Ten Values for Predicting Political Voting and Behavior:

ANES 2006 Pilot Study/2004 Study.

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Introduction

The ANES 2006 pilot study included among its scores of variables 10 items measuring values, specifically one each for 10 values proposed by Shalom H. Schwartz and as reviewed by him in a recent report on this ANES study (Schwartz 2007). Each of these value items were presented in two slightly different formats. This project seeks to explore how well the items predict a number of politically relevant variables such as reported voting in the 2000 presidential election focusing specifically on the Democratic and Republican candidates Al Gore and George W. Bush, respectively.

Schwartz presents his 10 values as universal to humankind. These ten values are: Power, Achievement, Hedonism, Stimulation, Self-direction, Universalism, Benevolence, Tradition, Conformity and Security.

Many theorists and researchers have explored values as a topic of psychological investigation. However, as only Schwartz's ten values are included in the present ANES study, measured with only one questionnaire item each (in two different formats), background discussion is limited to a general theoretical overview of the topic of values and a critique of Schwartz's values within this framework.

We believe that values that purport to be universal as a topic of psychological study must meet three fundamental criteria. First, they must have scientific value, i.e. their exploration must yield leverage on important questions of our time. Second, they should correspond at least roughly with a recognized definition of values. Finally, they should include or overlap with values commonly identified by lay persons as of central importance in their lives.

In answer to our first qualification, Schwartz has done extensive research in many nations and concludes from his studies that ten or twelve values are inclusive and universal, warranting central attention in scientific research. To review, he labels them Achievement, Benevolence, Conformity, Hedonism, Power, Security, Self-Direction, Stimulation, Tradition, and Universalism with two extra values labeled Financial Success and Respect. The introduction of these items into the European Social Survey has allowed a number of researchers to determine that these values have a significant impact on a number of social and political phenomena cross-nationally, thereby making them scientifically relevant constructs.

Secondly, scientifically studied values should be defined in a manner at least roughly compatible with common lay usage of the term "value". Webster's New Collegiate Dictionary offers several definitions of values (Webster 1999). The most relevant of these for psychological study is "a principle, standard, or quality regarded as worthwhile or desirable." This definition incorporates a wide variety of abstract notions such as religious or spiritual beliefs and the principles of fairness, honesty, and courtesy. Those researchers who study values offer definitions along similar lines: e.g., "values are core conceptions of the desirable within every individual and society" (Rokeach 1979, pp. 2). Clearly, lay and scientific definitions are quite similar.

Thirdly, a list of universal values should cover values that are considered important to lay persons. If we were to ask a persons in many nations of the world what values they hold dear, we would expect answers such as equality, honesty, fairness, political and/or religious freedom, personal and/or financial liberty, and a wide variety of

other human rights, such as those embodied by the United Nations Charter of Human Rights[1] and the those of the Earth Charter.[2]

In terms of the third criterion, being inclusive of commonly considered value concepts, Schwartz's ten or twelve value categories, as defined, seem lacking. While they include many of the values we would expect people to volunteer, even if using different terminology, there are a number of potentially important values that are missing. Of course not every conceivable value can be accounted for and the ANES board, due to limited space constraints, has required Schwartz to whittle his item-battery down to 10 from the 21 items found on the European Social Survey. This notwithstanding, values that are the opposite of the values inquired into are left to be determined by an answer of "not like me at all."[3] This may be an appropriate assumption to make, but that is an empirical question that should be tested rather than assumed. One could assume that such a response to an item regarding traditionalism may imply a person to hold progressivism in high regard. However, in the revised ANES question battery – the alternate items to be tested in the pilot study – there is no response that would imply the opposite stance. The most you could disagree with an item is the response "not important at all." This could hardly be said to imply an opposite stance.

Further, we believe that any term or concept used in the social sciences should be operationally definable, reliably measurable, and possess face validity. Schwartz operationally measures his terms with questionnaire items in Likert scale format. This combined with having only one such item for each value, as in the present ANES

[1] http://www.un.org/Overview/rights.html
[2] http://www.earthcharter.org

research project, makes it difficult for us to believe that few, if any, meaningful human values, such as achievement, power, or universalism, can be reliably or validly measured. Measurement error alone will likely attenuate any relationships that are found between this measure of values and any relevant dependent variable. It is difficult to imagine how any lay person or scientist would be comfortable with his or her own personal values being measured with such a meager sample of items. How can only one questionnaire item accurately measure or describe an individual's endorsement of a given value?

