

## **Understanding the Determinants of Political Ideology: Implications of Structural Complexity**

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*There has been a substantial increase in research on the determinants and consequences of political ideology among political scientists and social psychologists. In psychology, researchers have examined the effects of personality and motivational factors on ideological orientations as well as differences in moral reasoning and brain functioning between liberals and conservatives. In political science, studies have investigated possible genetic influences on ideology as well as the role of personality factors. Virtually all of this research begins with the assumption that it is possible to understand the determinants and consequences of ideology via a unidimensional conceptualization. We argue that a unidimensional model of ideology provides an incomplete basis for the study of political ideology. We show that two dimensions—economic and social ideology—are the minimum needed to account for domestic policy preferences. More importantly, we demonstrate that the determinants of these two ideological dimensions are vastly different across a wide range of variables. Focusing on a single ideological dimension obscures these differences and, in some cases, makes it difficult to observe important determinants of ideology. We also show that this multidimensionality leads to a significant amount of heterogeneity in the structure of ideology that must be modeled to fully understand the structure and determinants of political attitudes.*

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There has been a renewed interest in the concept of political ideology in both political science and psychology (see Jost, 2006; Jost, Federico, & Napier, 2009). With the increasingly polarized nature of interparty conflict in American politics (McCarty, Poole, & Rosenthal, 2008), the rise of the sociocultural dimension as a major cleavage at the elite level (Fiorina, Abrams, & Pope, 2005; Layman, 2001), and the recognition that citizens may possess more attitude structure than previously supposed (Achen, 1975; Ansolabehere, Rodden, & Snyder, 2008; Feldman, 1988; Goren, 2001, 2004; Peffley & Hurwitz, 1985), scholars have returned to the task of elucidating the antecedents of attachments to liberal or conservative ideas, groups, and institutions.

Some of the most interesting recent developments in our understanding of political ideology have concerned its biological and psychological underpinnings. For example, research has shown that political attitudes may have substantial heritable components, perhaps approaching 50% of all variance (Alford, Funk, & Hibbing, 2005), and has identified specific genes which interact with the

social environment to influence political orientations (Settle et al., 2010). Amodio, Jost, Master, and Yee (2007) also find that ideology is associated with basic neurocognitive functioning, with liberals and conservatives differing in self-regulatory processes of conflict monitoring.

In a particularly influential paradigm, researchers in psychology have explored the stable, dispositional factors which influence political attitudes. Jost and colleagues (Jost, 2006; Jost, Glaser, Kruglanski, & Sulloway, 2003; Jost, Nosek, & Gosling, 2008) have argued that political ideology is determined, to a large extent, by motivational differences across citizens. Specifically, they show that individuals with heightened needs for epistemic and existential certainty and security are substantially more likely to identify as conservatives. There also appears to be a robust relationship between political conservatism and personality traits such as openness to experience and conscientiousness (Carney, Jost, Gosling, & Potter, 2008; Gerber, Huber, Doherty, Dowling, & Ha, 2010; McCrae, 1996; Mondak, 2010; Thorisdottir, Jost, Liviatan, & Shrout, 2007).

A prominent characteristic of such scholarly research is a default operationalization of ideology as a unidimensional continuum, ranging from liberal to conservative (in the U.S. case), or left to right (but see Gerber et al., 2010). A great deal of work, however, in both political science and psychology suggests that this conceptualization may fail to capture significant aspects of ideology and ignores a great deal of heterogeneity in how citizens understand political conflict. People often adopt ideological identifications for largely symbolic reasons (Conover & Feldman, 1981; Ellis & Stimson, 2012), they may impose different meanings on the liberal-conservative continuum with respect to policy (Zumbrunnen & Gangl, 2008), and they often keep orientations across policy domains (e.g., economic, social) largely distinct (Duckitt, 2001; Layman & Carsey, 2002; Rokeach, 1973; Schwartz, 1992; Treier & Hillygus, 2009). This suggests that ideology cannot be reduced to a single value or measure which accurately represents the political beliefs of all citizens. We believe that empirical examinations of liberalism and conservatism that disregard such complexity in meaning and structure fail to detect some important aspects of the determinants of ideology and their ultimate consequences for politics.

In this article, we explore the nature of the ideology construct and its implications for theoretical accounts of ideology. We demonstrate that political attitudes cannot be reduced to a single dimension, even for sophisticated citizens. The existence of distinct ideological domains implies difficulties with understanding ideology simply in terms of “liberals” and “conservatives.” Extending the factor analytic framework using a latent class model, we find six qualitatively distinct ideological types within a nationally representative sample of the general public, each characterized by a different combination of political beliefs. We also address the apparent conflict between the complexity of citizen attitudes in terms of structure and the predictive power of ideological self-placements in explaining political behavior (Jost, Federico, & Napier, 2009). We show that this seeming paradox is a result of heterogeneity in the meaning that citizens impose on the unidimensional space. In other words, citizens *do rely* on the left-right continuum to understand politics, but they differ with respect to their understandings of these labels in terms of substantive policy content. In all of our analyses, we demonstrate that allowing for structural and conceptual complexity in mass ideology has significant consequences for theoretical models of its antecedents.

## Conceptualizing Political Ideology

A unidimensional (liberal-conservative or left-right) conceptualization of political ideology provides the starting point for much recent research. In many cases, this is more than a matter of convenience and is integrated into the theoretical framework itself. For instance, both Jost et al. (2003), and Alford et al. (2005) argue that their work suggests that individuals gravitate to clusters of political attitudes for reasons that transcend individual policy domains. Alford et al. (2005) argue that two political “phenotypes” can be defined. The first, the contextualist orientation, is defined by

tolerance of out-groups, an optimistic view of human nature, opposition to hierarchy and authority, high empathy, and low punitiveness. Conversely, the absolutist phenotype is defined by support for rigid moral rules, acceptance of inequality in society, high punitiveness, and an emphasis on in-group unity.

From a more theoretically developed perspective, Jost and colleagues argue that both economic and sociocultural conservatism serve the same basic needs for order, certainty, and security. The essence of their argument is that opposition to change and acceptance of inequality reduce uncertainty and threat “insofar as preserving the [inegalitarian] status quo allows one to maintain what is familiar and known while rejecting the risky, uncertain prospect of social change” (Jost et al., 2007, p. 990). Thus, while economic and social conservatism may be distinct conceptually, they tend to be related in practice due, in part, to their common ancestry in these psychological antecedents.

### *The Structure of Political Ideology*

Despite the appeal and simplicity of this unidimensional conceptualization, much research suggests that a single continuum is insufficient to describe the nature of political ideology in the mass public. From an empirical perspective, research in both political science and psychology suggests that citizen attitudes across ideological domains, while often correlated, remain statistically independent. Layman and Carsey (2002), analyzing U.S. national survey data from 1972 to 2000, find that the polarization of party elites along a single liberal-conservative continuum over this period has *not* led to a similar dynamic within the mass public. Because only sophisticated partisans possess both the requisite awareness and motivation to bring their own views in line with those of party elites, the result of elite polarization is conflict extension, whereby mass polarization occurs along each dimension, yet the dimensions themselves remain statistically independent.

The literature on political values makes a similar argument. In response to the pessimism of early work on ideology (Campbell, Converse, Miller, & Stokes, 1960; Converse, 1964), and with the recognition that there is no necessary *logical* relationship between ideological dimensions, scholars have demonstrated that people often think in terms of broad ideas within specific domains (Feldman, 1988; Feldman, 2003; Feldman & Steenbergen, 2002; Goren, 2001, 2004, 2012; Jacoby, 2006). In other words, citizens possess abstract beliefs which constrain specific policy preferences, but they do not necessarily see a higher-order connection between these political values.

