, H. J. (1954). *The psychology of politics*. London: Routledge & Kegan Paul.
- 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, & H. Thorisdottir (eds.), *Social and psychological bases of ideology and system justification* (pp.267-291). New York, NY: Oxford University Press.
- Feldman S., & Huddy L. (2014). Not so simple: The multidimensional nature and diverse origins of political ideology. *Behavioral & Brain Sciences* , 37, 312–313.
- 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.
- Fraley, R. C., Griffin, B. N., Belsky, J., & Roisman, G. I. (2012). Developmental antecedents of political ideology a longitudinal investigation from birth to age 18 years. *Psychological Science*, 23(11), 1425-1431.
- 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.
- Graham, J., Haidt, J., & Nosek, B. A. (2009). Liberals and conservatives rely on different sets of moral foundations. *Journal of Personality and Social Psychology*, 96(5), 1029-1046.
- Green, D. P., Palmquist, B., & Schickler, E. (2004). *Partisan hearts and minds: Political parties and the social identities of voters*. New Haven, CT: Yale University Press.
- 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), 669-88.
- Henrich, J., Heine, S. J., & Norenzayan, A. (2010). The weirdest people in the world?.

*Behavioral and brain sciences*, 33(2-3), 61-83.

Hetherington, M., & Suhay, E. (2011). Authoritarianism, threat, and Americans' support for the war on terror. *American Journal of Political Science*, 55(3), 546-560.

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(03), 297-307.

Huber, J., & Inglehart, R. (1995). Expert interpretations of party space and party locations in 42 societies. *Party Politics*, 1(1), 73-111.

Huddy, L., Mason, L., & Aarøe, L. (2015). Expressive partisanship: Campaign involvement, political emotion, and partisan identity. *American Political Science Review*, 109(01), 1-17.

Hyman, H. H., & Sheatsley, P. B. (1954). "The Authoritarian Personality"—A methodological critique. In R. Christie & M. Jahoda (Eds.), *Studies in the scope and method of "The Authoritarian Personality"* (pp. 50–122). Glencoe, IL: Free Press.

Inbar, Y., Pizarro, D. A., & Bloom, P. (2009). Conservatives are more easily disgusted than liberals. *Cognition and Emotion*, 23(4), 714-725.

Inbar, Y., Pizarro, D. A., & Bloom, P. (2012). Disgusting smells cause decreased liking of gay men. *Emotion*, 12(1), 23-27.

Iyer, R., Koleva, S., Graham, J., Ditto, P., & Haidt, J. (2012). Understanding libertarian morality: The psychological dispositions of self-identified libertarians. *PloS one*, 7(8), e42366.

Janoff-Bulman, R., Sheikh, S., & Baldacci, K. G. (2008). Mapping moral motives: Approach,

- avoidance, and political orientation. *Journal of Experimental Social Psychology*, 44(4), 1091-1099.
- Johnson, S. D., & Tamney, J. B. (2001). Social traditionalism and economic conservatism: Two conservative political ideologies in the United States. *The Journal of Social Psychology*, 141(2), 233-243.
- Johnston, C. D., Federico, C. M., & Lavine, H. G. (2016, in prepration). *Personality, Parties, and the Politics of Redistribution*.
- Johnston, C. D., Lavine, H. G., & Federico, C. M. (2014) *Cultural economics: The political psychology of economic preference formation in a polarized America*. Paper presented at the annual meeting of the Midwest Political Science Association, Chicago, IL, April 4, 2014.
- Johnston, C. D., & Wronski, J. (2015). Personality dispositions and political preferences across hard and easy issues. *Political Psychology*, 36(1), 35-53.
- Jost, J. T., Federico, C. M., & Napier, J. L. (2013). Political ideologies and their social psychological functions. *The Oxford Handbook of Political Ideologies*, 232-250.
- Jost, J. T., Federico, C. M., & Napier, J. L. (2009). Political ideology: Its structure, functions, and elective affinities. *Annual Review of Psychology*, 60, 307-337.
- Jost, J. T., Glaser, J., Kruglanski, A. W., & Sulloway, F. J. (2003). Political conservatism as motivated social cognition. *Psychological Bulletin*, 129(3), 339-375.
- Jost, J. T., & Hunyady, O. (2005). Antecedents and consequences of system-justifying ideologies. *Current Directions in Psychological Science*, 14(5), 260-265.
- Jost, J. T., Napier, J. L., Thorisdottir, H., Gosling, S. D., Palfai, 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(7), 989-1007.
- Kahan, D. M., Peters, E., Dawson, E. C., & Slovic, P. (2013). Motivated numeracy and enlightened self-government. *Yale Law School, Public Law Working Paper*, No. 307.
- Kandler, C., Bleidorn, W., & Riemann, R. (2012). Left or right? Sources of political orientation: The roles of genetic factors, cultural transmission, assortative mating, and personality. *Journal of Personality and Social Psychology*, 102(3), 633.
- Kemmelmeier, M. (2008). Is there a relationship between political orientation and cognitive ability? A test of three hypotheses in two studies. *Personality and Individual Differences*, 45(8), 767-772.
- Kossowska, M., & Van Hiel, A. V. (2003). The relationship between need for closure and conservative beliefs in Western and Eastern Europe. *Political Psychology*, 24(3), 501-518.
- Kunda, Z. (1990). The case for motivated reasoning. *Psychological Bulletin*, 108(3), 480-498.
- Lambert, A. J., Scherer, L. D., Schott, J. P., Olson, K. R., Andrews, R. K., O'Brien, T. C., & Zisser, A. R. (2010). Rally effects, threat, and attitude change: an integrative approach to understanding the role of emotion. *Journal of Personality and Social Psychology*, 98(6), 886-903.
- Layman, G. C., & Green, J. C. (2006). Wars and rumours of wars: The contexts of cultural conflict in American political behaviour. *British Journal of Political Science*, 36(01): 61-89.
- Lefkofridi, Z., Wagner, M., & Willmann, J. E. (2014). Left-authoritarians and policy