We do not argue that because the potentially large number of values cannot be perfectly accounted for with ten items that therefore the study of values is not important. But we do argue that claiming ten values measured by only ten questionnaire items are universal and more important to humans than any of scores of others is almost certainly a gross oversimplification of the human condition. While parsimony is valued in scientific explanations, it must be differentiated from oversimplification. Psychological behavior is complex when viewed from a scientific perspective. Scientists should proceed in a manner that respects this complexity.

It is from this skeptical perspective that the present scientists analyzed the data available on the ten values (and two sub-values) purportedly measured with one questionnaire item each in two different formats in the ANES pilot study of 2006.

In addition to exploring the explanatory power of these two question batteries, we seek to understand how well these inventories measure what they seek to. Whether or not these items measure the values they seek to is relevant to the question-wording

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[3] The question format for the PVQ items is as follows: "Next, I will describe some people. Please tell me how much each person is or is not like you. Is this person very much like you, like you, somewhat like you, a little like you, not like you, or not like you at all?"

experiment embedded in the survey. Responses to two disparate versions of each question are presented; each set having been given to separate groups of subjects in order to facilitate comparison of the two formats. Do the different formats yield different reliabilities and/or different validity correlations with the other variables?

These inventories seek to ascertain an individual's perception of importance for ten values, as listed above. In the modified question format, two additional questions are presented measuring specific achievement values: financial success and need for respect. Having the ten (or twelve) separate values determined through only ten (or twelve) questions limits our ability to determine how well each question singly measures the value it purports to measure. As Schwartz (2007) notes, and as his previous research has demonstrated, two questions would be more appropriate to more accurately ascertain an individual's stance on each value. However, given the limited space on the survey instrument, only ten to twelve questions were included in the 2006 pilot study.

Previous findings

In his technical report for these item-batteries, Schwartz lists the items in their two item formats and explains the rationale for each format. The first version of the questions asks the respondent how similar he/she is to a person with a particular value, e.g., "First, (he/she) thinks it is important that every person in the world be treated equally. (He/She) believes everyone should have equal opportunities in life." The second format simply asks for a level of endorsement of the value, e.g., "How important is it to you that every person in the world have the same opportunities in life?" Further, the response categories are also dissimilar. The PVQ questions provide the following response categories: very much like you, like you, somewhat like you, a little like you, not like you, or not like you

at all. Whereas the ANES questions use the following format: Extremely important, Very important, Moderately important, Slightly important, or Not important at all. Schwartz reports correlations between these 10 items and 50 selected criterion variables, noting only 3.4 significant correlations, on average, between each of the ten value items and these other variables. At the .05 level, one would expect 2.5 significant correlations out of 50 just by chance alone. Thus, only 3.4 correlations in 50 suggest minimal power of the ten value items as stand-alone predictors of the selected variables.

However, Schwartz does present tables of significant correlations, mainly in the .30's but also up to .63, between some of the 10 values and some criterion variables; e.g., choice of presidential candidate, liberalism/conservatism and interpersonal trust. The variables that show these relationships are primarily those measuring Universalism, Stimulation, and Self Direction as predictors of reported voting for Gore, liberal ideological identification, and high interpersonal trust; as contrasted by Tradition, Conformity and Achievement as predictors of a reported vote for Bush, conservative ideological identification, and low interpersonal trust. The highest correlations were between value items and measures of similar traits: Achievement and low trust (.63) and between Benevolence and high trust (.61). These results appear reasonable given the liberal and conservative ideologies assumed to be possessed by many of the respective voters.