In the psychology literature, similar arguments have been put forth with respect to Right-Wing authoritarianism (RWA; Altemeyer, 1981) and Social Dominance Orientation (SDO; Pratto, Sidanius, Stallworth, & Malle, 1994; Sidanius & Pratto, 2001), which are similar conceptually to cultural and economic conservatism, respectively (Duckitt, 2001; Jost et al., 2003; Van Hiel, Pandelaere, & Duriez, 2004). Individuals high in RWA tend to be conservative, submissive, and religious, while those high in SDO are more prone to a dominant personality profile, seeking socioeconomic superiority of the in-group, and are less concerned with the preservation of traditional institutions and values. As Altemeyer (1998) suggests, these appear to represent empirically independent strands of conservative attitudes. He finds that the two are often uncorrelated or only weakly related.

There is also strong theoretical support for the multidimensionality of political ideology. Duckitt's (2001; Duckitt, Wagner, du Plessis, & Birum, 2002) dual-process model of ideology and prejudice suggests that social and economic dimensions of ideology, operationalized in terms of RWA and SDO, are rooted in distinct worldviews. Those high in RWA tend to see the world as a dangerous place, while high SDOs see the world as a Machiavellian “competitive jungle.” The former leads to an ideological orientation which emphasizes submission to the existing social order and general respect for authority and tradition, while the latter results in a political belief system emphasizing group conflict and thus a preference for in-group dominance.

Recent work on core human values by Schwartz (1992) also suggests that economic and social conservatism are products of distinct motivational profiles. Schwartz's value theory argues that core values are the cognitive representations of 10 universal goals to which human beings and societies aspire. With data from 20 countries, Schwartz (1992) derived a common structural representation of these value domains in terms of their compatibilities and conflicts which can be reduced to two broad dimensions. The first, defined by respect for tradition, concern for personal and national security, and preference for conformity against individual autonomy and self-direction, corresponds well with the social dimension of ideology. The second, defined by motivations to achieve social rewards, power, and prestige as opposed to social justice and equality is in line with general understandings of the economic dimension of ideology (see also Feldman, 2003). As Schwartz (1992) argues, these dimensions, while possibly correlated in some societies, are relatively independent. For example, while respect for tradition and conformity has consequences which directly conflict with the goals of individual autonomy and self-direction, these are not incompatible with a perspective which emphasizes social justice, equality, or communitarian sensibilities.

### *Heterogeneity in Ideological Self-Placements*

The multidimensionality of preferences implies that self-placement along a single dimension is insufficient to account for the variety of ideological perspectives in the public. In effect, the traditional ideological identification item forces citizens to map multidimensional preferences onto a unidimensional space. This has two important implications.

First, it implies a substantial degree of structural heterogeneity within both liberalism and conservatism. Within either category, we should expect to observe meaningful variation in patterns of preferences. Ellis and Stimson (2012) have argued that there is substantial variation in the meaning of ideological identifications, for conservatives in particular. While some conservatives display stereotypically constrained sets of beliefs, a substantial portion of the public identifies with the conservative label for symbolic reasons associated with the residual negativity attached to liberalism from the social conflicts of the 1960's era (see also Conover & Feldman, 1981). Thus, many "conservatives" actually display a rather liberal set of policy preferences, particularly in the economic domain. Indeed, aggregate distributions of ideological identifications have tended to lean conservative even as the general character of the public's policy preferences have leaned to the liberal end of the spectrum (Stimson, 1999, 2004).

This type of heterogeneity has implications for emerging theoretical work on ideology. Specifically, it suggests that "unpacking" identifications into more fine-grained ideological categories may be advantageous. By limiting explorations of the determinants of ideology to self-placements, we may be obscuring meaningful variation in the structural relationships between biological and psychological factors and their expression as political belief systems. For example, do epistemic and existential needs differentiate conservatives with a libertarian bent from liberals to the same extent that they differentiate conservatives with "constrained" preferences? Or, rather, is there something fundamentally distinct about certain instantiations of conservatism? Questions such as these necessitate an exploration of structural heterogeneity.

Second, structural heterogeneity may help to solve a paradox in the ideology literature. As Jost and colleagues have noted (Jost, 2006; Jost et al., 2009), the traditional self-identification measure performs quite well as a predictor of political behavior (e.g., in predicting the vote; Bafumi & Shapiro, 2009). If citizen beliefs are not accurately described in terms of a single dimension, why do we find such robust associations between this measure and other variables of political interest?

We suggest that these seemingly contradictory considerations can be resolved in terms of heterogeneity in the *meaning* that citizens impose on the left-right continuum. People may use the liberal-conservative dimension to guide their political behavior, but they can differ in the way they

understand that dimension in terms of substantive policy content. While some citizens may see liberalism and conservatism as primarily about social issues, others may understand the dimension in terms of economics, while others may see both domains as relevant to ideological categorizations. If true, this would resolve the conflict above.

While underexplored empirically, recent work by Zumbrunnen and Gangl (2008) supports this expectation. They find that economic and sociocultural conservatism exist as distinct strands and have unique influences on ideological self-identification in multivariate analyses. Heterogeneity of meaning also has important implications for theoretical work on the antecedents of these identifications. Do the determinants of ideology identified by past research determine placements on the unidimensional continuum in similar ways across all citizens? Or rather, do the effects of key antecedent variables vary across representations of the liberal-conservative continuum?

### *The Present Article*

Complexity in the structure and meaning of ideology does not, by itself, invalidate the theoretical frameworks discussed above which have focused on unidimensional conceptualizations. As Jost et al. (2009) argue, while social and economic conservatism are surely not redundant constructs, they typically covary, and increasingly so as a function of political sophistication. This raises the question of “where does ideological structure come from (when it comes)?” (p. 313). These authors suggest that it is the interaction of discursive (top-down; elite-driven) and functional (bottom-up; psychological) processes of preference formation. While political scientists have tended to focus on the former path (e.g., Berinsky, 2007; Converse, 1964; Layman & Carsey, 2002; Sniderman & Bullock, 2004; Zaller, 1992), Jost et al. argue for the importance of the psychological side of constraint, with social and economic issue preferences “packaged” not just because of elite construction, but because of the more basic resonance of different issue positions across domains with the same psychological dispositions. Other work relies on similar reasoning. Research on the heritability of ideology sees common genetic antecedents to social and economic conservatism (Alford et al., 2005), and Amodio et al. (2007) have argued that conservatism is associated with differences in self-regulatory processes of conflict monitoring.

While simplicity is appealing, it must not come at the expense of conceptual clarity. Theoretical 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.

In the present article, we demonstrate that structural and conceptual heterogeneity matters for theoretical accounts of ideology. Our goal is *not* to provide a comprehensive account of ideology in the U.S. public, but rather it is to make a convincing case that unidimensional treatments of ideology obscure important (and interesting) complexities in the antecedents of political orientations. We believe this goal to be best served by keeping the analyses tractable. We thus exclude a number of issues from consideration, focusing on the two core domains of social and economic conservatism. In particular, we do not address issues associated with race, immigration, or foreign policy. These are obviously core issues in American politics, and future work needs to expand on the present article to explore additional complexities arising from these issues. To the extent that we can demonstrate heterogeneity in structure and process with only two issue domains, it is reasonable to assume that the addition of other issues would only reinforce our conclusion that unidimensional treatments are oversimplifications.

