What Liberals and Conservatives Really Think; Psychological Traits Differentiating Liberal from Conservative Worldviews. Replication Study Number 1. December 29, 2010

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Abstract: 60-plus psychological traits related to political attitudes are measured with questionnaire scales tapping hypothesized facets of liberal and conservative worldviews, confirming initial findings. The initial sample is augmented from about 55 to as many as 189, including a second West Coast community college sample and an East Coast university sample. This study confirms the high reliability and significant validity of the scales for differentiating liberal and conservative worldviews. Details of a measure of Fear of Diseased Neighbors are presented in support of biological theory that the conservative worldview evolved in the human species to protect in-groups from neighboring disease pathogens. A new scale measuring Lying and Conniving is created from scale items. Implications of the various findings for local and national political organizing are discussed.

Introduction.

As reviewed in the prior study of these traits (McConochie, 2010a), considerable research evidence over several decades has documented many psychological traits that differentiate liberal from conservative worldviews. This research by many investigators demonstrates consistent findings across dozens of nations and several continents, suggesting that the phenomena are universal in the human species. Theory by biologist Randy Thornhill and colleagues posits that the conservative worldview evolved to protect in-groups from disease pathogens in neighboring groups against which the in-group does not yet have immunity.

A study by the present author in the spring of 2010 provides a comprehensive framework for organizing and measuring these trait differences and an effort to test Thornhill's theory and the author's expanded theory that the liberal worldview evolved to promote gradual cooperative interactions with neighboring groups to promote the benefits of trade in goods, services and genetic material (which provides, among other benefits, immunity to foreign disease pathogens). The present study replicates this on a much larger sample.

Method.

The present study was conducted in the same manner as the first via four questionnaires (numbers 10-13) on the author's web site, Politicalpsychologyresearch.com. Student subjects were recruited through professors David Leung of Lane Community College in Eugene, Oregon and Bill Puka of Rensselaer Polytechnic Institute in Troy, New York. The Oregon students were in psychology classes. The New York students were in ethics and anarchy classes. They participated for extra credit. Upon completing each questionnaire, students received their personal scores on the traits measured in that questionnaire, which they could download. They also later received a summary of the study findings, provided by the author to their professors. The number of participants ranged from 189 for the first questionnaire to 151 for the fourth. Professor Leung's students also provided the data for the family frequency data study (liberal and conservative worldviews) discussed later in this report. For the sample of 189 persons, 35 percent were males, 65 percent females. The mean age was 26.8, standard deviation 10.4. The years of education mean was 13.9, standard deviation 1.8.

Data was automatically saved to file by the web site system, then downloaded by the author and analyzed via SPSS software.

The results were much as they were for the first study (McConochie, 2010a). The basic scale statistics are presented in Table 1. In the first study, 15 of the over 801 questionnaire items were weak and most thus omitted from scoring. In the replication study, only 5 items were weak, three among

the 57 "Miscellaneous Conservatism" items. The item numbers in Table 2 are for the items as they are presented in one of the four questionnaires. The means, standard deviations and alpha reliability coefficients are for the first study and the present replication study. For the items in each scale, see the manual (McConochie, 2010b).

Briefly, there are 10 basic dimensions of political discourse represented by the scales, six for each dimension. The first three represent the conservative worldview and the last three the liberal worldview, as hypothesized and as confirmed by correlations in both the initial study and in the present study. These dimensions are:

1. Religious beliefs. Fundamentalism versus kindly religious beliefs.
2. Group belongingness preferences. Social disenfranchisement versus feeling accepted.
3. Gender attitudes. Male superiority versus female egalitarianism.
4. Foreign policy. Militarism/competition/dominance versus peacefulness, cooperation/equality.
5. Government type preferences: In-group services versus all group service.
6. Economics: Self-serving versus sharing.
7. Civilian violence management: Violence and self-protection versus civility promotion.
8. Social group relations: Dominance versus social egalitarianism.
9. Locus of government authority: Authoritarian elite versus citizen authority.
10. Environment policy: Consumption versus conservation.

Table 1. Basic scale statistics.

Scale	No. of items	Item nos.	Weak items omitted	Range (of mean item scores)	Mean item score mean	S.D.	Alpha reliability
1a.RFun	22	1 to 22	1 (Item 20)	1 to 4.14	2.11/2.12	.82/.78	.94/.93
1b.CRel	16	23 to 38	None.	1 to 4.50	2.2/2.16	.99/.92	.96/.95

1c.SecurRel	20-1	39 to 58	None.	1 to 4.00	2.36/2.20	.90/.84	.95/.95
1d.Krel	17-1	59 to 75	None.	2.21 to 5.00	4.02/4.03	.49/.51	.81/.85
1e.Rellib	9	76 to 84	None.	2.33 to 5.00	3.97/4.13	.75/.65	.86/.82
1f.Eclec Spir	8	85 to 92	None.	1.75 to 5.00	3.54/3.54	.82/.78	.88/.85
2a.SocDis	20	93 to 112	None.	1.00 to 3.50	2.3/2.3	.58/.55	.87/.85
2b.CulCon	22	113 to 134	None.	1.00 to 3.73	2.57/2.59	.54/.51	.88/.85
2c.Igpel	16	135 to 150	None.	1.00 to 3.94	2.19/2.16	.72/.70	.93/.91
2d.SocEnfr	11	151 to 161	None.	1.00 to 4.82	3.5/3.49	.48/.53	.72/.77
2e.Cul Egal	16	162 to 177	None.	1.00 to 5.00	4.04/4.08	.60/.58	.92/.91
2f.EgalPhilo	13	178 to 190	None.	1.00 to 5.00	4.06/4.12	.65/.61	.90/.89
3a.MaleDom	6	1 to 6	None	1.00 to 4.33	2.63/2.67	.76/.75	.85/.83
3b.MascPol	9	7 to 15	None.	1.00 to 3.78	1.83/1.81	.72/.66	.91/.88
3c.Alpha Male	14	16 to 29	None	1.00 to 3.00	1.69/1.65	.58/.53	.90/.89
3d.FemResp	6	30 to 35	None.	1.00 to 5.00	4.18/4.24	.56/.56	.80/.81
3e.FemPol	16	36 to 51	None.	1.00 to 5.00	4.45/4.48	.58/.63	.95/.95
3f.FemHon	11	52 to 62	None.	1.00 to 5.00	3.96/3.87	.69/.66	.89/.86
4a.Warmong	10	63 to 72	None.	1.00 to 3.40	1.84/1.93	.68/.66	.90/.88
4b.WarPol	10	73 to 82	None.	1.00 to 5.00	2.23/2.46	.83/.83	.92/.90
4c.UniMil	20	83 to 102	None.	1.00 to 4.10	2.0/2.11	.65/.66	.94/.92

