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## Political Psychology



Political Psychology, Vol. 30, No. 1, 2009

# The Relationship between Cultural Values and Political Ideology, and the Role of Political Knowledge

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Cultural theory maintains that four worldviews—egalitarianism, individualism, hierarchicalism, and fatalism—can be used to describe people and societies. We examine survey measures of two of those worldviews—egalitarianism and individualism—to understand their relationship with belief systems. Contrary to what one might expect based on the cultural theory literature, we find that people with low levels of political knowledge seem not to have coherent worldviews regarding these issues. In contrast, people with high levels of political knowledge respond to egalitarianism and individualism questions as if they were opposite ends of a single, liberal-conservative continuum, rather than two of four distinct worldviews. We conclude that cultural theory researchers should take account of the influence of political knowledge whenever they investigate worldviews.

**KEY WORDS:** Cultural values, Political ideology, Political knowledge, Egalitarianism, Individualism, Public opinion

Since cultural theory was introduced by Mary Douglas (1966, 1970), it has become an influential explanation of why people choose which potential hazards to fear and which to ignore. In particular, it is often used to explain the rise of environmentalism (Douglas, 1992; Douglas & Wildavsky, 1982; Wildavsky, 1991; Wildavsky & Dake, 1990). In recent years, the use of cultural theory to explain

political views has been rapidly growing (e.g., Braman, Kahan, & Grimmelmann, 2005; Carlisle & Smith, 2005; Jenkins-Smith, 2001; Jenkins-Smith & Smith, 1994; Kahan & Braman, 2005; Peters & Slovic, 1996). Surprisingly, although one of its main proponents, Aaron Wildavsky, was a political scientist, little attention has been given to the relationship between cultural values and the concepts of ideologies and belief systems commonly used by political scientists. In this article, we explore that relationship.

Cultural theory maintains that four worldviews—egalitarianism, individualism, hierarchicalism, and fatalism—can be used to describe people and societies. We examine survey measures of two of those worldviews—egalitarianism and individualism—to understand their relationship with belief systems. Contrary to what one might expect based on the cultural theory literature, we find that people with low levels of political knowledge seem not to have coherent worldviews regarding these issues. In contrast, people with high levels of political knowledge respond to egalitarianism and individualism questions as if they were opposite ends of a single, liberal-conservative continuum, rather than two of four distinct worldviews. We conclude that cultural theory researchers should take account of the influence of political knowledge whenever they investigate worldviews.

We begin by briefly sketching out cultural theory and then some findings by political scientists about political belief systems. We then examine the questions used to measure egalitarianism and individualism and show how the coherence of worldviews varies by political knowledge.

### **Cultural Theory**

Cultural theory holds that patterns of social relationships are determined by two variables. The first, "group," is the extent to which people are incorporated into communities or other social groupings. The greater the incorporation, the greater the group influence on individual decisions and the lesser the individual's choice. In strong groups, people interact frequently in a wide range of activities and are influenced by group norms. In weak groups, people interact infrequently, and social pressure to conform is weaker. The lack of interaction in weak groups limits the influence those groups have over people. The second variable, "grid," is defined as the set of constraining classifications which may impinge on people's behavior. These constraints determine the social rules and norms regarding equality in social interactions. In high-grid communities, family status, sex, race, age, or other characteristics limit the behavior and type of activities in which people may engage. In low-grid communities, few prior constraints exist. People are not prevented from participating in activities because of status, although inequalities may develop because of ability or expertise. The combinations of these two variables yield four patterns of social relationships and corresponding worldviews and values which characterize all societies (Dake & Wildavsky, 1990; Douglas & Wildavsky, 1982; Rayner, 1992).

Egalitarianism stems from the combination of high group and low grid. That is, communities in which members interact with one another frequently are affected by community opinion and are not limited by status. Individualism emerges in low-group, low-grid societies. Individualists see themselves as bargaining with other individuals to negotiate social relations, rather than being influenced by group pressure. Individualists believe that people should be on their own and not rely on others for material assistance. Hierarchicalism emerges in high-group, high-grid societies—that is, communities in which members interact with one another frequently, but take on rigid roles depending on their status or other characteristics. Hierarchicalists believe in strong social and moral guidance from their community leaders. Fatalism develops in low-group, high-grid societies—that is, communities in which people do not interact much, but in which society imposes constraints on how people behave. Fatalists see the world as threatening and uncontrollable, but feel they cannot turn to their community for help.