Our empirical analysis proceeds in three parts. First, we demonstrate that mass policy preferences cannot be accurately described by a unidimensional continuum, even for the most sophisticated citizens in the electorate. We show that the two core dimensions of ideology, economic and social conservatism, are associated with different patterns of antecedent variables. Second, we demonstrate that such multidimensionality implies a number of distinct, *discrete* ideological groups within the electorate, characterized by the differing patterns of beliefs which they hold. In particular, we show that conservatives are quite heterogeneous with respect to their policy attitudes. Finally, we examine the meaning which citizens impose on the left-right continuum with respect to economic and social policy, resolving the seeming paradox of multidimensional policy preferences and highly influential ideological identifications. We show that citizens differ in the way in which they understand the terms “liberal” and “conservative,” and we explore the consequences of these distinct representations for the determinants of ideological self-placements. Taken as a whole, our results strongly suggest that future work examining the determinants of mass ideology must take seriously the complexities inherent within the construct.

## Data and Methods

The data used in this study come from the 2000, 2004, and 2006 American National Elections Studies (ANES); nationally representative samples of the U.S. adult population. In 2000, half of the 1,555 respondents were interviewed face-to-face and the other half by telephone. Detailed comparisons showed no differences in any of the analyses by data-collection mode. We therefore combined the two half-samples in all of the analyses reported here. For the 2004 study, 1,212 individuals were interviewed face-to-face, and 675 of these were reinterviewed in 2006. Only the 2006 study contains items measuring need for cognitive closure, a key variable thought to underlie conservative ideological preferences, but it does not contain other variables necessary for the analyses below. We thus rely on the merged 2004/2006 dataset as a replication and extension of our analysis of the 2000 data.

Our goal in this article is to show that a unidimensional model fails to adequately describe political ideology. In order to keep this task manageable, we have selected a relatively small set of questions intended to measure two key components of ideology: economic and social ideology. Four questions were chosen to represent economic ideology: more government spending versus fewer services, desire for a government medical-insurance plan, support for government action to guarantee everyone a job and adequate standard of living, and federal spending on assistance to the poor. Social ideology was measured with three questions: a four-category question on abortion policy, the legality of gays and lesbians adopting children, and women’s role in business and government. (The exact question wording for all items is presented in the appendix.)

Excluded from this analysis were questions on foreign policy, race, and immigration. While these are all important components of American public opinion, their inclusion would further complicate our analyses and distract from our challenge—to assess the utility of a unidimensional model of ideology. The focus on economic and social ideology is consistent with a great deal of research in political science and psychology that suggests that they are the two fundamental dimensions of political ideology, and it follows the conceptualization of ideology in Jost et al. (2003). Research in political science has shown that foreign policy attitudes are at best weakly related to other aspects of ideology (Hurwitz & Peffley, 1987). And attitudes toward minorities and immigrants are to some extent based on group affect in addition to ideology. Although we restrict our focus in this article, future work on ideology should expand the range of attitudes examined in order to more fully understand the construct.

We also examine the effects of a number of potential predictors of ideology. Several of these are important demographic variables: Age, education (in years), gender, and income (in thousands of dollars). We also include important predispositions that allow us to examine the psychological bases

of ideology: Egalitarianism, authoritarianism, religiosity, need for cognition, and need for cognitive closure (in 2004/2006 only). The questions used to measure each of these constructs are shown in the appendix. Finally, we use a standard measure of political sophistication: respondents' knowledge of politics and political figures.

Our analysis is based on a series of latent variable models for the issue questions. All of the models were estimated using Mplus (Muthén & Muthén, 2007). Since all of the observed issue questions have categorical response options, probit and ordered probit link functions are used in the factor analysis models. The parameters are estimated via weighted least squares with robust standard errors. For ease of interpretation, all of the scales except for sophistication have been recoded to range from 0 to 1. Sophistication is measured as the number of correct answers to the eight knowledge items. Since latent variables with discrete indicators have no obvious metric, the latent factors are scaled to have a variance of 1. The coefficients for the effects of each predictor on a latent variable can be interpreted as the change in standard deviation units of the latent variable for a one-unit increase in the predictor, holding all else constant.

### Analysis

We begin by comparing two latent variable models for the seven issue items: a one-factor and two-factor model. The one-factor model assumes that the covariance among these items can be accounted for by a single liberal-conservative dimension. The two-factor model assumes two distinct but potentially correlated dimensions of economic and social ideology. We start with the most parsimonious specification of the two-factor model with no cross loadings of any indicators on the two factors nor any correlated error terms.

The fit statistics for the one- and two-factor models are shown in Panel A of Table 1. All the statistics strongly favor the two-factor model. The fit of the one-factor model is very poor in both

**Table 1.** One- and Two-Factor Ideology Models

A. Fit Statistics for One- and Two-Factor Models				
	2000 NES		2004/2006 NES	
	One-Factor Model	Two-Factor Model	One-Factor Model	Two-Factor Model
$\chi^2/df$	49	4	26.53	2.92
CFI	.64	.98	.75	.98
RMSEA	.18	.04	.20	.05
R		.21		.36

*Note.*  $\chi^2/df$  is the ratio of the  $\chi^2$  to degrees of freedom; CFI is the comparative fit index; RMSEA is the root mean squared error of approximation; R is the correlation between the two latent factors.

B. Standardized Factor Loadings for the Two-Factor Model

	2000 NES		2004/2006 NES	
	Economic	Social	Economic	Social
Government spending	.70 (.02)		.71 (.03)	
Medical insurance	.62 (.03)		.70 (.03)	
Guaranteed jobs	.61 (.03)		.75 (.02)	
Assistance to poor	.60 (.03)		.60 (.04)	
Abortion		.61 (.04)		.66 (.04)
Gay adoption		.87 (.05)		.83 (.05)
Women's role		.51 (.04)		.63 (.05)

*Note.* Standard errors are in parentheses.

2000 and 2004/2006. The comparative fit indices (CFI) are .64 and .75, well below the minimum for a good fitting model of .9, and the root mean squared error of approximation (RMSEA) are well above .10 (.18 and .20). The two-factor model fits very well without any modifications. The CFI of .98 in both years is close to its maximum of 1, and the RMSEA is below .05 (.044) in 2000, and right at .05 in 2004/2006, the rule of thumb for a good model. The estimated correlation between the two factors is .21 in 2000, and .36 in 2004; economic and social ideology are just weakly to modestly correlated in the U.S. public, slightly higher in the more recent data. The standardized factor loadings for the two-factor model are shown in Panel B. All of the items load substantially on their hypothesized latent factors, and there is no evidence of significant cross-loadings on the two factors.

The good fit for the two-factor model allows us to compare the predictors of a single ideological dimension with distinct economic and social ideological dimensions. We begin with the one-factor model. Since very different measures have been used to tap liberalism-conservatism, we use two specifications of the one-factor model. First, we use the one-factor model just estimated for the issue items. Although this model did not fit very well, it provides the best definition of a latent factor of liberalism-conservatism based on expressed issue preferences. Second, we estimated a liberal-conservative factor using three other indicators: self-identification as a liberal or conservative (on a 7-point scale), and 100-point "feeling thermometer" ratings of liberals and conservatives. This alternative model uses ideological identification and evaluations rather than issue preferences. We then regressed each of these latent variables on a set of predictors: age, education (in years), gender, income (thousands of dollars), and scales for religiosity, egalitarianism, authoritarianism, need for cognition, need for closure (in 2004/2006), and political sophistication.