4d.PFP	12	103 to 114	None.	1.00 to 5.00	4.15/4.16	.72/.66	.94/.93
4e.PeaceP ol	19	115 to 133	None.	1.00 to 5.00	3.9/3.78	.64/.62	.92/.91
4f.PeacePr om	14	134 to 147	None.	1.00 to 5.00	3.9/3.76	.80/.76	.95/.93
5a.SIGGo v	7	191 to 197	None.	1.00 to 3.86	2.01/1.84	.77/.67	.88/.84
5b.PowPol	10	198 to 207	None.	1.00 to 3.30	1.86/1.77	.72/.62	.93/.88
5c.EliteGo v	7	208 to 214	None.	1.00 to 3.29	1.67/1.54	.66/.59	.86/.87
5d.ComG dGv	6	215 to 220	None.	1.00 to 5.00	4.15/4.28	.83/.72	.91/.91
5e.MajOp Gv	5	221 to 225	None.	1.00 to 5.00	3.99/4.07	.68/.68	.77/.76
5f.AllCitG ov	4	226 to 229	None.	1.00 to 5.00	4.17/4.29	.76/.68	.85/.81
6a.Profit Econ	5	148 to 152	None.	1.00 to 4.20	1.97/1.97	.73/.69	.83/.82
6b.ConEc on	8	153 to 160	None.	1.00 to 4.00	1.85/2.01	.75/.69	.89/.85
6c.Wealth Ec	12	161 to 172	None.	1.00 to 3.42	2.08/2.10	.64/.62	.85/.85
6d.BalEco n	4	173 to 176	None.	1.00 to 5.00	4.16/4.04	.78/.76	.86/.80
6e.LibEcP ol	9 less 1	177 to 185	Item # 178	1.00 to 5.00	3.89/3.76	.64/.59	.84/.85
6f.ShareEc o	10	186 to 195	None.	1.00 to 5.00	3.99/3.91	.70/.69	.91/.88
7a.VioPro ne	10 less 2	1 to 10	None.	1.00 to 3.60	2.25/2.49	.58/.46	.72/.52
7b.VioEna b	15-1	11 to 25	None.	1.00 to 4.20	2.61/2.61	.66/.68	.88/.89
7c.InGpDe	18	26 to 43	None.	1.00 to 4.22	2.68/2.69	.69/.67	.91/.89

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7d.CivCit	15	44 to 58	None.	1.00 to 5.00	3.75/3.77	.58/.57	.89/.87
7e.VioPref	19	59 to 77	None.	1.00 to 5.00	3.97/4.00	.59/.55	.91/.90
7f.CivProm	12	78 to 89	None.	1.00 to 5.00	4.16/4.12	.73/.69	.96/.94
8a.SDO6	16	90 to 105	None.	1.00 to 3.81	2.05/2.03	.75/.67	.94/.92
8b.InGpFav	11	106 to 116	None.	1.00 to 3.64	2.07/1.94	.73/.68	.92/.90
8c.Power Olig	10	117 to 126	None.	1.00 to 3.90	1.8/1.68	.78/.66	.96/.94
8d.HumRts	12	127 to 138	None.	1.00 to 5.00	4.36/4.37	.59/.60	.95/.94
8e.AntiOlig	10	139 to 148	None.	1.00 to 5.00	4.11/4.24	.80/.70	.96/.95
8f.Egalitsm	7	149 to 155	None.	1.00 to 5.00	4.2/4.30	.77/.69	.91/.92
9a.Authorsm	10 less 4	156 to 165	None.	1.00 to 4.20	2.59/2.33	.74/.69	.77/.86
9b.Natlism	8	166 to 173	None.	1.00 to 4.63	2.16/2.22	.68/.71	.84/.86
9c.Ldr Devo	9	174 to 182	None.	1.00 to 4.22	2.21/2.22	.71/.71	.88/.85
9d.Pro Gvt	10	183 to 192	None.	1.00 to 5.00	4.14/4.11	.75/.70	.95/.93
9e.ComB Gvt	12	193 to 204	None.	1.00 to 5.00	4.04/4.07	.69/.67	.84/.91
9f.CitGov	5	205 to 209	None.	1.00 to 5.00	4.02/4.09	.74/.71	.85/.84
10a.ConsPer	10	1 to 10	None.	1.00 to 3.90	1.94/1.84	.91/.78	.96/.95
10b.ConsGv	10	11 to 20	None.	1.00 to 3.80	2.02/1.95	.84/.70	.94/.91
10c.HumCon	10	21 to 30	None.	1.00 to 4.00	1.94/1.84	.81/.69	.93/.92

10d.Suscom	10	31 to 40	None.	1.00 to 5.00	4.06/4.13	.75/.69	.94/.92
10e.SusNow	9	41 to 49	None.	1.00 to 5.00	4.27/4.26	.70/.67	.95/.94
10f.SusFut	9	50 to 58	None.	1.00 to 5.00	4.16/4.18	.74/.71	.95/.95
11a.MiscCon	57 less 3	59 to 115	61, 73, 80	1.00 to 3.51	2.23/2.25	.61/.53	.96/.95
11d.MiscLib	33	116 to 148	None.	1.00 to 5.00	3.97/3.94	.54/.56	.95/.95
12a.CTribe	5	149, 151, 153, 155, 157	None.	1.00 to 4.20	2.7/2.75	.80/.75	.80/.73
12b.LTribe	5	150, 152, 154, 156, 158	None.	1.00 to 5.00	3.88/3.93	.64/.68	.79/.79
13. Fear of Diseased Neighbors		See Table 3, below.	None.	1.00 to 3.57	2.15 (present study)	0.66	0.79
14. Lying and conniving		See Table 4, below	None	1.00 to 4.3	2.14	.57	.91

As can be seen by scanning the figures, the reliability coefficients are generally very satisfactory, with most in the .80's and .90's. The scales for the most part are quite reliable, as they were in the first study.