In their analysis of the same cluster of 10 Schwartz items, Hitlin and Kramer (2007) offer a factor analysis yielding two distinct factors. While they leave these factors unlabeled with descriptive terminology, examination of the item loadings suggests the underlying factors to be Extroversion and Conservativism/Authoritarianism. Their first

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factor has the heaviest loadings on Universalism, Stimulation, Hedonism, Achievement, Power, and Self-Direction. Their second factor has the heaviest loadings on Security, Tradition and Conformity. Benevolence also fell into this second factor. If this question were interpreted as benevolent action to only members of the respondent's in-group, as proposed by Schwartz, it coheres nicely with the other three items.

Present Analyses and Findings.

The first step of the present analysis was a principle components factor analysis. This was performed separately for the first and second versions of the items, 10 in the first cluster and 10 plus the 2 additional items in the second. The results of this analysis are presented in Table 1. For our analysis, the PVQ question format returned 337 of 340 respondents while the ANES format returned 332 of 335. The first three columns in Table 1 are for the PVQ format of the 10 items (#523-532); the second three are for the 10 + two items in the alternative format (#533-544). Based on the items that load on each factor, we suggest that these three factors measure Conservatism, Egalitarianism, and Extroversion.

INSERT TABLE 1 HERE

Our analysis differs from that of Hitlin and Kramer's; where their analysis of the PVQ items shows two underlying factors, our analysis shows three. However, their analysis of the alternative items reveals three underlying factors, the same conclusion we find for this group of items.

Given the evidence of underlying factors in the data, we construct a summated rating scale for the Conservatism, Egalitarianism, and Extroversion factors in each item battery. The scales are composed of the following items:

1. Conservatism, PVQ format: Security, Tradition, Conformity

2. Egalitarianism, PVQ format: Universalism, Benevolence, Self-Direction

3. Extroversion, PVQ format: Stimulation, Hedonism, Achievement, Power

4. Conservatism, Alternative format: Tradition, Conformity, Power

5. Egalitarianism, Alternative format: Universalism, Security, Benevolence, Self-Direction

6. Extroversion, Alternative format: Stimulation, Hedonism, Achievement, Financial Success, Respect of Others

Correlational Analysis

Table 2 shows expected Pearson correlations of approximately .50 between voting in 2004 and voting for either Bush or Gore and between voting for Bush and Gore. Conservatives were slightly more likely to vote than were Liberals (.13**) and, not surprisingly, they were considerably more likely to vote for Bush (.51**) than for Gore (-.38**). The individual value items correlated only slightly with voting in 2000 and for Bush or Gore.

INSERT TABLE 2 HERE

Our scales correlated weakly with these criterion variables in the expected directions. Those who score higher on the Conservatism scale, for the first version of the 10 values, were slightly less likely to vote for Gore (-.12*), and were somewhat less likely to describe themselves as ideological liberals (.24**). Both of these findings are as one would expect. These findings held up for the second version of the 10+2 value items (-.11*, .24**). By this composite score conservatives were also slightly more likely to vote for Bush (.15**), as might be expected.

Those who score higher on the Egalitarianism scale were slightly less likely to vote for Bush (-.11*) and were slightly less likely to describe themselves as ideological conservatives, as would be expected. No relationship was found when using the second question battery to construct the Egalitarianism scale, however.

Extroverts as measured by the first composite score, based on the first version of the 10 value items, were slightly less likely than introverts to vote in '04 (-.13**). They are slightly less likely to be ideologically conservative (-.11*). The second version of the Extroversion scale also demonstrates a similar directionality but fails to achieve significance (-.11). According to these scales, especially the scale from the first question battery, Extroverts were slightly less likely to vote for Bush.

Predictive Power of Individual Items and Scales

Comparing weighted OLS and Logistic Regression results for the Vote, Vote – Bush, Vote – Gore, Ideological Identification and Party Identification variables allows us to derive the added benefit and predictive power of the separate item batteries and the three factor scales. The results of these analyses are shown in tables 3-7. We utilize several control variables in each equation. They are age (V043250), gender (V041109a), education level (V043254), whether the respondent is currently working (V043260c), income level (V043293), whether the respondent has served or is serving in the military (V043259), and the respondent's level of occupational prestige (V043262c).