Estimates for the two unidimensional models are shown in Table 2.<sup>1</sup> Despite the very different variables used to operationalize ideology, the effects of the predictors are very similar across these two models. There are only weak effects of the demographic variables. Neither age nor education is significant in any equation. Women are slightly more liberal than men, and conservatism increases a little with increasing income in 2000, and more substantially in 2004/2006.

Religiosity is strongly associated with conservatism in all models. Even more striking is the large effect of egalitarianism, which remains almost unchanged between the models for ideology, and across the two datasets. Higher levels of authoritarianism are associated with greater conservatism in all models, though the effect is substantively larger in the issue preference model than the identification/evaluation model for 2000. This difference reverses in pattern for 2004/2006. In the 2000 data, the effect of need for cognition is marginally significant in both models, but it is not significant for either model in 2004. Greater levels of political sophistication (knowledge) are associated with increasing conservatism in all four models. Finally, and unexpectedly, need for cognitive closure is not significantly associated with ideology in either model using the 2004/2006 data.

With the exception of need for closure, the overall pattern from these sets of estimates is consistent with previous research on the determinants of liberalism-conservatism (Jost et al., 2003). Compared to liberals, conservatives are more religious, higher in authoritarianism, less committed to equality, and somewhat lower on need for cognition. Women and those lower in income are slightly more liberal than men and people higher in income.

A very different picture emerges when we examine the predictors of separate dimensions of economic and social ideology (Table 3). Looking first at the demographic variables, age has no significant effect on economic ideology in 2000 but a significant positive effect on social conservatism. In 2004/2006, age has no significant effect in either model.<sup>2</sup> There is also no significant effect of gender on economic conservatism in either year. Women are, however, significantly more

<sup>1</sup> In this and the following analyses, all regression and covariate estimates are computed simultaneously with the measurement model.

<sup>2</sup> Note that the standard errors are substantially larger in 2004/2006 than in 2000 because of the significantly smaller sample size.

**Table 2.** Regression Results for One-Factor Liberal/Conservative Models

		Latent Issue Preferences	Latent Liberal/Conservative
A. 2000 NES			
Age		-.006 (.022)	.023 (.021)
Education		.006 (.017)	.031 (.016)
Male		.16 (.08)	.33 (.08)
Income		.053 (.022)	.026 (.012)
Religiosity		1.22 (.13)	1.09 (.14)
Egalitarianism		-3.19 (.21)	-3.58 (.21)
Authoritarianism		.87 (.14)	.39 (.14)
Need for Cognition		-.36 (.16)	-.34 (.16)
Sophistication		.055 (.022)	.073 (.022)
R <sup>2</sup>		.43	.42
B. 2004/2006 NES			
		Latent Issue Preferences	Latent Liberal/Conservative
Age		.075 (.24)	-.040 (.254)
Education		.102 (.230)	-.174 (.254)
Male		.326 (.113)	.235 (.122)
Income		.800 (.221)	.799 (.217)
Religiosity		.81 (.171)	1.42 (.185)
Egalitarianism		-3.54 (.301)	-3.34 (.289)
Authoritarianism		.66 (.199)	1.19 (.213)
Need for Cognition		-.13 (.169)	-.25 (.179)
Sophistication		.08 (.055)	.11 (.059)
Need for Closure		-.01 (.280)	-.41 (.278)
R <sup>2</sup>		.48	.43

Note. Standard errors are in parentheses. R<sup>2</sup> is the estimated variance in the latent variable accounted for by the model.

liberal than men on social ideology, and the magnitude of this effect is consistent across the studies. Increasing income is associated with greater economic conservatism while it has no effect on social conservatism, and again, this effect is substantively larger in 2004 than in 2000. The estimated effects of education in Table 3 are very different from what is seen in Table 2. In the one-factor models, education is not significant in either specification. Table 3 shows that the apparent absence of an effect of education is due to its very different consequences for economic and social ideology: Increasing education is associated with greater economic conservatism but also with greater social liberalism. This pattern of results is replicated in 2004, but it fails to attain accepted levels of significance. Thus, the effects of education on ideology are completely lost in the one-factor model.

The effects of religiosity, authoritarianism, and need for cognition are much more nuanced in the two-factor model than in the one-factor models. Each one has a substantively large effect on social conservatism (larger than their effects on the one-dimensional ideology factors) but no significant effect at all on economic ideology. Egalitarianism has a substantially larger effect on economic ideology, but it is still a significant predictor of social ideology in both years (a result we will return to). In addition, like education, political sophistication has opposite effects on the two dimensions of ideology—it is positively associated with economic conservatism and negatively associated with social conservatism. Finally, the effects of need for cognitive closure are opposite in sign for the two dimensions (Panel B only). Increasing need for closure is associated with increased economic *liberalism* in these data (although not significantly), while it is significantly associated with increased social *conservatism*. The latter effect is consistent with previous work in this area (see Jost et al.,

**Table 3.** Regression Results for the Two-Factor Model

A. 2000 NES		
	Economic	Social
Age	-.009 (.022)	.063 (.026)
Education	.072 (.017)	-.081 (.019)
Male	.13 (.08)	.61 (.10)
Income	.034 (.011)	-.013 (.014)
Religiosity	.19 (.13)	2.62 (.21)
Egalitarianism	-3.38 (.20)	1.82 (.24)
Authoritarianism	-.14 (.14)	1.32 (.18)
Need for Cognition	-.20 (.16)	-.48 (.20)
Sophistication	.115 (.022)	-.078 (.027)
R <sup>2</sup>	.41	.69

  

B. 2004/2006 NES		
	Economic	Social
Age	.042 (.240)	.103 (.298)
Education	.290 (.235)	.413 (.287)
Male	.136 (.114)	.640 (.143)
Income	.960 (.229)	-.058 (.261)
Religiosity	.22 (.171)	2.05 (.238)
Egalitarianism	-3.44 (.298)	-2.09 (.341)
Authoritarianism	.33 (.202)	1.15 (.257)
Need for Cognition	.06 (.167)	-.51 (.203)
Sophistication	.17 (.058)	-.19 (.068)
Need for Closure	-.31 (.285)	.77 (.352)
R <sup>2</sup>	.44	.70

Note. Standard errors are in parentheses. R<sup>2</sup> is the estimated variance in the latent variable accounted for by the model.

2003), but the former again highlights the importance of distinguishing different domains of policy with respect to their psychological antecedents.<sup>3</sup>

In summary, across two datasets, a two-factor model is a much better fit to these issue preferences than the one-factor model. The one-factor model is, by all conventional standards, a very poor description of these data. The evidence in favor of the two-factor model is consistent with a great deal of previous research. More important are the consequences of this for our understanding of the determinants of political ideology. As we have shown, the one-factor models of ideology provide a picture of the determinants of ideology that is limited at best and, in several instances, misleading. The demographic correlates of ideology are much clearer in the two-factor model, and some effects of the demographic variables are obscured in the one-factor models. We have also shown that the effects of key psychological variables are very different in the two models. In particular, authoritarianism, need for cognition, and religiosity have no significant effects on economic conservatism. The effects of these variables on social conservatism are significant and substantively large. In fact, their effects on social conservatism are larger than what is observed for a single liberal-conservative dimension. Finally, need for cognitive closure is positively associated with social conservatism and (not significantly in the 2004/2006 data) negatively correlated with economic conservatism. This

<sup>3</sup> It is possible that the inclusion of egalitarianism as a predictor may be obscuring the effects of the other predictors on economic ideology. We therefore reestimated all of the models with egalitarianism excluded. There were no significant differences in the results. In particular, we found no evidence that authoritarianism, need for cognition, or need for closure had significant positive effects on economic conservatism in either data set.