There were slight but significant differences between the Oregon and New York students, with the Oregon students higher on 1a Religious Fundamentalism, 1b Conservative Religion, 1c Security Religion, 5c Elite Government, 8b In-group Favoritism, 9a. Authoritarianism, 10a. Personal Consumption, 10c. Human Consumption, 11a. Miscellaneous Conservative Attitudes, and 14. Lying and Conniving.

The New York students were higher on 1e. Religious Liberalism, 5c. Eclectic Spirituality, 4d. Positive Foreign Policy, 7a. Violence Proneness, 7c. In-group Self-Defense, 8e. Anti-oligarchy, 9f. Citizen Government, 10f. Sustainable Future, and 12b. Liberal Tribal Beliefs. These are not large, random samples, so no meaningful conclusions can be drawn from these differences, but they demonstrate the sensitivity of the scales to differentiating between groups. The most interesting of these differences is the higher violence-proneness score for the East Coast group. Another group of students some years ago also had very high scores on an expanded version of this scale. The scores for males were as high as were scores for Oregon prison inmates. This test measures a variety of traits that differentiate incarcerated teens and adults from non-incarcerated ones. Perhaps East Coast life is significantly more stressful in a variety of dimensions, accounting for this score difference. More research would be needed to clarify this.

The Pearson correlations between the scales and political orientation, are presented in Table 2. Political orientation is measured in the questionnaires with items in five-option Likert scale format, with the stem "Politically, I think of myself as a... (Conservative, Liberal, Green/Environmentalist, Independent)". Each option is presented separately. A measure of the liberal/conservative dimension is also created by adding the liberal score to the inverse of the conservative score (lib + (6 – con)). The liberalism score correlated with conservatism -.70 in the first study on the sample of 55 students and -.57 for the replication study, N of 189. The two scores together have an alpha reliability of .73. Thus, the lib/con score provides an index of the liberal-conservative dimension, though, as will be discussed below, these two political orientations appear to be more complex than just opposite poles on a single dimension. In each dimension, traits a, b and c were hypothesized to represent the conservative worldview and traits d, e and f the liberal worldview.

As in the original study, the correlations are with few exceptions in the directions predicted and statistically significant, supporting the hypothesized relationships between the traits and political orientation. Note

the pattern of three positive correlations followed by three negative correlations in each of the columns. To get a full appreciation of the meaning of the traits, the reader is encouraged to download the trait manual (McConochie, 2010b) and read the trait items.

Table 2. Pearson product moment correlations between scales and political orientation. Significance levels: ** = .01, * = .05.

Trait/scale.	Conser vatism	Liberal ism	Lib/con	Frequency; % => 3.5 mean item score
1a Religious fundamentalism	.53**	-.57**	-.52**	4.8
1b Religious conservatism	.57**	-.44**	-.57**	11.6
1c Security-oriented religion	.47**	-.38**	-.42**	5.8
1d Kindly religious beliefs	-.19*	.25**	.25**	86.2
1e Religious liberalism	-.49**	.46**	.46**	83.1
1f Spiritual eclecticism	-.53**	.46**	.56**	66.1
2a Social disenfranchisement	.26**	-.17*	-.24**	0.5
2b Cultural conservatism	.49**	-.35**	-.47**	2.1
2c In-group elitism	.33**	-.16*	-.28**	1.1
2d Social enfranchisement	-.10	.12	.12	51.9
2e Cultural egalitarianism	-.42**	.38**	.45**	87.3
2f Egalitarian philosophy	-.32**	.36**	.38**	87.3
3a Male dominance preference	.37**	-.22**	-.34**	12.6
3b Masculine politics	.47**	-.38**	-.49**	1.7
3c Alpha male-ism	.46**	-.23**	-.41**	0
3d Female respect	-.20**	.26**	.26**	94.3
3e Female politics	-.31**	.26**	.33**	94.3
3f Female honor	-.32**	.33**	.38**	70.3
4a Warmongering endorsement	.61**	-.46**	-.62**	0
4b War politics	.57**	-.35**	-.54**	8

4c Unilateral militarism	.49**	-.28**	-.46**	1.7
4d Positive foreign policy	-.36**	.38**	.43**	87.4
4e Peace politics	-.44**	.51**	.55**	66.3
4f Peace promotion	-.41**	.40**	.47**	62.9
5a Special interest group government	.28**	-.17*	-.25**	0.5
5b Power politics	.31**	-.26**	-.32**	0
5c Elite government	.33**	-.19**	-.29**	0
5d Common good government	-.39**	.28**	.38**	88.4
5e Majority opinion government	-.35**	.28**	.35**	81.5
5f All citizen government	-.26**	.19*	.25**	92.1
6a Profit economics	.49**	-.30**	-.46**	1
6b Conservative economics	.54**	-.40**	-.55**	1.7
6c Wealth economics	.52**	-.38**	-.52**	0
6d Balanced economics	-.24**	.39**	.36**	86.3
6e Liberal economics	-.20**	.40**	.35**	70.3
6f Share economics	-.31**	.33**	.38**	74.9
7a Violence proneness	.15	.06	-.05	1.9
7b Violence enabling	.48**	-.31**	-.46**	10.7
7c In-group defense	.58**	-.34**	-.54**	11.3
7d Civil citizenry	-.21**	.22**	.25**	71.1
7e Violence prevention	-.31**	.30**	.36**	86.2
7f Civility promotion	-.31**	.30**	.36**	86.8
8a Social Dominance Orientation (SDO 6)	.49**	-.36**	-.50**	0.6
8b In-group favoritism	.53**	-.32**	-.50**	1.3
8c Power oligarchy	.40**	-.15	-.32**	1.3
8d Human rights endorsement	-.35**	.34**	.41**	95.6
8e Anti-oligarchy	-.23**	.33**	.33**	87.4
8f Egalitarianism	-.25**	.36**	.36**	89.9
9a Authoritarianism	.51**	-.13	-.37**	3.8