INSERT TABLES 3-7 HERE

Adding the individual items to any regression equation clearly adds considerably to the variance explained in each equation. It does matter what one is choosing to predict as to which of the two sets of 10 or 12 items adds more variance explained and which set

of items turns up the greater number of significant coefficients. However, looking at the tables reveals that the greater variance explained is not consistently higher for one or the other set of value items. The same is also true regarding which set of items turns up more significant coefficients.

The factor-derived scales, however, reveal a more robust story. The scales constructed from the alternative question battery, while also unstable in their ability to create a greater increase in the variance explained, clearly contribute more significant coefficients. In all but one equation, that predicting a vote for Gore, at least one scale achieves marginal-significance; and in all but two equations, predicting a vote for Gore or a Vote for Bush, at least one scale achieves significance at conventional (0.05) levels.

Given this set of findings, it appears that these variables do indeed have some ability to predict politically relevant outcomes. Further, it appears that the alternative measures derived by the ANES Board may be slightly more powerful in this respect. These value sets clearly have an impact on how one identifies oneself and in how one intends to act in the political arena.

Summary of Findings, Observations, Opinions and Recommendations

The ten value items in the two alternate versions seem to provide similar validity as predictors of political behavior. Their content seems constrained to many fewer than 10 basic human values, however. Factor analysis yields three factors suggestive of the Big Five personality trait of Extroversion and two poles of the liberal/conservative ideological spectrum (Egalitarianism/Conservatism). Composite scores for these factors predict political behavior in the expected directions.

However, the strength of the predictive power of both the items and the composite scales is relatively small (e.g. Pearson correlations generally less than .20) and, in the present authors' opinion, of questionable value as a measure of values. Perhaps the inclusion of the full PVQ item set would provide more explanatory power, in addition to providing a parallel item battery to the European Social Survey and thereby facilitating cross-national comparison.

By way of example of the forms of other scales and items that might be of greater predictive power for future ANES studies of political behavior, one may consider findings from a study conducted by one of the present authors, presented in Table 8. These measures are based on traits measured with questions in 5-option Likert scale format (McConochie 2006a; 2006b).

The findings reported in Table 8 are consistent with those reported above for the ANES study data and those reported by Anand and Krosnick (2003). They demonstrate that questionnaire items of interesting content and in simple straightforward Likert scale format can predict relevant political behavior singly, in small clusters, and in more reliable scale measures. These widely ranging traits predict political choices rather robustly. These traits include basic values (religious fundamentalism and human rights), general political policies (endorsement of a positive foreign policy and resource conservation) and specific issue-relevant attitudes (warmongering endorsement).

Conclusions

The two separate formats used to phrase the 10 (and 12) values in the ANES 2006 Pilot Study do not appear to have dramatically different value in terms of predictive power. They both appear to yield some predictive power for central political voter

decisions, such as choosing between presidential candidates. However, because the Schwartz items cannot with confidence be assumed to measure robust value traits per se, no generalizations about the relationship between values and political choices are warranted from this data.

The fact that a variety of value and trait measures correlate robustly with presidential voting choices, demonstrated by separate studies my McConochie, suggests that perhaps the degree of correspondence between a voter's hypothetical ideal presidential candidate or campaign platform and that presented by a given candidate may provide a meaningful clue to presidential and party voting choices. Perhaps other ANES survey items reflecting such content will confirm this prediction.

However, this would necessitate a basic revision of the basic research model of the ANES project. Fewer traits measured with more items would permit inclusion of robust and meaningful traits. Statistically significant findings would permit more substantial generalizations to the national population.

References:

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Appendix 1: Summary of Independent Variables