**Table 4.** Comparison of One-Factor and Two-Factor Models by Levels of Information

	One-Factor Model	Two-Factor Model
<b>Low Information:</b>		
$\chi^2 / df$	216/12	.25/11
CFI	.51	.97
RMSEA	.159	.044
R		.11
<b>High Information:</b>		
$\chi^2/df$	147/10	32/11
CFI	.83	.97
RMSEA	.187	.070
R		.48

Note.  $\chi^2/df$  is the ratio of the  $\chi^2$  to degrees of freedom; CFI is the comparative fit index; RMSEA is the root mean squared error of approximation; R is the correlation between the two latent factors.

finding is of particular importance, as need for closure, a key indicator of the epistemic need for uncertainty reduction, is at the heart of recent theories of ideology (Jost et al., 2003).

#### *Heterogeneity in Political Ideology: The Effects of Political Sophistication*

Given all of the research on the relationship between political sophistication (knowledge) and ideology, it is critical to examine the structure and determinants of ideology for those high and low on political sophistication. It is possible that a unidimensional model will be a good description of ideology for those high in sophistication (Converse, 1964; Jost et al., 2009). To proceed, we compare the latent factor structure and predictors of ideology for those low in political sophistication with those high in political sophistication. Due to low sample sizes in the 2004/2006 data, we rely on the 2000 data only for all remaining analyses. We define low sophistication as those who give less than two correct answers to the eight-item knowledge measure (22% of the sample) with those who give more than four correct answers (25%).

The fit statistics for the one- and two-factor models by levels of sophistication are shown in Table 4. It is clear that the one-factor model is not an adequate fit in either group. The CFI is larger in the High Information group but it is still unacceptably low, and the RMSEA indicates that the one-factor model fits poorly in both groups. In contrast, the two-factor model fits well in both groups. The CFI is .97 in both cases. And while the RMSEA is .07 for the High Information group, this still reflects an adequate fit for this simple model. There is one important difference between the two groups: The correlation between the factors is much larger in the High Information group ( $r = .48$ ,  $p < .05$ ) than in the Low Information group ( $r = .11$ ,  $p > .05$ ). Thus, while the same two-factor model fits in both groups, there is no significant correlation between economic and social ideology in the Low Information group and a moderate correlation in the High Information group. Ideology is much better accounted for by a two-dimensional model for those low and high in political knowledge, although the correlation between the dimensions increases as knowledge increases.

More important than the correlation between economic and social conservatism is the pattern of predictors of the two dimensions across levels of political sophistication. If political ideology becomes increasingly one dimensional as sophistication increases, we should see convergence in the predictors of the two dimensions for those high in sophistication. In Table 5, we show the results of regressions of the two latent factors on the same set of predictors used in Table 3 separately for those high and low in sophistication.

**Table 5.** Regression Results for the Two-Factor Model by Levels of Political Information

	Economic Issue Preferences		Social Issue Preferences	
	Low Info	High Info	Low Info	High Info
Age	.018 (.036)	-.065 (.044)	.052 (.036)	.112 (.053)
Education	.071 (.026)	.066 (.038)	-.110 (.029)	-.115 (.044)
Female	-.36 (.13)	.04 (.14)	-.43 (.15)	-.75 (.18)
Income	.084 (.020)	.020 (.017)	-.004 (.023)	-.022 (.022)
Religiosity	.25 (.23)	.44 (.22)	2.25 (.28)	2.96 (.41)
Egalitarianism	-2.36 (.34)	-3.88 (.35)	-1.41 (.34)	-2.11 (.42)
Authoritarianism	-.68 (.23)	-.07 (.24)	1.26 (.27)	1.08 (.32)
Need for Cognition	-.42 (.25)	-.05 (.31)	-.67 (.30)	-.02 (.02)
R <sup>2</sup>	.33	.47	.56	.76

Note. Standard errors are in parentheses. R<sup>2</sup> is the estimated variance in the latent variable accounted for by the model.

The regression results show that, with few exceptions, the effects of the predictors on economic and social conservatism are extremely similar across levels of political sophistication. Most critically, authoritarianism has significant positive effects on social conservatism for those low and high in sophistication but no significant positive effect on economic conservatism at either level of sophistication. There is a statistically significant effect of authoritarianism on economic conservatism for those in the Low Sophistication group, but increasing authoritarianism is associated with greater economic *liberalism*; we will return to this finding shortly. Religiosity also has similarly strong effects on social conservatism for both sophistication groups but just a marginally significant, substantively small effect on economic conservatism for those high in sophistication. As before, egalitarianism is a significant predictor of both latent variables for both sophistication groups, and the coefficients are larger for economic conservatism than social. Unexpectedly, Need for Cognition is a significant predictor of economic and social conservatism but only for those in the Low Sophistication group.

Overall, there is no strong evidence in these results that the structure of ideology is unidimensional among those who are politically sophisticated. The correlation between the factors does increase substantially with levels of sophistication. However, the full set of results from this analysis show that economic and social conservatism remain distinguishable even at high levels of sophistication. The pattern of predictors that emerged from these regressions is very similar to those obtained for the full sample. Economic and social conservatism become more correlated among the more sophisticated, but they still have very different characteristics.<sup>4</sup>

#### *Heterogeneity in Ideology: Patterns of Issue Preferences*

A two-factor model appears to be a very good description of the dimensions underlying the core domestic issue preferences in the United States. If a one-dimensional model accounted for these data, it would be possible to talk about “liberals” and “conservatives” in a descriptively accurate sense. However, the absence of a single liberal-conservative dimension suggests that multiple combinations of issue preferences may exist. There may be more than two ways in which ideology is manifested, and a discrete model of ideology may capture the diversity of views better than a continuous model.

To investigate this, we turn from a standard variable-centered analysis to a person-centered analysis. Using the same issue preference items, we conducted a latent class analysis (McCutcheon, 1987). Like factor analysis, latent class analysis identifies latent variables that account for the

<sup>4</sup> The lack of convergence of the psychological predictors in the two-factor model for the High Sophistication group suggests that the larger correlation between the factors for this group may be elite driven or contextual.

**Table 6.** Latent Class Analysis of Issue Preferences

	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6
Gov't Spending:						
Liberal	.86	.84	.25	.17	.25	.17
Moderate	.12	.06	.76	.79	.27	.25
Conservative	.03	.10	.00	.04	.49	.58
Health Insurance:						
Liberal	.79	.83	.19	.19	.13	.13
Moderate	.04	.10	.72	.70	.19	.13
Conservative	.17	.07	.09	.11	.68	.74
Jobs/Std of Living						
Liberal	.46	.62	.08	.07	.00	.07
Moderate	.13	.16	.67	.67	.09	.07
Conservative	.42	.23	.24	.27	.91	.86
Abortion:						
Always legal	.65	.07	.77	.25	.56	.11
Only need	.15	.05	.13	.13	.24	.18
Only conditions	.17	.34	.07	.45	.18	.53
Always illegal	.03	.54	.02	.17	.02	.18
Gay Adoption:						
Favor	.69	.08	.97	.21	.69	.03
Oppose	.31	.92	.04	.79	.31	.97
Ideology:						
Liberal	.58	.24	.73	.17	.24	.04
Moderate	.12	.33	.07	.11	.06	.01
Conservative	.30	.43	.21	.73	.70	.96
Class proportion:	.23	.08	.13	.24	.15	.17
% conservative	.12	.07	.05	.31	.19	.27
% liberal	.41	.07	.29	.13	.11	.02

Note. Entries for each issue (and ideology) are the estimated probability of each response for members of that latent class.

covariances among the observed variables. However, while latent factors are assumed to be continuous, latent classes are discrete. They thus identify groups or classes of respondents who have similar patterns of responses on the observed variables. The nature of each latent class is determined by the estimated probabilities of responses to each observed variable in the latent class. To facilitate estimation and interpretation of the latent class model, responses to the government services, health insurance, and jobs questions were trichotomized into liberal, moderate, and conservative categories to minimize small cells.<sup>5</sup> The spending on the poor question and women's rights questions were dropped from this analysis to minimize potential violations of local independence (McCutcheon, 1987).