9b Nationalism	.53**	-.29**	-.48**	3.1
9c Leader devotion	.41**	-.19*	-.35**	2.5
9d Progressive government	-.33**	.42**	.44**	83.7
9e Liberal political agenda	-.40**	.45**	.50**	84.3
9f Citizen authority	-.36**	.33**	.40**	83
10a Personal resource use	.51**	-.36**	-.51**	4
10b Government resource use	.48**	-.38**	-.51**	2.6
10c Human natural resource use	.56**	-.34**	-.53**	1.3
10d Sustainable community endorsement	-.40**	.43**	.49**	86.1
10e Green/clean/safe politics	-.29**	.42**	.42**	88.7
10f Ideal sustainability	-.32**	.34**	.39**	84.1
11a Miscellaneous hypothetical conservative values	.58**	-.31**	-.52**	0
11d Miscellaneous hypothetical liberal values	-.30**	.32**	.37**	80.8
12a Conservative tribal values	.43**	-.16	-.34**	13.2
12b Liberal tribal values	-.33**	.33**	.39**	75.5
13 Diseased neighbor phobia	.45**	-.17*	-.37**	2.5
14 Lying and conniving-7	.36**	-.18	0.32	2.0

Reading the trait items in the manual is also valuable to get a sense of the face and content validity of the scales. An effort was made in writing the scales to phrase items in terms similar to statements read and heard in public discourse about political issues, especially for the b and e level traits (political manifestations of basic underlying traits). To the extent that this effort was successful, the items will be considered by the reader to have face and content validity. The fact that the scales generally have good to excellent reliability may be considered as evidence of the cohesiveness and thus relevance of the items as written and of the traits which they constitute.

An example of the importance of measuring and understanding such traits is exemplified in trait 9c, Leader Devotion, which in the present study

correlates .41** with the conservative worldview and -.19* with the liberal worldview. This scale includes items such as "I would be willing to step between our national leader and an assassin, to take the bullet and protect our leader" and "I would feel comfortable with a political leader who was almost Godlike in power and wisdom." These items bring to mind Hitler's totalitarian rule and requirement that military members swear allegiance not just to their country but to him personally.

Similarly, trait 8d, Human Rights Endorsement, includes these items: "Everyone should have the right to work for a living in a job freely chosen and for a reasonable wage", and "Everyone has the right to health and to universal medical insurance." These issues resonate with recent national political issues in the United States. This trait correlates -.35** with conservatism and .34** with liberalism.

As in the initial study, traits within clusters correlate positively and significantly with their hypothesized partners (a, b and c, for example) and negatively with their hypothesized opposites (d, e and f). For example, in the present study Human Rights Endorsement correlates .73** with Anti-oligarchy and .80** with Egalitarianism, and Anti-oligarchy correlates .82** with Egalitarianism. In the first study the correlations were .60**, .67** and .85**. Human rights correlates -.66** with its theoretical opposite, Social Dominance Orientation in the present study. In the initial study it correlated -.29*.

In the initial study there were various relatively minor correlations between age, gender and education and some of the trait scores. However, when controlling for these other variables, little overall effect was present on the relationship between traits and political orientation. For example, the correlations between Religious Fundamentalism, Warmongering Endorsement, Female Respect and Human Rights and the Lib/Con score are -.52**, -.62**, .26** and .41**. Controlling for age, gender and education they are -.51**, -.62**, .25** and .39**.

The correlations between traits and political worldviews should not be interpreted to mean that "conservatives" are warmongers or that only liberals

endorse a positive foreign policy, but only that persons high on one or the other of these two worldviews tend to differ significantly on such traits. For example, among the subjects who completed the second questionnaire, 37 were relatively high on conservatism and 78 on liberal (mean item scores greater than 3). The conservatives' mean item score on Warmongering was 2.50, compared to 1.59 for the the liberals. Both groups were below average on this traits; but the conservatives were less low. Similarly, on Female Respect, conservatives scored 4.19 and liberals 4.40. Both groups were above average. But the liberals were more above average than the conservatives.

Clusters of traits can be used to predict political orientation. For example, Religious Fundamentalism, Kindly Religious Beliefs, Social Disenfranchisement, Social Enfranchisement, Special Interest Group Government and Common Good Government produce a multiple correlation with the Lib/Con score of .59 with the ANOV F score at 16.28, significant at the .000 level. The highest standardized Beta Coefficients are for Religious Fundamentalism and Common Good Government.

The seven items from various scales that refer specifically to fear of diseased neighbors constituted a reliable measure (Alpha .79). This scale correlates .45** with conservatism and -.17* with liberalism, consistent with biological theory as discussed in the initial study report (McConochie, 2010a). To explore the hypothesized function of this trait specifically as a means of protecting in-groups from neighboring disease pathogens, correlations were computed between this scale and the items in the In-group defense scale (scale 7c). The phobia scale correlates positively and significantly with this scale .71** and with all but one of the items in this scale, as presented in Table 3. These findings are interpreted as support for the theory.

Table 3. Diseased Neighbor Phobia Scale Pearson Correlations with In-group Defense Scale Items.