These worldviews are important because each of them yields a characteristic response to hazards and threats in the world (Dake & Wildavsky, 1990; Douglas & Wildavsky, 1982; Jenkins-Smith & Smith, 1994; Marris, Langford, & O'Riordan, 1998; Rayner, 1992; Schwarz & Thompson, 1990). Individualists see interventions limiting transactions among individuals as threatening—for example, government regulations of private business. They tend to see lower risks than others see, and they are far more likely than others to accept risks in exchange for economic returns. Egalitarians are especially concerned with risks caused by what they see as inegalitarian institutions—big government and large corporations. They are also more likely to favor policies that reduce risks at the expense of economic growth. Consequently, these are the people most likely to fear nuclear power, offshore oil development, genetic engineering, and similar threats. Hierarchicalists fear threats associated with social or moral breakdowns—for example, terrorism, mugging, pornography, AIDS, and other threats to the social order. Fatalists basically fear everything because to them the world is a threatening place. They see themselves as outsiders with little ability to control their world.

Two approaches to studying cultural theory have developed over the years. Some researchers rely on nonquantitative, anthropological methods when using cultural theory. Others prefer quantitative, survey-research methods, when using cultural theory. Our work, of course, addresses the survey-research side of the literature.

The survey-based method for measuring cultural worldviews is simply to develop sets of questions that reflect the various worldviews—individualism, egalitarianism, etc. In their early work on cultural theory, for example, Wildavsky and Dake used a survey which asked respondents to agree or disagree with the following statements (Dake, 1992, p. 31):

### Individualism

- "In a fair system, people with more ability should earn more."
- "A free society can only exist by giving companies the opportunity to prosper."
- "People who are willing to work hard should be allowed to get on."
- "In this country, the brightest should make it to the top."
- "If a person has the get-up-and-go to acquire wealth, that person should have the right to enjoy it."

### Egalitarianism

- "If people in this country were treated more equally, we would have fewer problems."
- "The government should make sure everyone has a good standard of living."
- "Those who get ahead should be taxed more to support the less fortunate."
- "I would support a tax change that made people with large incomes pay more."
- "I support government efforts to get rid of poverty."

These questions obviously reflect what many observers would call liberal-conservative ideology. The step from grid-and-group theory to Wildavsky and Dake's individualism and egalitarianism questions is a step from anthropological theory toward real-world politics. Of course, that is the purpose of their work—to explain patterns of behavior such as environmentalism. However, because their cultural values scales tap into recognizable aspects of liberal-conservative ideology, it becomes reasonable to ask what political scientists who study ideologies and belief systems can tell us about the cultural values scales.

### Ideology, Attitudes, and Political Knowledge

An observation and a set of studies by political scientists cast new light on cultural theory and its measures. First, the observation is that concepts of egalitarianism and individualism have long been used by political scientists, and they are considered to be central elements of liberal and conservative ideologies, which are typically treated as opposite ends of a single scale. Second, political scientists have shown that people with differing levels of political knowledge and sophistication organize their values and opinions differently. Together, these studies have implications for cultural theory.

Disputes over economic interests have always distinguished liberalism and conservatism. Liberals believe that the government should play a broad role in society, seeking to protect the poorer and more vulnerable citizens. In economic matters, this means that liberals are willing to curtail economic freedom and limit free markets in order to increase economic and political equality. Conservatives believe that the government should play a minimal role in society, except in areas

where it is necessary to uphold traditional moral standards. In economic matters, they oppose government restrictions on businesses or individual behavior, preferring to let free markets determine economic outcomes. Some writers refer to these conflicting economic views as egalitarianism and individualism and use survey questions similar to those quoted above to measure them (Dolbeare & Medcalf, 1993; McClosky & Zaller, 1984).

When explaining differences between liberals and conservatives on economic issues, most political scientists point to economic self-interest as the main cause. Poor people lean toward liberalism (or egalitarianism), and wealthy people lean toward conservatism (or individualism) because those ideologies generally work to their economic advantage. For example, consider one of the egalitarianism items quoted above, "Those who get ahead should be taxed more to support the less fortunate." The economic interests in the question are obvious. Rich people would benefit from lower taxes; poor people would benefit from more government services.