The first step in this analysis required the identification of the number of latent classes needed to account for the observed responses. To do this, we estimated a series of models with an increasing number of latent classes (McCutcheon, 1987). Following the most recent statistical advice (Nylund, Asparouhov, & Muthén, 2007), the best-fitting model is the one with the lowest BIC (Bayesian Information Criterion). In this case, the minimum value of BIC was obtained for a six-class model. Increasing the number of classes beyond this led to larger values of BIC and increasingly uninterpretable results. The estimates from this model are shown in Table 6. The entries are the estimated

<sup>5</sup> Although it is not necessary to trichotomize the variables, doing so makes it easier to interpret the results. It also simplifies the estimation since cell proportions approaching zero require the software to place bounds on those estimated quantities.

response probabilities for each category of the variables for people in that class. The “class proportion” row shows the estimated fraction of the total sample in each latent class.<sup>6</sup>

The sample is well distributed across the six latent classes; no class accounts for more than 24% of the respondents. Those in Class 1 are consistently liberal. They are very likely to take the liberal positions on government spending and health insurance. While they are equivocal on government-guaranteed jobs and living standards, they are the second most likely to give a liberal position on this issue with virtually no one in the other four groups taking that stand. They are also quite liberal on abortion and gay adoption. While they are the most consistently liberal group in this analysis, members of Class 1 have only a .58 probability of calling themselves liberal; 30% label themselves conservative. The large percentage of Class 1 respondents who label themselves conservative is consistent with Ellis and Stimson’s (2012) argument that conservative self-identification is, to some extent, a lingering symbolic reaction to the events of the 1960s rather than a direct reflection of conservative beliefs.

Class 2 is somewhat more liberal than Class 1 on economic issues. In contrast, they are very conservative on social issues. Despite their liberal economic views, only 24% identify as liberal; almost twice as many think of themselves as conservative. Those in Class 3 have no clear ideological positions on the three economic issues. They are most likely to take the moderate position on each. However, they are very liberal on the social issues. In fact, they are the most likely to hold liberal views on these social issues. Despite their lack of strong positions on economic policy, they are the most likely of any of these groups to identify as liberals—seemingly due entirely to their preferences on social issues.

Class 4 is very much the mirror image of Class 3. Like those in Class 3, they have no ideological preferences on economic issues. However, they are relatively conservative on abortion and gay adoption. And, like Class 3, their positions on social issues seem to determine their self-identification—they have a .73 probability of labeling themselves conservative.

Those in Classes 5 and 6 are the most conservative on economic issues—members of Class 6 are just slightly more likely than those in Class 5 to take the conservative position on each issue. These two groups differ significantly on social issues. Class 6 is consistently conservative. Their conservative social issue preferences mirror their economic policy views. And this consistency is reflected in their ideological identification. They are almost certain (probability = .96) to call themselves conservative. Members of Class 5 join relatively liberal positions on the social issues with their conservative positions on economic policy. In contemporary terms, they could be labeled as libertarian. Their self-identification though tends to follow their economic views as they have a probability of .70 of calling themselves conservative.

This latent class analysis does identify groups that fit standard descriptions of liberals (Class 1) and conservatives (Class 6). Together they make up an estimated 40% of the American adult population in 2000. However, the majority of Americans have patterns of political views that do not fit this simple conception of ideology.<sup>7</sup>

To explore the differences in these groups further, we have used the probability of each respondent’s classification into the latent classes to calculate means for the covariates used in our previous analyses (Clark & Muthén, 2009). These are shown in Table 7. There are a number of large differences between the groups on many of these variables that indicate consistent substantive differences between these groups. Those in Class 1, the most liberal group, are relatively high in

<sup>6</sup> We include ideological self-identification as an indicator in the latent class model. We do so in order to facilitate the interpretation of the distribution of liberal and conservative identification for each latent class. We have estimated the model without including self-identification and the estimates differ only slightly from those reported here. Model estimates without ideological self-identification are available from the authors.

<sup>7</sup> The six-class solution helps to demonstrate the utility of the latent class approach. Classes 3 and 4 would not be discovered by dichotomizing economic and social conservatism and creating a fourfold typology. Yet they make up about a third of the U.S. public in 2000.

**Table 7.** Posterior Means for the Latent Class Model

	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6
Age	44.7	50.7	44.7	50.2	46.6	51.0
Education (years)	13.5	12.0	14.6	13.5	14.2	13.8
Female	.63	.63	.61	.54	.55	.47
Income (\$1000)	48.5	32.9	60.1	51.0	57.9	58.5
Religiosity (0–1)	.41	.66	.36	.58	.42	.61
Egalitarianism (0–1)	.68	.64	.69	.58	.54	.49
Authoritarianism (0–1)	.54	.77	.46	.64	.54	.65
N for Cognition (0–1)	.42	.40	.41	.37	.41	.39
Sophistication (0–8)	3.0	1.9	3.7	3.0	3.4	3.6

Note. Entries are the estimated means for each variable for members of that latent class.

egalitarianism and low in religiosity and authoritarianism. They also have relatively low incomes compared to the other classes. Class 2, which combined economic liberalism and social conservatism, has similar levels of egalitarianism to Class 1 but much higher levels of religiosity and authoritarianism. In fact, they are the highest group on authoritarianism, significantly higher ( $p < .05$ ) than the consistently conservative Class 6. At the same time, Class 2 is lowest in education, income, and political knowledge. This group bears a striking resemblance to descriptions of “working-class authoritarianism” (Lipset, 1959; Napier & Jost, 2008).

The profile of Class 3 is in many ways similar to Class 1. They have almost identical levels of egalitarianism and are actually slightly lower in religiosity and authoritarianism. They differ from Class 1 in being more affluent, better educated, and knowledgeable. In light of their egalitarianism, their lack of liberal preferences on economic issues is a puzzle not accounted for by these results.<sup>8</sup> The conservative views on social issues of members of Class 4 coincide with their relatively high levels of religiosity and authoritarianism. They are significantly less egalitarian than members of Class 3 despite having similarly moderate positions on economic issues.

The profiles of Classes 5 and 6 contrast in interesting ways. Members of Class 5 are a little more egalitarian than Class 6 though this difference is not statistically significant. Class 5 does exhibit significantly lower levels of religiosity and authoritarianism than Class 6. Interestingly, there are no significant differences in religiosity and authoritarianism between Class 5 and the consistently liberal Class 1. Despite being very likely to describe themselves as conservative, members of Class 5 have mean scores on religiosity and authoritarianism that are indistinguishable from the most consistently liberal group.