1. I often think that our nation must be prepared to do	.52**

whatever is necessary to protect ourselves from danger.	
2. I often feel concerned about whether I am safe in my home and community.	.39**
3. I feel safer when I am at home than when out in the community.	.30**
4. I like the idea of living in a gated community protected by fences and guards.	.47**
5. I would feel safer in the center of my nation than near a border with another nation.	.54**
6. I feel safer in my country than I would in any other country.	.40**
7. People in other countries are more likely to carry infectious diseases than are people in our country.	.51**
8. Persons whose skin color is much different from mine are more likely to carry diseases than people like me.	.37**
9. I am concerned about getting germs from door handles and in other ways when out in public.	.24**
10. I am especially worried that an evil foreign group might try to destroy our nation with biological weapons, such as a plague virus.	.52**
11. Our nation is in very real danger of attack from foreign powers.	.42**
12. We are as vulnerable now to acts of terrorism as we were 5 years ago.	0.12
13. We must have strong police departments to keep an eye on dangerous people in our midst.	.48**
14. We need a strong federal intelligence agency to tap	.50**

phones, investigate bank accounts and do whatever else is necessary to protect us against terrorists and spies.	
15. The safety of our nation must come before concerns for citizen rights to privacy or to fair trials.	.50**
16. One important reason our citizens must have rights to own handguns is for self-defense in their own homes.	.34**
17. The most important trait of a president of our nation is the ability to protect us from danger.	.40**
18. I like the idea of owning guard dogs, such as Doberman Pincers, German Shepherds or Pit Bull terriers.	.48**

The Lying and Conniving scale was a product of factor analysis of the Miscellaneous Conservative items. It consists of 7 items. When two items from the Miscellaneous Liberal items were added (reverse scored) the scale properties were not improved. The 7-item scale is very reliable (alpha .91) and differentiates liberals from conservatives, so is included in the tables. It correlates .36** with Conservatism, -.18 with Liberalism. Other factors included a brief Religious Fundamentalism scale and other scales resonating enough with existing scales that they were not added as separate scales. The items in the Lying and Conniving scale are presented in Table 4.

Table 4. Items in Lying and Conniving scale.

1. It is smart for my preferred political leaders to lie and cheat if necessary to win elections and hang onto political power.
2. It is wise strategy for leaders of my preferred political party to keep those citizens away from the polls who might vote against us.
3. It is okay for my political candidates to run down and discredit their opponents during campaigns for office.
4. In political campaigns, winning justifies lying and conniving.

5. In political campaigns, belittling your opponent, even with lying, is justified if it will help you win.
6. In times of war, it is worthwhile to use propaganda to demonize enemies.
7. Even in times of peace, it is more important to dominate other nations than to make friends with them.

The percentage of persons who hold a given value, as reflected in the trait measures, can be calculated by computing the frequency of persons with mean item scores at or above 3.5 (the midpoint of the "neutral" range on the Likert scale options). These frequency percentages are expressed in percentages in the last column of Table 2. Scanning this data reveals that the percentage of persons in the present study endorsing the scales or traits correlating positively with conservatism tend to be rather small compared to the percentage of persons endorsing the scales correlating positively with liberalism.

The frequency percentage data for the present study are roughly similar to data obtained by the author in prior studies using these or similar scales. For example, in the present study 4.8% of the students endorse Religious Fundamentalism and 86.2% endorse Kindly Religious Beliefs, the two factors found by the author in factor analytic studies of religious beliefs. In prior studies, these percentages have hovered around 6 and 89% respectively. Violence-proneness, as measured by scale 7a is endorsed by 1.9% in the present study and by about 6% in other samples of teens and adults in prior studies. Warmongering as measured by scale 4a is endorsed by 1.9% of the present sample of college students compared to about 6% in other studies of teens and adults. Thus, the present sample seems to consist of rather civil, well-mannered citizens, compared to the general population.

The fact that zero percent of the present sample endorse some traits, e.g. scales 3c Alpha Male-ism, 5b Power Politics, and 6c Wealth Economics, does not mean that these scales are useless. They still have adequate reliability, spreading persons apart and thus permitting detection of relationships with other measures. For example, Alpha Male-ism correlates -.41** with the Lib/Con measure of political orientation. In terms of mean item scores, for the 37 persons in the sample who have scores of 4 or 5 on Conservatism the mean Alpha Male-ism score is 1.93. For the 78 persons with Liberalism scores of 4 or 5 the score is 1.47, significantly lower.

The smaller percentage of persons endorsing the "conservative" traits compared to the "liberal" traits could be a function of the way the trait measures are worded. Or, it could reflect substantive frequency differences between these two political worldviews. It may also reflect sample characteristics. Conservatives seemed under-represented in this sample. For example, using the data just above, 37 of the 175 persons who took the Alpha Male-ism scale were conservatives and 78 were liberals.

Thus, 21% were conservatives and 45% liberals, leaving 34% for the "moderate" category. This compares to national U.S. estimates of about 35% conservatives, 25 percent liberals and 40% moderates based on surveys of young adults by the Pew Research Center (Pew, 2010). Thus, the percentage of persons endorsing the traits correlating positively with conservatism are probably underestimates of what would be found in the general population. Similarly, the percentage endorsing the traits correlating positively with liberalism may be overestimates of general population values.

A related frequency issue is raised by the evolutionary theory of the origins of the conservative and liberal worldviews. The present

author postulates that if these worldviews have had survival value for humans then both worldviews would have appeared consistently in even small groups, such as family clans or communities. This would give these groups advantages over neighboring groups that lacked either liberal or conservative representatives, as both worldviews are considered to have value in protecting or promoting the local in-group's welfare, as discussed in the introduction above.

It is assumed that these worldviews are largely genetically based, with some individuals genetically predisposed to fearful, hostile dispositions toward outsiders and other individuals predisposed to trusting, cooperative dispositions. Just as families tend to yield a balance of male and female offspring, both of which are necessary for procreation and survival of the species, so too families would be expected to yield a relative balance of offspring of liberal and conservative worldviews.