There is more to liberalism and conservatism than just positions on economic issues, of course. The two ideologies also differ on how government should address moral and religious issues, for example. However, those matters are beyond the scope of this analysis.

For our purposes, the important part of how political scientists regard liberalism and conservatism is that the two ideologies are seen as opposite ends of a single continuum running from liberal to moderate to conservative. To be sure, there are some people, such as libertarians, whose ideologies do not neatly fit on the continuum. Yet the overwhelming majority of Americans can be usefully placed on a single, left-right scale. That view contradicts the cultural values assumption that there are four worldviews, as we explained above.

We now turn to the findings that people with different levels of political knowledge and understanding organize their values and opinions differently. To explain these results, we begin with some background from Converse's (1964) famous article on belief systems. Converse claimed that all but a small portion of Americans were essentially devoid of any political ideology. Specifically, he found that most Americans fail to use ideology to evaluate political parties and presidential candidates, to offer reasonable definitions of liberalism and conservatism, or to demonstrate constraint or consistency among opinions on specific issues. Still, despite Converse's discouraging conclusion regarding the ideological confusion of most Americans, he did find that Americans who were well educated, politically knowledgeable, and politically active were more likely than other Americans to utilize such ideological concepts.

Some aspects of Converse's work have been shown to be misleading or incorrect. Converse's claim that almost all Americans are devoid of ideological thinking has been shown to be an exaggeration. His model of how people respond to attitude questions, which assumed that respondents were either perfectly stable over time or answered randomly, has also been abandoned. Nevertheless,

Converse's basic conclusions about Americans' lack of political knowledge have been supported (Friedman, 2006; Gerber & Green, 1998; Lupia & McCubbins, 1998; Smith, 1989; Sniderman, Brody, & Tetlock, 1991). Delli Carpini and Keeter (1996) and others have shown that although many Americans have a moderate amount of political knowledge, only a small percentage are truly well informed. Numerous studies have shown that survey responses to attitude questions have large random error components and that they are unstable over time. Moreover, both reliability and stability of responses vary with political knowledge and awareness. The more knowledgeable people are, the less random noise appears in their survey responses (Achen, 1975; Judd & Milburn, 1980; Zaller, 1992). Finally, people's ability to connect their values with opinions on policy issues and with voting choices varies by knowledge (Althaus, 2003; Iyengar, 1987; Sniderman et al., 1991; Zaller & Feldman, 1992).

Building on Converse's work, Stimson (1975) examined attitude consistency, or the degree to which a person's opinions on political issues are all at the same point on the political spectrum. A consistent person is one who holds all liberal opinions, all moderate opinions, or all conservative opinions. In contrast, an inconsistent person holds a mixture of liberal, moderate, and conservative views. Following conventional practice, Stimson measured attitude consistency by looking at correlations among opinion items in his survey. When he divided his sample by level of education and political knowledge, he found far higher correlations among the well educated and knowledgeable than among people with low levels of education and knowledge.

Stimson also conducted a factor analysis and found that individuals with greater knowledge use fewer dimensions, which have greater predictive power, to structure their attitudes and candidate evaluations, whereas individuals with lower knowledge rely on more dimensions, with less predictive power. In practical terms, this means that people with low levels of knowledge often hold mixes of liberal and conservative beliefs, but people with high knowledge levels generally hold ideologically consistent opinions—all liberal, all moderate, or all conservative. Moreover, people with little political knowledge hold clusters of unrelated opinions—for example, one set of opinions on race issues, another on how to deal with criminals, another on tax issues, and so on. The opinions are often unrelated to one another because people with little knowledge generally fail to recognize the connections among issues supplied by ideological principles. Stimson's work has also been supported by later studies. Other researchers have found that the better educated and informed people are, the more likely they are to organize their opinions into a single, liberal-conservative dimension and to use ideology in their political reasoning (Herrera et al., 1992; Sniderman et al., 1991; Zaller, 1992).

The question about cultural values that naturally arises from the belief systems literature is whether the cultural values are distinct (as the cultural-values literature claims), or are related in ways that only the well educated recognize (as the belief-systems literature suggests). To address this question, we turn to our data.