By multiplying the estimated proportion of the sample in each latent class times the probabilities that they identify as liberal and conservative, we can see how much each class contributes to the total number of liberal and conservative identifiers. These estimates are shown in the last two rows of Table 6. Fully 70% of liberal identifiers come from two latent classes, Class 1 and Class 3. The remaining 30% are distributed across Classes 2, 4, and 5. Conservative self-identification is more heterogeneous. Only 27% is estimated to come from the one consistently conservative group, Class 6. Somewhat more, 31%, are drawn from Class 4, who are conservative only on social issues. And 19% of conservatives come from the libertarian Class 5, who are conservative only on economic issues. Self-identification as conservative thus indicates little about the underlying issue basis of political ideology.

The latent class model also yields insights into the nature of the correlation between economic and social ideology. As Jost et al. (2009) note, and we have shown here, there typically are low to

<sup>8</sup> While it would be tempting to attribute the absence of ideological preferences of Class 3 to a lack of sophistication, members of this class are the highest of any class on political knowledge, education, and income.

moderate correlations between these two dimensions. Could this be evidence of an underlying structural relationship? Another possibility is that this correlation is a function of the distribution of people across the latent ideological classes. To show this, we estimated the correlation between the two latent ideological factors for those predicted to be in the consistently liberal and conservative Classes 1 and 6 and, separately, for all other respondents. For those in Classes 1 and 6, the estimated correlation is .98 (s.e. = .03). There is effectively a perfect correlation between economic and social ideology for this group of people (40% of the population). The estimate of the same correlation for all other respondents is  $-.60$  (s.e. = .04).<sup>9</sup> This again demonstrates the consequences of heterogeneity and shows that when the correlation between these two dimensions is computed for the entire population, it will reflect the relative number of people in the different classes at any point in time.

### *Heterogeneity in Ideology: Self-Identification*

Modeling the structure of issue preferences allows for a clear test of the dimensionality of ideology. Another common approach is to measure ideology through self-identification or the evaluation of ideological labels (liberal and conservative). These measures are often good predictors of political outcomes. However, the latent class analysis suggests that self-identification may mean different things to different people. This suggests that while people may have some understanding of a liberal-conservative dimension, the meaning of that dimension may vary.

To address this issue, we estimated a factor-mixture model (Lubke & Muthén, 2007): A model with a single continuous latent factor of ideology but with parameters that can differ across discrete latent classes. We begin with the assumption that people do see a liberal-conservative dimension in politics. However, we allow for the possibility that people do not define the dimension in the same way. We therefore estimate a one-factor model that includes the issue items used in the previous factor analyses, along with ideological self-identification, and the feeling thermometer evaluations of liberals and conservatives. To determine if there is significant heterogeneity in understandings of the liberal-conservative dimension, we allow the factor loadings for the issue items to vary freely across latent classes while keeping the loadings for self-identification and evaluations of liberals and conservatives fixed. Thus, in each of the potential latent classes, the one factor is equally defined by self-identification and evaluations. Only the loadings of the issues are allowed to vary.

We estimated this model using Mplus. The first step is to determine the number of classes. To do this, we estimated models with an increasing number of latent classes and observed the BIC for each solution (Lubke & Muthén, 2005). The smallest BIC was obtained for a model with three latent classes. Increasing the number of latent classes produced larger BIC values and less interpretable solutions. The results of this analysis are shown in Table 8.

The factor loadings for the issue items are shown in Panel A along with the proportion of the sample estimated to be in each latent class. None of the latent classes dominate the sample. Latent class 1 contains 45% of the sample, Latent Class 2 contains 33%, and the third latent class includes the remaining 22%. The nature of each latent class can be inferred from the factor loadings. (The factor loadings for ideological self-identification and the liberal and conservative feeling thermometers are not shown since they are fixed across the three classes.) People in Latent Class 1 link all of the issues—economic and social—to their ideological identification. This represents the classic model of liberalism-conservatism. It makes up an estimated 45% of the sample. This coincides fairly closely with the results of the latent class analysis that showed that 40% of the sample can be described as conventionally defined liberals or conservatives according to the unidimensional model of ideology.

<sup>9</sup> This negative correlation is a function of the almost perfect negative correlation ( $r = -.97$ , s.e. = .04) for those in Classes 2 and 5 and a very weak positive correlation ( $r = .19$ , s.e. = .09) for those in Classes 3 and 4.

**Table 8.** Factor Mixture Model for Political Ideology

A. Standardized Factor Loadings for the Three-Class Model:			
	Class 1	Class 2	Class 3
Services/Spending	.58 (.04)	-.20 (.11)	.82 (.04)
Medical Care	.52 (.04)	-.19 (.10)	.87 (.14)
Jobs/Std of Living	.44 (.05)	-.22 (.10)	.90 (.17)
Abortion	.56 (.10)	.81 (.04)	-.22 (.30)
Gay Adoption	.70 (.11)	.92 (.06)	.06 (.18)
Women's Role	.34 (.06)	.73 (.07)	-.03 (.10)
Class Proportions:	.45	.33	.22

  

B. Regression Results for the Three-Class Model:			
	Class 1	Class 2	Class 3
Age	.004 (.048)	.041 (.037)	.044 (.034)
Education	.008 (.040)	-.082 (.029)	.084 (.030)
Female	-.36 (.23)	-.40 (.13)	.12 (.18)
Income	.064 (.027)	.000 (.018)	.044 (.026)
Religiosity	3.19 (.86)	1.55 (.31)	-.70 (.50)
Egalitarianism	-3.89 (.95)	-.19 (.36)	-2.43 (.50)
Authoritarianism	1.29 (.34)	1.33 (.28)	-.27 (.31)
Need for Cognition	-.48 (.40)	-.42 (.26)	-.32 (.29)
Sophistication	.088 (.062)	-.109 (.053)	.193 (.060)
R <sup>2</sup>	.81	.59	.43

Note. Standard errors are in parentheses. R<sup>2</sup> is the estimated variance in the latent variable accounted for by the model.

The other two latent classes are virtually mirror images of each other. Those in Latent Class 2 strongly connect social issues to their ideological identification, but there is virtually no relationship between identification and economic issues. In contrast, Latent Class 3 is defined by the strong relationship between economic—but not social—issues and identification.

The regressions of the latent ideological factor on the predictors for each of the three classes are shown in Panel B of Table 8. With heterogeneity in ideological identification modeled by the latent classes the pattern of predictors of ideology is now clearer. Religiosity, authoritarianism, and egalitarianism are all substantial predictors of ideology in Class 1. The previously unexpected effect of egalitarianism on social conservatism seen in Tables 3 and 5 is entirely a result of the significant coefficient in Latent Class 1—those who do fit a unidimensional model of ideology. In Latent Class 2, which is defined just by social issues, there is no significant effect of egalitarianism on ideology. There are substantial and significant effects of religiosity and authoritarianism. Latent Class 3 shows a very different pattern. This class is defined solely by economic issues, and we observe a large effect of egalitarianism but no significant effects of religiosity or authoritarianism. We thus again see that only a minority of the American public have political beliefs that appear to fit a unidimensional model of ideology.

## Conclusions

Parsimony is a desirable goal in science. However, this must be balanced against the need for an accurate description of social phenomena. A unidimensional model of political ideology provides a simple understanding of the structure of political thought. While there may be some virtue of mapping political attitudes onto a simple dimension of political competition (particularly in a two-party political system), there is considerable evidence that this does not do justice to the ways in which people actually organize their political beliefs.