To test this hypothesis the author informally asked persons at various club meetings how many grew up in families of all liberals, all conservatives or some of each. By far the majority reported "some of each". To quantify this phenomenon, students at a local community college were invited to gather data on families for extra credit in psychology classes taught by Professor Leung. A simple one-page form was provided, photocopied and filled out by several students, providing data on 199 persons in 25 families. Adults including grandparents, parents and siblings were counted in liberal, neutral and conservative categories.

The families on average had 3.1 liberals, 3.4 conservatives and 1.4 neutrals, consistent with the notion of a relatively balanced distribution of liberal and conservative worldviews in families, genetically based. If these worldviews were primarily learned, one would expect some families to be mostly liberal and some mostly conservative. None of the

25 families had all liberals or all conservatives with no neutrals or representatives of the opposite worldview.

General discussion.

The present studies (the initial one and this replication) are consistent in their findings but not based on large or random samples of adults. They are from only one nation. Therefore, while the findings are consistent with those from prior cross-cultural studies of similar psychological traits by other authors, they must be interpreted with caution. If confirmed with larger and more diverse samples, the findings hold several implications for political life, locally, nationally and internationally.

One implication is that it appears to be an oversimplification to say that a given person or group of persons are "liberals" or "conservatives". These two worldviews are made up of many facets across at least 10 areas of political discourse. Some subjects in the present study who described themselves as strong conservatives or strong liberals had scores on the many facet traits that sometimes reflected a mix of attitudes. A person can be high on some conservative traits and also high on some liberal ones...an economic conservative and international relations liberal, for example. Thus, it may be more appropriate to say that a person or group appears to represent primarily conservative worldview political attitudes on issues such as economics and marriage, rather than to say they are "conservatives".

Another implication of the present findings is that persons representing the respective worldviews may be rather stubborn in maintaining those worldviews. To the extent that these worldviews are grounded in genetically-based dispositions, they are likely to resist major modification via cultural or educational influence or information.

Persons of each disposition are likely to feel strongly dedicated to represent that disposition in the service of their group or nation. Each disposition is likely to be justified with information and arguments that support it, with persons thinking their attitudes are simply a function of their own personal good judgments and information, when in fact they may be genetically based, predisposing them to resonate with liberal or conservative political arguments and policies..

It may help citizens to realize that their worldviews are grounded in genetic predispositions that cause them to resonate with certain information in their environments and to adopt thinking and arguments that reinforce their innate dispositions. It may help family members to tolerate and understand their political and even religious differences if they see them as genetically predisposed and varied by nature to serve species group survival mechanisms dating back millions of years.

It may help activists, educators and journalists to realize that political worldviews may not be amenable to much if any significant change via education, persuasion or even propaganda, with the exception of liberals moving more to conservative beliefs when under what researchers call "mortality salience". When reminded of death possibilities, liberals can be recruited to more warmongering attitudes, it would seem. This is compatible with the necessity to recruit liberals in wartime, as there are too few warmongers to effectively fight a war. If liberals are told the war is a defensive necessity, a study by the present author suggests that as many as 70 percent the public will be willing to participate actively in combat. This study involved about 250 university students who were asked about their willingness to participate in war. 5 percent were willing to participate in aggressive war (warmongering). 70 percent would participate in defensive wars only. 25 percent wanted no active participation in any type of war.

In an oft quoted statement, Hitler's right hand man, Herman Goering explained while awaiting trial for war crimes in Nuremberg after World War II that it was easy for leaders to persuade citizens to participate in war simply by telling them they were being attacked and condemning resistors as traitors (ref). He seemed to know intuitively what researchers have subsequently demonstrated as the mortality salience phenomenon.

More broadly, the challenge for societies will be to further clarify the scientific grounding of these worldviews, educating citizens on the findings and developing ways to promote understanding and cooperation between the worldviews without trying to totally change them. Rather, the focus will need to be on facilitating constructive mutual effort rather than conflict between members of the same government or nation.

Communities large and small, towns, counties, states and nations, face mutual problems of great and increasing concern for all, around issues of health care, jobs, global climate change, population management and financial stability of world markets. We can't afford to waste time, energy and resources on in-fighting. We must understand that we are differently predisposed by our genetic makeup to represent two different worldviews and find ways to mature beyond primitive tribal, knee-jerk reactions to sophisticated, well-informed and cleverly meshed constructive action. We can learn that viewing humans as fundamentally competitive or cooperative is not so much a belief in scientifically established fact as it is a worldview. Conservatives tend to endorse the competitive worldview, while liberals endorse the cooperative worldview. How can they compromise, finding room in political policies and programs for both worldviews?

The content of the scales, as presented in the manual (McConochie, 2010b) can again be referred to for clues as to how this can be

accomplished. Many creative minds can contribute to this effort. Consider the following suggestions for each of the various facets of political discourse:

1.   Religious beliefs. Within every major religious tradition, we can expect both fundamentalist and kindly beliefs and even sects. Protection for strongly held fundamentalist beliefs can be honored within limits, requiring that they be discouraged from excluding other faiths and limited from encroaching excessively on political affairs, especially top leadership and military matters, to protect nations from the dangers of unchecked authoritarianism. Persons who espouse kindly religious beliefs should be encouraged to promote cooperation with other faiths and nations for mutual benefit, peace-keeping, etc.

2.   Social group orientation. A reasonable balance between in-group values and cooperation and trust with other groups can be sought in fostering an atmosphere that facilitates efficient and profitable large corporations, and a peaceful and safe nation on the one hand, and trusting, cooperative interchanges with groups different from one's own, as in student exchanges, cultural exchanges, international athletic competitions, foreign aid and fair, respectful international trade, on the other hand. Screening applicants for top corporate positions to assure they are not excessively selfish and greedy might be worthwhile.