### **Data and Measures**

The data for our analysis come from a public opinion survey of California adults conducted in July and October, 2002. A survey of Californians, of course, is not as desirable as a sample of all Americans, but for our purposes it is almost as good. California is a large, diverse state with many similarities to the entire U.S. population. Indeed, more than one in ten Americans lives in California. One researcher argues that it can be seen as a "microcosm" of the United States (Baldassare, 2000, p. 17). It is sufficiently close so that any broad patterns found among Californians should be found elsewhere in the United States.

Our survey included eight questions used to measure individualism and egalitarianism. Six of them were originally used by Ellis and Thompson (1997) in their study of cultural theory and environmental attitudes in the Pacific Northwest. We added two additional questions (the fourth and eighth items listed below) in an effort to improve their indexes. Although these questions are not the ones used by Wildavsky and Dake, they are substantively the same. More broadly, everyone who uses surveys to measure individualism and egalitarianism uses similar questions.

Survey respondents were asked, "Do you agree strongly, agree somewhat, disagree somewhat, or disagree strongly with the following statements?" The questions in the survey skipped back and forth between egalitarianism and individualism items, and their order was rotated. Here the items have been reordered so that the egalitarianism questions are the first four, and the individualism questions follow. The statements were:

- "The world would be a more peaceful place if its wealth were divided more equally among nations."
- "We need to dramatically reduce inequalities between the rich and the poor, Whites and people of color, and men and women."
- "What our country needs is a fairness revolution to make the distribution of goods more equal."
- "Government regulation of business is necessary to keep industry from becoming too powerful."
- "Competitive markets are almost always the best way to supply people with the things they need."

<sup>&</sup>lt;sup>1</sup> The survey was conducted by the U.C. Santa Barbara Survey Research Center. The sample was a representative cross-section of 1,475 adult residents of the state. Respondents were selected by random-digit dialing. Interviews were conducted in English or Spanish, as appropriate. The response rate (RR2) was 27%; the cooperation rate (COOP2) was 55%. All analyses reported in this paper are weighted with age-sex weights.

 "Society would be better off if there were much less government regulation of business."

- "People who are successful in business have a right to enjoy their wealth as they see fit."
- "Competition, whether in school, work, or business leads to better performance and desire for excellence."

We also make use of a political knowledge scale, which is built by adding the number of correct answers each respondent gives to five questions recommended by Delli Carpini and Keeter (1996).<sup>2</sup> This is probably the most thoroughly tested and widely used political knowledge index in current use. We can be confident that there is certainly a huge gap between the respondents at the two ends of the index. Because of the small number of people who answered zero questions correctly, the zero- and one-correct categories have been combined.

### **Findings**

As a first step in the analysis, Table 1 examines the strength of the Pearson correlations among questions broken down by level of political knowledge. In order to make Table 1 easier to read, all the questions have been coded so that egalitarian and nonindividualist answers are high values, while nonegalitarian and individualist answers are coded as low values. If we think of egalitarianism and individualism as opposites, this means that we have reversed the individualist scales so that all the questions are coded in the same direction. In addition, the egalitarian items are in italics, while the individualist items are in regular font. Finally, in order not to overwhelm readers with five sets of correlation tables (one for each level of knowledge in the five-point index), we show only low, medium, and high levels of knowledge (i.e., for respondents scoring 1, 3, and 5 on the index).<sup>3</sup>

The political behavior literature suggests that the correlations among the least knowledgeable should be low and mixed, while the correlations among the most knowledgeable should be high and positive. The cultural values literature makes no particular prediction here because it does not address the question of how values should vary with knowledge.

The results in Table 1 support the political behavior view. The top panel shows the results for people scoring at the top of the political knowledge scale. All the

<sup>&</sup>lt;sup>2</sup> The questions are: (1) Do you happen to know what job or political office is now held by Dick Cheney? (2) Whose responsibility is it to determine if a law is constitutional or not... is it the president, the Congress, or the Supreme Court? (3) How much of a majority is required for the U.S. Senate and House to override a presidential veto? (4) Do you happen to know which party has the most members in the House of Representatives right now? (5) Would you say that one of the parties is more conservative than the other at the national level? Which party is more conservative?

<sup>&</sup>lt;sup>3</sup> The data in Table 1 were calculated using pairwise deletion of missing data. Correlations were also calculated using multiple imputation of missing data. The results were virtually identical.