Variable	Obs	Mean	Std. Dev.	Min	Max
Age	1212	0.525	0.190	0.200	1
education	1212	0.615	0.230	0	1
employed	1212	0.650	0.477	0	1
gender	1212	0.533	0.499	0	1
ideology	920	0.610	0.211	0.143	1
income	753	0.717	0.233	0.043	1
military	1212	0.139	0.346	0	1
Party	1195	0.479	0.349	0	1
prestige	1092	0.580	0.282	0.167	1
PVQ Items					
Universalism	339	0.365	0.212	0.167	1
Security	339	0.422	0.229	0.167	1
Stimulation	340	0.549	0.247	0.167	1
Tradition	340	0.412	0.246	0.167	1
Hedonism	340	0.469	0.230	0.167	1
Conformity	340	0.422	0.234	0.167	1
Achievement	339	0.442	0.233	0.167	1
Benevolence	340	0.291	0.154	0.167	1
Power	340	0.643	0.243	0.167	1
Self-Direction	340	0.328	0.195	0.167	1
Alternative Items					
Universalism	335	0.465	0.216	0.200	1
Security	335	0.328	0.155	0.200	1
Stimulation	333	0.579	0.224	0.200	1
Tradition	335	0.553	0.218	0.200	1
Hedonism	334	0.453	0.187	0.200	1
Conformity	334	0.465	0.192	0.200	1
Achievement	333	0.479	0.184	0.200	1
Benevolence	335	0.371	0.149	0.200	1
Power	335	0.664	0.233	0.200	1
Self-Direction	335	0.340	0.146	0.200	1
Financial Success	334	0.501	0.178	0.200	1
Respect of Others	335	0.494	0.205	0.200	1
PVQ Scales					
Conservatism	340	0.748	0.176	0.167	1
Egalitarianism	340	0.839	0.129	0.167	1
Extroversion	340	0.641	0.161	0.167	1
Alternative Scales					
Conservatism	335	0.639	0.152	0.200	1
Egalitarianism	335	0.793	0.130	0.235	1
Extroversion	335	0.697	0.135	0.200	1

Table 1: Factor Analyses: principle component factors with oblique-promax rotation

Variable	PVQ			Alternative		
	Conservatism	*Egalitarianism*	*Extroversion*	*Conservatism*	*Egalitarianism*	*Extroversion*
Universalism	0.10	**0.76**	-0.05	-0.07	**0.69**	0.00
Security	**0.65**	0.23	-0.12	0.23	**0.69**	-0.15
Stimulation	-0.28	0.16	**0.71**	-0.15	0.10	**0.76**
Tradition	**0.73**	-0.04	0.11	**0.48**	0.27	0.06
Hedonism	-0.09	0.26	**0.61**	-0.27	0.20	**0.62**
Conformity	**0.74**	0.05	-0.01	**0.77**	0.23	-0.18
Achievement	0.30	-0.05	**0.68**	0.14	-0.04	**0.76**
Benevolence	0.39	**0.48**	0.00	0.30	**0.45**	0.13
Power	0.23	-0.38	**0.66**	**0.61**	-0.31	0.34
Self-Direction	-0.05	**0.53**	0.30	-0.10	**0.49**	0.29
Financial Success	-	**-**	-	0.18	-0.19	**0.69**
Respect of Others	-	**-**	-	0.23	0.16	**0.36**
Variance Explained	19.88%	15.29%	20.16%	15.51%	16.88%	23.03%
Alpha	0.60	0.44	0.61	0.49	0.55	0.70