- representation in Western Europe: electoral choice across ideological dimensions. *West European Politics*, 37(1), 65-90.
- Luguri, J.B., & Napier, J. L. (2016). Threats to personal control increase support for liberal economic (but not social) policies. Paper presented at the annual meeting of the Society for Personality Psychology, San Diego, CA.
- Malka, A., & Lelkes, Y. (2010). More than ideology: Conservative–liberal identity and receptivity to political cues. *Social Justice Research*, 23(2-3), 156-188.
- Malka, A., Lelkes, Y., & Soto, C. J. (2016, invited resubmission). Are cultural and economic conservatism positively correlated? A large-scale cross-national test.
- 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(2), 137-142.
- Malka, A., 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. (2008). *Polarized America: The dance of ideology and unequal riches*. Cambridge, MA: MIT Press.
- Middendorp, C. P. (1978). *Progressiveness and conservatism: The fundamental dimensions of ideological controversy and their relationship to social class*. New York, NY: Mouton.
- Morton, R., Tyran, J. R., & Wengstrom, E., (2011). *Income and Ideology: How Personality Traits, Cognitive Abilities, and Education Shape Political Attitudes*. Univ. of Copenhagen Dept. of Economics Discussion Paper 11(08).
- Morgan, G. S., Mullen, E., & Skitka, L. J. (2010). When values and attributions collide: Liberals'

- and conservatives' values motivate attributions for alleged misdeeds. *Personality and Social Psychology Bulletin*, 36(9), 1241-1254.
- Nail, P. R., & McGregor, I. (2009). Conservative shift among liberals and conservatives following 9/11/01. *Social Justice Research*, 22(2-3), 231-240.
- Napier, J. L., & Jost, J. T. (2008). The “Antidemocratic Personality” revisited: A cross-national investigation of working-class authoritarianism. *Journal of Social Issues*, 64(3), 595-617.
- Oxley, D. R., Smith, K. B., Alford, J. R., Hibbing, M. V., Miller, J. L., Scalora, M., Hatemi, P.K. & Hibbing, J. R. (2008). Political attitudes vary with physiological traits. *Science*, 321(5896), 1667-1670.
- Peterson, B. E., & Gerstein, E. D. (2005). Fighting and flying: Archival analysis of threat, authoritarianism, and the North American comic book. *Political Psychology*, 26(6), 887-904.
- Petrescu, D. C., & Parkinson, B. (2014). Incidental disgust increases adherence to left-wing economic attitudes. *Social Justice Research*, 27(4), 464-486.
- Ray, J. J. (1973). Conservatism, authoritarianism, and related variables: A review and empirical study. In G. D. Wilson (Ed.), *The Psychology of Conservatism* (pp. 17-35). New York: Academic Press.
- Rokeach, M. (1960). *The open and closed mind*. New York: Basic Books.
- Smith, K. B., Oxley, D., Hibbing, M. V., Alford, J. R., & Hibbing, J. R. (2011). Disgust sensitivity and the neurophysiology of left-right political orientations. *PLoS One*, 6(10), e25552.
- Sniderman, P. M., & Tetlock, P. E. (1986). Symbolic racism: Problems of motive attribution in political analysis. *Journal of Social Issues*, 42(2), 129-150.

- Stankov, L. (2009). Conservatism and cognitive ability. *Intelligence*, 37(3), 294-304.
- Stenner, K. (2005). *The authoritarian dynamic*. New York, NY: Cambridge University Press.
- Stone, W.F. (1980) The myth of left-wing authoritarianism. *Political Psychology*, 2(3-4), 3-19.
- Terrizzi, J. A., Shook, N. J., & Ventis, W. L. (2010). Disgust: A predictor of social conservatism and prejudicial attitudes toward homosexuals. *Personality and Individual Differences*, 49(6), 587-592.
- Tetlock, P. E. (1984). Cognitive style and political belief systems in the British House of Commons. *Journal of Personality and Social Psychology*, 46(2), 365-.
- Thórisdóttir, H., & Jost, J. T. (2011). Motivated closed-mindedness mediates the effect of threat on political conservatism. *Political Psychology*, 32(5), 785-811.
- Thorisdottir, H., Jost, J. T., Liviatan, I., & Shrouf, P. E. (2007). Psychological needs and values underlying left-right political orientation: Cross-national evidence from Eastern and Western Europe. *Public Opinion Quarterly*, 71(2), 175-203.
- Treier, S., & Hillygus, D. S. (2009). The nature of political ideology in the contemporary electorate. *Public Opinion Quarterly*, 73, 679–703.
- Van Berkel, L., Crandall, C. S., Eidelman, S., & Blanchard, J. C. (2015). Hierarchy, dominance, and deliberation egalitarian values require mental effort. *Personality and Social Psychology Bulletin*, 41(9), 1207-1222.
- Van Hiel, A. V., & Mervielde, I. (2004). Openness to experience and boundaries in the mind: Relationships with cultural and economic conservative beliefs. *Journal of personality*, 72(4), 659-686.
- 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(6), 1765-99.

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.

Wilson, G. D. (1973). *The psychology of conservatism*. Oxford, England: Academic Press.

Wilson, G. D., & Patterson, J. R. (1968). A new measure of conservatism. *British Journal of Social and Clinical Psychology*, 7(4), 264-269.

Zaller, J. (1992). *The nature and origins of mass opinion*. New York, NY: Cambridge university press.