Table 1. Correlations among Egalitarian and Individualist Questions by Level of Knowledge

High Knowledge							
	Wealth equal	Reduce inequality	Fairness revolution	Regulation necessary	Competitive markets	Less regulate	Enjoy wealth
Reduce inequality	0.64	;					
Fairness revolution	0.65	0.58					
Regulation necessary	0.47	0.46	0.47				
Competitive markets	0.35	0.40	0.47	0.32			
Less regulation	0.33	0.34	0.27	0.50	0.39		
Enjoy wealth	0.42	0.34	0.39	0.31	0.49	0.43	
Competition best	0.33	0.40	0.34	0.23	0.42	0.33	0.41
Mean Correlation	0.41			Minimum $n = 218$			
Medium Knowledge							
	Wealth equal	Reduce inequality	Fairness revolution	Regulation necessary	Competitive markets	Less regulate	Enjoy wealth
Reduce inequality	0.31						
Fairness revolution	0.46	0.39					
Regulation necessary	0.13	0.20	0.21				
Competitive markets	0.14	0.17	0.19	0.03			
Less regulation	0.03	0.12	0.00	0.29	90.0		
Enjoy wealth	0.28	0.26	0.20	0.10	0.22	0.22	
Competition best	0.23	0.21	0.17	90:0	0.35	90.0	0.25
Mean Correlation	0.19		Minimu	Minimum $n = 254$			
Low Knowledge							
	Wealth equal	Reduce inequality	Fairness revolution	Regulation necessary	Competitive markets	Less regulate	Enjoy wealth
Reduce inequality Fairness revolution	0.25	0.21					
Regulation necessary	0.11	-0.05	0.21				
Competitive markets	-0.02	90:0-	90.0	-0.07			
Less regulation	-0.19	-0.08	-0.11	0.11	0.01	,	
Enjoy wealth	0.03	-0.12	-0.01	0.09	0.16	0.01	1
Competition best	0.02	0.20	0.03	-0.14	0.15	-0.08	0.05
Mean Correlation	0.04		Minimu	Minimum $n = 181$			

Note: Variables have been coded so that egalitarian and non-individualist responses are high.

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correlations are substantially higher than the corresponding correlations among the less informed respondents in the lower panels, and all are positive. This pattern reflects ideological consistency. That is, if respondents agree with the egalitarian values, they reject the individualist values, and vice versa. The mean correlation between the clusters of egalitarian and individualism items, 0.36, is lower than the mean within the egalitarian cluster, 0.54, but is almost the same as the mean correlation within the individualism cluster, 0.41. The difference in average correlations, 0.05, is trivial.

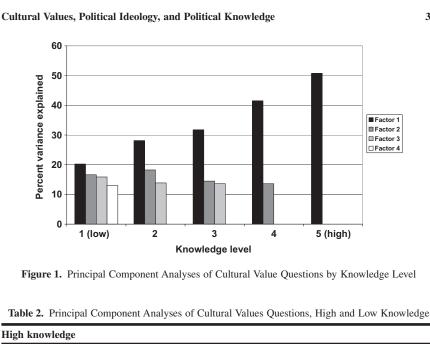
The bottom panel in Table 1 shows the results for the least knowledgeable respondents. Here we see a quite different picture. Almost all the correlations are low. The only exceptions are the correlations among the first three egalitarianism variables, which range from .21 to .31. Fifteen of the correlations are less than 0.10, and 10 of them are actually negative, which results from patterns such as people agreeing with one individualist statement but rejecting another.

The mean correlations shown for each group summarize the results. The mean among the high-knowledge respondents is 0.41, among the medium-knowledge respondents it is 0.19, and among the least knowledgeable respondents it is 0.04. The more knowledgeable people are, the better they connect the values. At the lowest level of knowledge, the correlations are so low that it does not make sense to say that they are measuring coherent worldviews. Respondents seem not to recognize the ideas underlying the questions.