Table 2: Pairwise Correlations

Variable	Vote 2000?	Vote - Bush	Vote - Gore	Ideological ID	Party ID
Vote for Bush	0.48**				
Vote for Gore	0.45**	-0.47**			
Ideological ID	0.13**	0.51**	-0.38**		
Party ID	0.04	0.59***	-0.54***	0.60***	
PVQ, N = 337					
Universalism	-0.01	-0.14**	0.12*	-0.16**	-0.16**
Security	-0.10	-0.05	-0.07	0.05	0.01
Stimulation	-0.09	-0.10	-0.03	-0.17**	-0.05
Tradition	0.06	0.14**	-0.10	0.24**	0.12*
Hedonism	-0.10	-0.11*	0.01	-0.15**	-0.07
Conformity	-0.01	0.08	-0.10*	0.25**	0.11*
Achievement	-0.15**	-0.09	-0.09	-0.01	-0.01
Benevolence	-0.05	-0.02	-0.01	-0.07	0.04
Power	-0.02	0.11*	-0.12*	0.05	0.14**
Self-Direction	-0.06	-0.05	-0.00	-0.09	-0.02
Alternative, N = 332					
Universalism	-0.06	-0.12*	0.06	-0.13*	-0.18**
Security	-0.00	-0.00	-0.00	0.09	-0.03
Stimulation	-0.08	-0.13**	0.06	-0.14**	-0.11+
Tradition	0.03	0.16**	-0.10	0.22**	0.09+
Hedonism	-0.05	-0.04	0.01	-0.09	-0.05
Conformity	-0.02	0.10	-0.06	0.23**	0.15**
Achievement	-0.13**	-0.07	-0.03	0.04	0.00
Benevolence	-0.06	-0.01	-0.02	0.05	-0.02
Power	-0.01	0.07	-0.06	0.06	0.05
Self-Direction	-0.05	-0.07	0.07	-0.14**	-0.16**
Financial Success	-0.12	-0.07	-0.00	-0.00	0.01
Respect	-0.05	-0.07	0.02	-0.16**	-0.05
Scales					
Conservatism 1	-0.02	0.08	-0.12*	0.24**	0.11*
Egalitarianism 1	-0.06	-0.11*	0.06	-0.16**	-0.08
Extroversion 1	-0.13**	-0.07	-0.08	-0.11*	-0.00
Conservatism 2	-0.06	-0.09	0.05	-0.06	0.014*
Egalitarianism 2	0.00	0.15**	-0.11*	0.24**	-15**
Extroversion 2	-0.12*	-0.11	0.01	-0.11	-0.05

*** ≤ 0.001, ** ≤ 0.01, * ≤ 0.05, + ≤ 0.10

Table 3: Predictors of Voting (logistic regression)

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
age	6.453***	4.785*	8.884***	4.180*	7.238***
education	2.177***	4.591**	-1.866	3.570*	0.114
employed	0.183	-0.477	0.467	-0.513	0.559
gender	0.477+	0.190	1.239	0.167	0.262
ideology	-0.200	0.397	0.518	0.001	-0.433
income	1.367*	1.127	3.798+	1.589	2.612
military	-0.072	0.177	0.404	0.314	0.344
Party	0.540	0.154	0.396	0.253	0.365
prestige	0.130	-0.273	1.568	-0.398	0.358
PVQ Format					
V06P523 (UN)		2.940*			
V06P524 (SE)		-2.293+			
V06P525 (ST)		-2.426*			
V06P526 (TR)		0.380			
V06P527 (HE)		1.485			
V06P528 (CO)		-0.239			
V06P529 (AC)		0.009			
V06P530 (BE)		-0.363			
V06P531 (PO)		0.301			
V06P532 (SD)		0.309			
Alternative +2 Format					
V06P533 (UN)			2.602		
V06P534 (SE)			-1.570		
V06P535 (ST)			3.373+		
V06P536 (TR)			0.430		
V06P537 (HE)			-3.067		
V06P538 (CO)			0.730		
V06P539 (AC)			-0.417		
V06P540 (BE)			-1.019		
V06P541 (PO)			0.748		
V06P542 (SD)			0.507		
V06P543 (FS)			-8.996**		
V06P544 (RA)			-2.074		
PVQ Scales					
Conservatism				-1.306	
Egalitarianism				3.060	
Extroversion				-1.280	
Alternative Scales					
Conservatism					1.634
Egalitarianism					1.121
Extroversion					-7.172*
Constant	-5.075***	-4.187+	-9.630**	-3.659	-0.798
Observations	538	155	172	156	172
Pseudo R2	0.231	0.291	0.401	0.230	0.286

*** ≤ 0.001, ** ≤ 0.01, * ≤ 0.05, + ≤ 0.10

Table 4: Predictors of Voting for Bush (logistic regression)