3.   Gender orientation and policy. Several important compromises within gender policy can strengthen communities. The Alpha Male-ism trait includes endorsement of this item: "Our group should increase in numbers relative to other groups". This belief can impede reasonable population size limitation programs, which will be essential to promoting a reasonable standard of living for peoples in many nations. Perhaps male thinking can be honored sufficiently in other beliefs to ask for relinquishing this one. Honoring women in all reasonable ways is to a community's advantage in terms of promoting energetic business activity, buying power among women, contributing to education, government and

other leadership roles, etc. Women constitute half of a community's adult population. Their energies, talents, good will and other values should be embraced and nurtured. This can probably be accomplished without unduly threatening the self-esteem of reasonable and similarly empowered and respected adult men. Religions that espouse no birth control for members of their faith as an expression of desire to outnumber other religions pose an especially serious problem to population control efforts. Perhaps understanding the apparent evolutionary origins of such policies can help religions modify their policies for the benefit of the species overall.

4.	Foreign policy: competition and militarism versus cooperation, positive foreign policy and foreign aid. Militarism, love of weapons and competition, loyalty among soldiers and traditions of war live on in the human spirit in spite of centuries of armed conflict between groups with generally disastrous results. These traits are often evident in young boys even without deliberate encouragement. Nations will be challenged to monitor aggressive war impulses and movements, limiting their military responses only to suppressing invasive and destructive manifestations of this aspect of human nature. Too often, when political power devolves intentionally or unintentionally to a single leader, military activity can extend beyond a reasonable defensive mode to an aggressive, invasive mode. Perhaps military, police and political leaders can be assessed for psychological traits and predispositions to exclude excessively competitive, hostile warmongering-prone types. If national budgets for departments of commerce, foreign aid and similar cooperative programs are increased to nearer the amounts spent for departments of military, nations might assure more constructive relations with their neighbors. Citizens can be informed of mortality salience research and other research that helps explain the recruitment mechanisms of war. Reminders of mortality tend to increase a shift for all citizens, liberal and conservative alike, to the more conservative worldview, facilitating participation in war. In a study by the present author of about 250

university students, 70% were willing to fight in national wars defensively, 5% as invaders and 20% preferred no active involvement. Thus, to wage invasive war, the 5% would have to be augmented by recruiting the 70% with propaganda explaining the war as necessary for "defense". Such knowledge may help peaceful citizens resist propaganda in the service of irrational invasive wars.

5. Government type preference. The content of the scales measuring attitudes about government itself reveal an interesting distrust of government except as it serves one's own special interest group, as one philosophy contrasted to another philosophy of encouraging government as a means of promoting the welfare of all citizens of a nation. In a sense, both philosophies can argue that they espouse the welfare of the nation, but one defines 'nation' as "me and my cohorts", while the other defines it as "us, broadly inclusive". Perhaps compromise can be found in delineating specific functions or roles for government and reasonable policies and budgets for serving each function. Perhaps limits can be set on how much in-fighting is allowed for haggling over this. Perhaps limits can also be set on budgets for and borrowing government to promote a reasonable balance between programs, e.g. less on the U.S. military budget and more on foreign aid, the United Nations and research on how to effectively reduce greenhouse gasses.

6. Economic policy. Economic policy can be characterized by clearly self-serving policies to maximize personal wealth protected by a strong military funded by borrowed money. Or, it can involve redistribution of wealth via taxes to provide a wide range of services to the community overall and government decisions not colored by special interest group contributions to campaigns of elected officials. How to resolve the conflicts inherent in conservative and liberal attitudes in this arena is not readily apparent from the present study data other than by a public vote on what government services and budget policies the majority of citizens want.

7. Domestic violence management. How violence is viewed and managed within one's community and nation varies between the conservative and liberal worldviews, with conservatives at the extremes tending to fear neighbors and wanting to protect themselves with weapons, guard dogs and personal weapons. The liberal worldview adopts a more benign philosophy characterized by promoting civil, peaceful behavior by citizens, teaching children to compromise and cooperate rather than conflict and fight and encouraging national policies of negotiation rather than militarism. Handgun ownership is an issue U.S. Citizens repeatedly conflict over, presumably a reflection of this issue. The National Rifle Association tends to represent the conservative position. Compromise between the liberal and conservative worldviews on gun ownership might be promoted by education as to the paradoxical increased danger to citizens from their own personal weapons, increased dialogue with other nations that have less personal ownership of of weapons and more restraint of non-sporting weapons, such as pistols and assault weapons.

8. Social group relations. The conservative worldview reflects a preference for in-group favoritism over dominated outside groups, who are looked down upon. In contrast, the liberal attitude about group relationships is to see all groups as of equal value, deserving respect and care. Liberals endorse human rights, broadly defined. Conservatives tend not to. Liberals endorse a wide citizen base for government decisions. Conservatives do not. How to foster compromise between the two worldviews on this dimension is not readily apparent from the data of the present studies alone, at least to the present author.

9. Leadership type preferences. The conservative worldview tends to endorse leadership characterized by authoritarianism, nationalism and devotion and submission to leaders. The liberal worldview in contrast tends to endorse government policy-making by deference to citizen opinions, as could be measured by polls. Polls could also help define desired improvement in government services. Again, it is unclear

whether there is common ground upon which both worldviews can feel comfortable. Perhaps in different arenas of government different policies can be designed to appeal to conservative and liberal worldviews respectively.

10. Environment management. Issues of sustainability, population limitation, environment protection, conservation of resources and global climate change have been of increasing scientific and public concern for the past several decades. As can be seen in the scales, the conservative worldview tends to advocate indifference to these issues, focusing instead on immediate unlimited use of natural resources in the service of profit, wealth and political and military power and security. In contrast, the liberal worldview tends to endorse conservation, protection of habitats, husbanding of non-renewable resources and reduced atmospheric and other environmental pollution. There appear to be no easy resolutions of these conflicting policies, especially as wealth is associated with resource ownership, control and use. Wealth can control political decisions through legal campaign contributions in some nations and illegal bribes in others. Thus, the liberal worldview seems at a disadvantage on this issue, as far as promoting compromise at the national government level is concerned. One notion the author has had is creating institutes of sustainable communities. These are imagined as multidisciplinary institutes funded initially by public money but, ideally, eventually self-sustaining as commercial enterprises. Their mission would be working on contract with communities to design and help them implement plans for sustainability. The community would participate in focus group meetings sponsored by the institute to solicit initial ideas about what features the citizens want their community to have, for example in terms of population size and limits, education, jobs, health care, housing, transportation, energy use, etc. Then the institute staff would develop options for the community to consider and poll community members how them to select a final working model to implement. The community would seek rights and responsibilities from existing local and distant

governments to control their own destinies as far as possible, e.g. establishing population policies, monitoring import of goods and services from outside the community (e.g. handguns, pornography, street drugs, goods manufactured overseas, types of fuel, health care regulations and programs, and banking regulations). The expectation is that sustainability for a community will evolve more effectively from bottom up (grassroots) than from top down (authoritarian imposition of outside laws and regulations). The vision is for such institutes to work closely with staffing by professors from local universities, industry, governments, etc.