As a second step in analyzing these data, we conducted a principal component analysis of the cultural values items at each level of political knowledge. If the cultural values approach is correct, we should discover that two underlying principal components-egalitarianism and individualism-cause responses to the questions at all levels of knowledge. In contrast, if the political behavior approach is correct, we should see several components operating at low levels of knowledge, but only one component at high levels of knowledge. This pattern should appear because the opinions of people with little political knowledge should be scattered and inconsistent. Because their political ideas are not well connected to one another, the analysis should reveal several underlying causes of opinions. The most informed people, however, should recognize that the cultural values questions are merely different aspects of liberal-conservative ideology, and they should consistently respond in a way that reveals their positions on that one underlying variable. In addition, the analyses should show that the answers of the respondents with little information are poorly explained, while the answers of the highly knowledgeable respondents are well explained.

As we see in Figure 1 and Table 2, the political behavior prediction is correct again. Each bar in Figure 1 represents a principal component. The height of the bar indicates what percentage of the total variance in the eight questions is explained by the component. The responses of people at the lowest level of knowledge are explained by four components. The largest (represented by the bar on the far left of the figure) explains 20% of the variance in the answers to the cultural values

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High knowledge		
	Component 1	
Wealth equal	0.77	
Reduce inequality	0.77	
Fairness revolution	0.77	
Regulation necessary	0.67	
Competitive markets	0.68	
Less regulation	0.66	
Enjoy wealth	0.70	
Competition best	0.66	
Eigenvalues	4.06	
n = 202		

Low knowledg	Low	knowledg	e
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	Component 1	Component 2	Component 3	Component 4
Wealth equal	0.70	-0.14	0.00	-0.16
Reduce inequality	0.46	-0.56	0.03	0.39
Fairness revolution	0.78	0.07	-0.01	0.06
Regulation necessary	0.52	0.56	-0.24	0.12
Competitive markets	0.06	0.33	0.69	0.20
Less regulation	-0.17	0.45	-0.13	0.76
Enjoy wealth	0.12	0.47	0.51	-0.40
Competition best	-0.01	-0.38	0.67	0.26
Eigenvalues	1.62	1.33	1.27	1.04
n = 168				

questions. At the next two levels of knowledge, we see three principal components and a growing percentage of explained variance. At the fourth highest level of knowledge, we see only two components. At the highest level of knowledge, we see a single principal component that explains 50% of the variances in the questions.

Table 2 shows the principal component coefficients for the highest and lowest knowledge groups. In the highest knowledge group, a single component explains the data best. All of the coefficients are large and positive, and they are roughly equal in magnitude. Recall that the individualism items were reversed, so agreeing with egalitarian items and disagreeing with individualist items produces a high score. This is what we should expect to see if the questions were all tapping liberal-conservative ideology.

In the lowest knowledge group, the results are far less systematic. The first component is dominated by two egalitarianism questions—whether the world would be more peaceful if wealth were more equally divided and whether our country needs a fairness revolution to distribute goods more equally.

The second component presents a mixed pattern. The two largest coefficients are associated with egalitarian items—the first saying that we need to reduce inequalities between the rich and poor, etc., and the second saying that government regulation of industry is necessary to reduce the power of industry. However, the negative coefficient on the first item means that people who score highly on this component reject the first egalitarian item and agree with the second. Another odd pair of coefficients in this factor are the competitive markets item ("Competitive markets are almost always the best way . . .") and the competition item ("Competition, whether in school, work, or business leads to better performance . . ."), both of which measure individualism. Again, we have two similar items with opposite coefficients. To score highly on this component, a respondent must accept the first statement and reject the second.

The third and fourth components only have a few large coefficients. The third component seems to be tapping respondents' opinions on competition, and the fourth seems to be tapping opinions on regulation.

The data shown in Figure 1 and Table 2 are consistent with Stimson's findings and other political behavior studies of political attitudes. Among respondents with the highest level of knowledge, we see a single, liberal-conservative factor explaining responses. Among respondents with the least political knowledge, we see a large number of factors which do not explain responses very well.

Our third step in analyzing the data was to examine the reliabilities of the scales by level of knowledge using Cronbach's alpha. The reliability of a scale is basically the percentage of systematic variation in a scale as opposed to random noise. For example, a scale with a reliability of  $\alpha = 0.75$  has 75% systematic variation and 25% random noise.