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
age	3.034***	3.710+	2.001	3.748+	0.734
education	1.085	3.040+	0.199	2.158	0.095
employed	-0.058	0.416	0.655	0.266	0.198
gender	0.365	0.373	0.547	-0.013	0.289
ideology	3.063***	4.179*	4.778*	3.411+	3.941*
income	1.522*	1.453	3.011+	1.132	1.990
military	0.055	0.086	0.389	-0.002	0.154
party	4.488***	5.824***	6.613***	5.320***	5.302***
prestige	-0.209	-2.632*	0.192	-1.729	0.422
PVQ Format					
V06P523 (UN)		3.176*			
V06P524 (SE)		-0.959			
V06P525 (ST)		-0.645			
V06P526 (TR)		1.809			
V06P527 (HE)		0.289			
V06P528 (CO)		-0.726			
V06P529 (AC)		-2.115			
V06P530 (BE)		-2.967			
V06P531 (PO)		1.091			
V06P532 (SD)		1.074			
Alternative +2 Format					
V06P533 (UN)			1.046		
V06P534 (SE)			-0.026		
V06P535 (ST)			-2.194		
V06P536 (TR)			2.831+		
V06P537 (HE)			2.291		
V06P538 (CO)			-3.558+		
V06P539 (AC)			-0.319		
V06P540 (BE)			-2.264		
V06P541 (PO)			1.660		
V06P542 (SD)			0.791		
V06P543 (FS)			-4.406*		
V06P544 (RA)			-0.251		
PVQ Scales					
Conservatism				0.275	
Egalitarianism				2.208	
Extroversion				-1.417	
Alternative Scales					
Conservatism					0.993
Egalitarianism					-0.734
Extroversion					-3.777+
Constant	-8.208	-9.676**	-11.982***	-9.741**	-5.061+
Observations	541	156	172	157	172

Pseudo R2	0.432	0.529	0.583	0.496	0.529

*** ≤ 0.001, ** ≤ 0.01, * ≤ 0.05, + ≤ 0.10

Table 5: Predictors of Voting for Gore (logistic regression)

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
age	4.722***	7.327*	6.867*	5.554+	7.158
education	0.475	2.701	-1.761	2.891	-0.925
employed	0.534+	-0.850	1.311	-1.187	1.294
gender	0.429	0.804	0.517	1.182+	0.182
ideology	-2.351**	-4.752+	-2.809	-3.854+	-2.963
income	0.096	-1.626	-2.056	-0.075	-1.298
military	0.019	-0.605	1.257	0.074	1.177
party	-4.726***	-10.133***	-7.236***	-8.597***	-6.724***
prestige	0.835	4.451*	2.663+	2.957*	1.869
PVQ Format					
V06P523 (UN)		4.824*			
V06P524 (SE)		-4.267*			
V06P525 (ST)		-5.589**			
V06P526 (TR)		-2.863			
V06P527 (HE)		2.489			
V06P528 (CO)		-0.912			
V06P529 (AC)		4.088+			
V06P530 (BE)		1.226			
V06P531 (PO)		-0.812			
V06P532 (SD)		-3.693			
Alternative +2 Format					
V06P533 (UN)			1.447		
V06P534 (SE)			-1.536		
V06P535 (ST)			1.131		
V06P536 (TR)			-0.053		
V06P537 (HE)			-1.530		
V06P538 (CO)			1.255		
V06P539 (AC)			-1.612		
V06P540 (BE)			1.320		
V06P541 (PO)			-1.398		
V06P542 (SD)			1.066		
V06P543 (FS)			0.984		
V06P544 (RA)			-0.835		
PVQ Scales					
Conservatism				-3.122	
Egalitarianism				1.642	
Extroversion				-2.007	
Alternative Scales					
Conservatism					-0.775
Egalitarianism					2.478
Extroversion					-1.322
Constant	-1.698+	-6.136+	0.090	-0.216	-1.249
Observations	541	156	172	157	172
Pseudo R2	0.398	0.693	0.574	0.626	0.559