Our demonstration that political ideology is at least two dimensional is not new. There is a considerable amount of theory and prior research that supports this position. However, too much recent work on the determinants of ideology has failed to fully appreciate the consequences of multidimensionality. We have shown that modeling the predictors of ideology yields substantially different conclusions in a two-dimensional model than the one-dimensional model. Demographic correlates of ideology that are clear and differentiated in the two-dimensional model are generally obscured in the one-dimensional model. Perhaps more importantly, psychological variables that have been used to describe the differences between liberals and conservatives have very different effects on economic and social ideology. In particular, authoritarianism and religiosity have substantively large effects on social conservatism but no significant effect on economic conservatism. This pattern is observed equally for those high and low in political sophistication. It simply is not accurate to conclude that authoritarian characteristics necessarily lead to opposition to equality. Those high on authoritarianism are very likely to be socially conservative, but they are just as likely to be liberal on economic policy as conservative. The results of the latent class model showed one group of people (Latent Class 2) for whom high levels of authoritarianism coexist with very liberal economic policy positions.

An extension of the multidimensionality of ideology is that the structure of people's political views is more complex than a single-dimensional model suggests. Our latent class analysis shows that at least six different combinations of political attitudes can be distinguished in a random sample of adult Americans. Two of these do fit the traditional conception of liberals and conservatives. However, this accounts for no more than 40% of the public. Libertarians, who combine economic conservatism with social liberalism, are virtually as numerous as traditional conservatives. Other latent classes combine those with very different combinations of economic and social views.

Liberal, and especially conservative, self-identification is similarly heterogeneous. Those with consistently conservative policy preferences make up less than 30% of self-identified conservatives, and many conservatives come from people with conservative social attitudes but consistently moderate positions on economic issues. And almost 20% of conservatives are ideologically libertarian, with liberal preferences on social issues. The extent of observed heterogeneity is perhaps surprising given our consideration of only two issue domains. We expect that the inclusion of additional issues concerning race, immigration, and foreign policy would strongly reinforce the conclusion that a unidimensional representation of ideology is overly simplistic. Future work incorporating additional policy domains will provide a richer picture of the structure of political attitudes. Given the asymmetries in the influence of key predictors across social and economic domains, future work should consider how and why the influence of biological and psychological factors varies across different types of issues. As we move beyond a single ideological dimension as the key dependent variable, a number of interesting questions about the determinants of ideology naturally arise.

Our factor-mixture analysis also shows why liberal-conservative identification can have predictive value despite heterogeneity in ideology. This model shows that a liberal-conservative dimension may be meaningful to most people, but in different ways. A little less than half of the public appears to define liberal-conservative consistent with the unidimensional model. Others see the dimension only in terms of social or economic issues. And these alternative definitions of liberal-conservative are systematically linked to different sets of predictors.

Advances in understanding political ideology will depend on an empirically supported conceptualization of the construct. While political commentators may use liberal and conservative as simple descriptions of political views, empirical evidence demonstrates that this is unlikely to provide a useful basis for a psychological or political analysis of ideology. It will be necessary to take the complexity of ideology into account in order to fully understand the factors that lead to the structure of political attitudes.

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## Appendix

### *Core Issue Questions*

**Government Spending.** Some people think the government should provide fewer services even in areas such as health and education in order to reduce spending. Other people feel it is important for the government to provide many more services even if it means an increase in spending.

**Medical Insurance.** There is much concern about the rapid rise in medical and hospital costs. Some people feel there should be a government insurance plan which would cover all medical and hospital expenses for everyone. Others feel that all medical expenses should be paid by individuals through private insurance plans like Blue Cross or other company paid plans.

**Guaranteed Jobs.** Some people feel the government in Washington should see to it that every person has a job and a good standard of living. Others think the government should just let each person get ahead on their own.

**Assistance to Poor.** What about aid to poor people? Should federal spending on aid to poor people be increased, decreased, or kept about the same?

**Abortion.** There has been some discussion about abortion during recent years. I am going to read you a short list of opinions. Please tell me which one of the opinions best agrees with your view?

- 1) By law, abortion should never be permitted.
- 2) The law should permit abortion only in case of rape, incest, or when the woman's life is in danger.
- 3) The law should permit abortion for reasons other than rape, incest, or danger to the woman's life, but only after the need for the abortion has been clearly established.
- 4) By law, a woman should always be able to obtain an abortion as a matter of personal choice.

**Gay Adoption.** Do you think gay or lesbian couples, in other words, homosexual couples, should be legally permitted to adopt children?

**Women's Role.** Recently there has been a lot of talk about women's rights. Some people feel that women should have an equal role with men in running business, industry, and government. Others feel that a woman's place is in the home.

### *Egalitarianism*

Our society should do whatever is necessary to make sure that everyone has an equal opportunity to succeed. Do you agree strongly, agree somewhat, neither agree nor disagree, disagree somewhat, or disagree strongly with this statement?

We have gone too far in pushing equal rights in this country.

One of the big problems in this country is that we don't give everyone an equal chance.

This country would be better off if we worried less about how equal people are.

It is not really that big a problem if some people have more of a chance in life than others.

If people were treated more equally in this country we would have many fewer problems.

### *Authoritarianism*

Although there are a number of qualities that people feel that children should have, every person thinks that some are more important than others. I am going to read you pairs of desirable qualities:

Independence or respect for elders.

Obedience or self-reliance.

Curiosity or good manners.  
Being considerate or well behaved.

### *Religiosity*

Would you say your religion provides some guidance in your day-to-day living, quite a bit of guidance, or a great deal of guidance in your day-to-day life?

People practice their religion in different ways. Outside of attending religious services, do you pray several times a day, once a day, a few times a week, once a week or less or never?

Outside of attending religious services, do you read the Bible several times a day, once a day, a few times a week, once a week or less or never?

### *Need for Cognition*

Some people like to have responsibility for handling situations that require a lot of thinking, and other people don't like to have responsibility for situations like that. What about you? Do you like having responsibility for handling situations that require a lot of thinking, do you dislike it, or do you neither like it nor dislike it?

Some people prefer to solve simple problems instead of complex ones, whereas other people prefer to solve more complex problems. Which type of problem do you prefer to solve: simple or complex?

### *Need for Cognitive Closure*

Do you like unpredictable situations, dislike them, or neither like nor dislike them (branching format with nine possible response categories ranging from "Like a Great Deal" to "Dislike a Great Deal")?

When you don't understand the reason why something happens in your life, how uncomfortable does that make you feel [Extremely uncomfortable, very uncomfortable, moderately uncomfortable, slightly uncomfortable, or not uncomfortable at all? / Not uncomfortable at all, slightly uncomfortable, moderately uncomfortable, very uncomfortable, or extremely uncomfortable]?

Of the situations when you see two people disagreeing with one another, in how many of them can you see how both people could be right [All of them, most of them, about half of them, a few of them, or none of them? / None of them, a few of them, about half of them, most of them, or all of them]?

### *Political Sophistication*

Now we have a set of questions concerning various public figures. We want to see how much information about them gets out to the public from television, newspapers and the like.

The first name is TRENT LOTT. What job or political office does he NOW hold?

WILLIAM REHNQUIST?  
TONY BLAIR?  
JANET RENO?  
What U.S. state does George W. Bush live in now?  
What U.S. state is Al Gore from originally?  
What U.S. state does Dick Cheney live in now?