If the political behavior approach is correct, the reliabilities of the scales should be highest among people with the highest levels of political knowledge, and

		11110	eage			
Knowledge:	1 Low	2	3	4	5 High	Total
Egalitarianism	.48	.67	.62	.78	.83	.71
Individualism	.17	.47	.50	.63	.74	.55
Combined scales	.26	.58	.71	.82	.88	.74

**Table 3.** Scale Reliabilities (Cronbach's alpha) by Level of Knowledge

the reliabilities should be lower among the less knowledgeable. Moreover, if egalitarianism and individualism are actually measuring the same underlying continuum, then combining the items from both scales into a single scale should increase the reliability coefficient further because increasing the number of items in a scale increases its reliability (Lord & Novick, 1968). In contrast, the cultural values approach does not offer any general predictions about the relationship between scale reliability and level of knowledge.

The data presented in Table 3 support the political behavior approach. When we divide the sample by level of knowledge, the reliability of each scale increases as knowledge increases. Moreover, combining the items into a single scale slightly increases the reliability over the reliabilities of either of the subscales.

Our final step in analyzing the data was to repeat the principal component analysis from Table 2, but this time with the addition of liberal-conservative ideology. Our goal is to see whether ideology fits well with the individualism and egalitarianism items. In the high knowledge group, if the ideology coefficient is large and the factor structure remains the same as the one in Table 2, then we can infer that a single, underlying characteristic causes ideology and the cultural value items. In the low knowledge group, we expect that ideology will appear in the same scattered fashion as the other items in Table 2.

The results in Table 4 support our expectations. Among highly knowledgeable respondents, the egalitarianism and individualism items and the liberal-conservative ideology measure reflect a single characteristic. A single factor appears again. The coefficient for ideology is quite high, 0.78, and adding ideology did not affect the other coefficients. Among the least knowledgeable, we once again find a set of four components and a muddled picture. Ideology is not uniquely associated with one factor.

### **Implications**

Among people with low levels of political knowledge, we find little evidence of coherent worldviews. Among people with high levels of political knowledge, we find that egalitarianism and individualism are actually opposite ends of the same underlying dimension. These findings do not match expectations from the cultural theory literature.

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**Table 4.** Principal Component Analyses of Ideology and Cultural Values Questions, High and Low Knowledge

High knowledge		
	Component 1	
Ideology	0.78	
Wealth equal	0.76	
Reduce inequality	0.77	
Fairness revolution	0.74	
Regulation necessary	0.68	
Competitive markets	0.66	
Less regulation	0.66	
Enjoy wealth	0.67	
Competition best	0.64	
Eigenvalues	4.53	
n = 200		

### Low knowledge

	Component 1	Component 2	Component 3	Component 4
Ideology	-0.36	0.18	.30	0.43
Wealth equal	0.70	0.20	0.12	-0.07
Reduce inequality	0.52	-0.25	0.43	0.33
Fairness revolution	0.63	0.41	0.06	0.24
Regulation necessary	0.33	0.54	-0.46	0.14
Competitive markets	-0.28	0.57	0.45	0.04
Less regulation	-0.42	0.23	-0.13	0.63
Enjoy wealth	-0.20	0.62	0.08	-0.54
Competition best	-0.01	-0.03	0.74	14
Eigenvalues	1.69	1.35	1.28	1.08
n = 162				

One might be tempted to respond that the problem is with the measures, not with the theory. The weakness with that criticism is that our measures are very similar to—and in some cases, identical to—measures used in other studies of cultural worldviews. Moreover, even if researchers develop better measures of egalitarianism and individualism, the arguments presented here would lead one to suspect that the new measures would suffer the same problems that our measures suffer. Certainly they would have to be tested.

A more useful response is to recognize that political scientists and cultural theorists have been investigating the same topic using different approaches and different terminology. A critical finding from the political science side is that people's opinions and behavior depend on their level of political knowledge. In particular, people who know little about politics generally do not hold consistent opinions or have coherent worldviews, while people who know a great deal about politics generally have consistent opinions and worldviews which can be described with the liberal-conservative continuum.

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An important contribution from the cultural theory side is a possible explanation of the origins of the liberal-conservative dimension. Political scientists generally treat liberal-conservative ideology and other values as exogenous variables. They take them as given and generally do not try to explain their sources. The grid-group argument underlying cultural theory offers a possible explanation of ideologies and values. Cultural theory offers a promising path.

### ACKNOWLEDGMENTS

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