11a.   Miscellaneous conservative values. There are 54 items in this scale that correlate significantly with conservative orientation. Thus, there are many issues implicit in the data. The items imply that the conservative worldview is characterized by preoccupation with one's one immediate happiness, reinforced by money, possessions, fundamentalist religious beliefs and authoritarian leadership. Persons higher on this worldview tend to worry about terrorist attacks and disease. They endorse lying and cheating in politics, eschew science and research to improve government, prefer government primarily to serve their personal interests for freedom to make and keep money and keep foreigners at bay militarily. The implication of these attitudes is that their political policies can be expected to include efforts to politically "sell" to the public a benevolent concern for the greater community but only as a ploy to promote their self-interests. They can be constructively capitalized upon to support military activity when truly needed by a nation and to support business activity in general. However, without limits, their policies can spell trouble via poorly regulated industries and unchecked military spending and activity.

11b. Miscellaneous liberal values. The 33 miscellaneous liberal value items reflect a variety of attitudes. Persons who endorse this worldview

tend to be unhappy as long as they see misfortune and disadvantage in peoples around the world. They tend not to worry about or fear foreigners as much as conservatives do. They like learning, travel, new experiences, change, variety, jazz, movies about overcoming hardship, and abstract art. They value treating employees and customers with deep respect and honesty. They value fair play in politics.

One way such citizens could promote these values would be to design and implement their communities as sustainable ones and, assuming the majority of citizens endorse these values, promote them in their communities via control of local government policies. These values might also be promoted by the development of more non-governmental, national "certification" bodies, similar to the Good Housekeeping Seal of Approval. Goods and services could be rated on how well they reflect the values held by liberals and these ratings published. Consumers who hold these values could then choose them when making personal purchases. To the extent that the majority of citizens hold these values, the recommended goods and services would be purchased more often and thus more likely to survive in the local community market place.

12. Tribal values, conservative and liberal. These values should be of interest to citizens in efforts to educate them as to the apparent evolutionary origins of political worldviews. Further research can clarify and confirm or refute these initial findings and their implications. They can be studied in actual tribal communities, e.g. in the jungles of the Amazon and New Guinea. If confirmed, they can serve as interesting educational material.

13. Fear of diseased neighbors. How can nations manage the conservative-endorsed tendency to fear diseased neighbors? One interesting possibility is programs such as the Polio-Plus program of Rotary International, a non-profit service organization with chapters

around the world. This organization is guided by four simple ethical principles: Is it the truth? Is it fair to all concerned? Will it be beneficial to all concerned, and Will it build good will and better friendships? Because Rotary has members of all religious faiths and political orientations (worldviews), it carefully avoids political issues and religious favoritism, for example keeping meeting invocations relatively non-denominational. Rotarians have worked with other groups to immunize all the children of the world against polio and several other diseases. This project is being very successful, perhaps in part because it inadvertently taps the fear of diseases characteristic of the conservative worldview and concern for the welfare of all humans everywhere in all nations characteristic of the liberal worldview. Thus, both liberal and conservative Rotarians can see the project as consistent with their political worldviews.

   In addition to such programs, cooperation between these two worldviews may be promoted by educating citizens on the scientific nature of diseases and how they spread and can be prevented. Persons of the conservative worldview can be reassured that sophisticated scientifically informed programs for disease control and cure are being pursued. They can be recruited as students and practitioners in these efforts.

Concluding suggestions and comments.

        The present study and its predecessor are offered as an exploration of political worldviews as complex, multifaceted psychological predispositions grounded in genetics and evolution and manifested in a given person's attitudes about current issues in his or her culture that resonate with that person's disposition. It is expected that future research will confirm similar manifestations across various cultures around the world and document that these worldviews are universal, as implied by

prior studies documenting consistent manifestations of liberal and conservative political attitudes across many continents.

The present study is of predominantly Caucasian Americans. It is expected that the findings will not be unique to this ethnic group but manifest in various ways across all ethnic groups. Studies across different cultures and ethnic groups will have to find unique ways to define "conservative" and "liberal". The terms "Conservative" and "Liberal" may have meanings in Europe different from in the United States, for example. Perhaps these terms can be defined in European replications with phrases such as "dedicated to preserving established traditional ways of doing things" and "dedicated to promoting change for the better".

Short of this, research in diverse cultures around the world might simply document clusters of the trait measures used in the present study. If factor analysis yields two clusters similar to those found in the present studies, then one could assume that these two worldviews exist universally in the human species. What they are called, "conservative", "liberal" or with other labels, would be of secondary importance.

The present studies have been shared with a few conservative friends of the author. He has been accused by some as being "biased" in his write-ups. Questioning has led to no clear, convincing specifics, leading to the author's hunch that some of these complaints may be attempts to "shoot the messenger" with discrediting criticism of him rather than of his research findings; the questionnaires and statistics per se have not been questioned. It will be interesting to observe further reactions in this regard. The findings of Galileo and Darwin and their receptions by holders of threatened worldviews come to mind.

The reader is reminded to access the prior study and the manual of traits, both available on his web site under Publications, as included in

the references below. The author is eager to facilitate further replications. Interested professors and others willing to help with this are encouraged to contact him: Bill@Politicalpsychologyresearch.com.

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