*** ≤ 0.001, ** ≤ 0.01, * ≤ 0.05, + ≤ 0.10

Table 6: Predictors of Party Identification

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
age	-0.060	0.034	-0.381*	0.062	-0.273
education	0.001	0.015	-0.017	0.057	-0.044
employed	-0.049	-0.035	-0.032	-0.029	-0.012
gender	-0.054*	-0.102*	-0.047	-0.074+	-0.042
ideology	1.014***	1.117***	1.192***	1.116***	1.148***
income	0.124+	0.381**	0.033	0.372**	0.022
military	-0.004	0.013	0.005	0.050	-0.025
prestige	0.028	-0.043	-0.049	-0.055	-0.044
PVQ Format					
V06P523 (UN)		-0.170			
V06P524 (SE)		0.119			
V06P525 (ST)		-0.044			
V06P526 (TR)		0.016			
V06P527 (HE)		0.071			
V06P528 (CO)		-0.063			
V06P529 (AC)		-0.080			
V06P530 (BE)		0.274+			
V06P531 (PO)		0.272**			
V06P532 (SD)		-0.205+			
Alternative +2 Format					
V06P533 (UN)			-0.113		
V06P534 (SE)			-0.126		
V06P535 (ST)			-0.158		
V06P536 (TR)			-0.028		
V06P537 (HE)			0.160		
V06P538 (CO)			0.122		
V06P539 (AC)			-0.092		
V06P540 (BE)			-0.237		
V06P541 (PO)			0.033		
V06P542 (SD)			-0.253		
V06P543 (FS)			0.147		
V06P544 (RA)			0.262*		
PVQ Scales					
Conservatism				0.125	
Egalitarianism				-0.156	
Extroversion				0.234	
Alternative Scales					
Conservatism					0.111
Egalitarianism					-0.588**
Extroversion					0.169
Constant	-0.161+	-0.342+	-0.040	-0.597*	0.232
Observations	541	156	172	157	172
R2	0.372	0.572	0.509	0.532	0.484

*** ≤ 0.001, ** ≤ 0.01, * ≤ 0.05, + ≤ 0.10

Table 7: Predictors of Ideological Self-Identification

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
age	0.154**	0.076	0.247**	0.105	0.204*
education	-0.075+	-0.049	0.028	-0.060	0.036
employed	0.044*	0.030	0.055+	0.033	0.047
gender	-0.014	0.021	-0.021	0.011	-0.007
income	0.043	-0.126+	0.079	-0.122	0.080
military	-0.003	-0.017	-0.042	-0.025	-0.017
party	0.332***	0.411***	0.319***	0.399***	0.336***
prestige	-0.014	0.016	-0.054	0.006	-0.042
PVQ Format					
V06P523 (UN)		0.011			
V06P524 (SE)		-0.032			
V06P525 (ST)		0.016			
V06P526 (TR)		0.013			
V06P527 (HE)		-0.117+			
V06P528 (CO)		0.123+			
V06P529 (AC)		0.026			
V06P530 (BE)		-0.159+			
V06P531 (PO)		-0.107+			
V06P532 (SD)		0.070			
Alternative +2 Format					
V06P533 (UN)			-0.048		
V06P534 (SE)			0.140+		
V06P535 (ST)			-0.064		
V06P536 (TR)			0.152*		
V06P537 (HE)			-0.071		
V06P538 (CO)			0.101		
V06P539 (AC)			0.159*		
V06P540 (BE)			0.098		
V06P541 (PO)			0.050		
V06P542 (SD)			-0.048		
V06P543 (FS)			-0.087		
V06P544 (RA)			-0.242***		
PVQ Scales					
Conservatism				0.086	
Egalitarianism				-0.077	
Extroversion				-0.161	
Alternative Scales					
Conservatism					0.332***
Egalitarianism					0.122
Extroversion					-0.316**
Constant	0.359***	0.391***	0.265*	0.569***	0.145
Observations	541	156	172	157	172
R2	0.380	0.536	0.580	0.509	0.518

*** ≤ 0.001, ** ≤ 0.01, * ≤ 0.05, + ≤ 0.10

Table 8: Correlations between McConochie Study Variables and Criterion Variables

Variable/Cluster	Vote for Bush	Vote for Gore
Warmongering	0.44**	
Public Democracy Endorsement		0.33*
Human Rights Endorsement	-0.35*	
Religious Fundamentalism		-0.33*
Resource Conservation	-0.50**	0.31*
Positive Foreign Policy Endorsement		0.34*
Four items, one each from: Monarchy Endorsement, Resource Conservation, Religion and Human Rights scales	0.54**	
Four items, one each from Religiosity, Warmongering, Out of Iraq, and Resource Conservation scales		0.62**
Two items, Monarchy Endorsement and Competition Worldview	0.54**	

N = 42 (community college students)