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The Two Faces of Diversity: The Relationships between Religious Polarization, Religious Fractionalization, and Self-rated Health

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Supplemental Table A. Individual Respondent Frequency per Society, Mean Self-reported Health for Each Society, and Society-level Variables

Country	Frequency	Mean Self-reported health	Polarization	Fractionalization	Polity index	Logged GDP capita	Mean religiosity	Gini	Regulation index
Algeria	1048	2.785	.020	.010	2	1.496	.349	27.6	22
Argentina	921	2.951	.769	.507	8	2.330	–.216	44.5	0
Armenia	1019	2.267	.313	.167	5	1.169	.159	31.1	3
Australia	999	3.110	.802	.690	10	3.949	–.563	34.7	0
Azerbaijan	1002	2.739	.136	.070	–7	1.765	–.679	31.8	35
Belarus	1475	2.272	.672	.426	–7	1.797	–.230	28.6	22
Brazil	1410	2.911	.822	.623	8	2.418	.415	53.9	3
Chile	678	2.827	.806	.511	10	2.554	–.218	49	0
China	1892	2.848	.468	.263	–7	1.517	–1.189	42.8	54
Colombia	1459	3.007	.800	.554	7	1.833	.384	55.5	2
Ecuador	1196	2.964	.806	.537	5	1.538	.315	49.3	2
Estonia	1383	2.469	.790	.515	9	2.684	–.811	32	6
Georgia	1178	2.361	.241	.129	6	1.087	.265	42.1	6
Germany	1887	2.872	.824	.664	10	3.733	–.664	30.7	9
Ghana	1552	3.389	.716	.637	8	.272	.785	42.8	7
India	1478	2.966	.658	.464	9	.297	.211	35.2	16
Iraq	1088	2.756	.039	.020	3	1.505	.365	28.6	0
Japan	1583	2.565	.934	.524	10	3.796	–.513	32.1	0
Jordan	1190	3.139	.114	.059	–3	1.303	.542	33.7	16
Kazakhstan	1500	2.688	.850	.627	–6	2.205	–.360	28.6	19
Kyrgyzstan	1455	2.906	.355	.196	4	–.128	.218	30.1	23
Lebanon	1073	2.980	.788	.621	6	2.171	.247	31.8	0
Malaysia	1298	3.237	.748	.556	6	2.205	.286	46.3	30

Mexico	1911	2.969	.732	.472	8	2.193	.253	48.1	20
Netherlands	1559	2.869	.744	.546	10	3.919	–.642	27.9	3
New Zealand	638	3.188	.778	.705	10	3.517	–.539	32.3	0
Nigeria	1759	3.458	.747	.729	4	.845	.857	43	10
Pakistan	1189	3.092	.013	.007	6	.039	.517	29.8	21
Peru	1083	2.646	.668	.423	9	1.614	.234	46.2	0
Philippine	1196	2.695	.694	.484	8	.756	.598	41.8	7
Poland	835	2.725	.229	.118	10	2.534	.361	33.2	3
Romania	1418	2.646	.451	.255	9	2.116	.328	28.2	7
Russia	1950	2.344	.822	.524	4	2.368	–.450	39.5	20
Rwanda	1527	3.125	.746	.631	–4	–.574	.525	51.3	8
Singapore	1691	3.098	.553	.827	–2	3.841	–.047	47	6
Slovenia	924	2.736	.839	.485	10	3.154	–.327	24.9	0
South Africa	2941	3.259	.724	.719	9	1.996	.346	63	0
South Korea	1144	2.941	.761	.718	8	3.095	–.354	32	3
Spain	1007	2.903	.745	.408	10	3.425	–.698	35.3	2
Sweden	1072	3.076	.896	.516	10	3.953	–.848	26.5	5
Taiwan	1129	3.134	.636	.793	10	2.959	–.350	34.2	1
Thailand	1091	3.058	.138	.072	4	1.624	–.208	39.4	14
Trinidad	940	3.123	.710	.733	10	2.814	.452	40.3	3
Tunisia	1066	2.956	.000	.000	–4	1.421	.112	35.8	28
Turkey	1493	2.856	.047	.023	7	2.368	.273	38.8	35
Ukraine	1488	2.247	.670	.431	6	1.087	–.070	24.8	9
United States	2099	3.069	.724	.753	10	3.879	.019	40.4	1
Uruguay	728	3.011	.795	.559	10	2.480	–.475	45.3	1
Uzbekistan	1365	2.945	.161	.083	–9	.320	–.596	35.3	43
Yemen	892	2.889	.000	.000	–2	.269	.152	34.7	15
Zimbabwe	1500	3.309	.729	.454	1	–.337	.680	43.2	6

Supplemental Table B: Multilevel logistic regression models on the dichotomous form of self-rated health from the 2010–2014 WVS (Individual N = 67,399; Country N = 51)

Variable	Model 1	Model 2	Model 3
Key predictors and interactions			
Polarization index	–2.120***(.596)	–2.402***(.580)	–1.787**(.596)
Fractionalization index	2.884***(.702)	2.922***(.669)	2.162**(.764)
Polity index	.043*(.019)	–.018(.032)	–.006(.031)
Polarization* Polity		.114*(.049)	
Fractionalization* Polity			.112*(.055)
Individual-level controls			
Religious identity			
Protestant	.047(.044)	.046(.044)	.046(.044)
Catholic	.022(.040)	.021(.040)	.022(.040)
Orthodox	–.229***(.050)	–.228***(.050)	–.228***(.050)
Jew	–.092(.162)	–.092(.162)	–.094(.162)
Muslim	.022(.057)	.015(.057)	.018(.057)
Buddhist	.129*(.065)	.132*(.065)	.133*(.065)
Hindu	–.122(.095)	–.127(.095)	–.124(.095)
Other religions	–.049(.060)	–.051(.060)	–.050(.060)
Religious none (reference)			
Religious service attendance	.034***(.006)	.034***(.006)	.034***(.006)
Pray frequency	–.001(.006)	–.001(.006)	–.001(.006)
Self-rated religiosity	–.084**(.026)	–.083**(.026)	–.084**(.026)
Age	–.039***(.001)	–.039***(.001)	–.039***(.001)
Women	–.215***(.019)	–.215***(.019)	–.215***(.019)
Income level	.151***(.005)	.151***(.005)	.151***(.005)
Education	.108***(.007)	.108***(.007)	.108***(.007)
Married	.194***(.021)	.194***(.021)	.194***(.021)
Country-level controls			
Logged GDP per capita	–.025(.100)	–.028(.095)	–.003(.097)
Mean religiosity	–.197(.240)	–.023(.241)	–.035(.245)
Gini index	.015(.010)	.012(.009)	.014(.009)
Religious regulation index	.006(.009)	.007(.008)	.005(.008)
Intercept	.572(.422)	.750(.410)	.675(.410)
Variance components			
Level-2 intercept variance	.240(.049)	.217(.044)	.222(.045)

Note: Unstandardized coefficients are presented with standard errors in parentheses. One-tailed tests.
Standard errors in parentheses
* $p < .05$, ** $p < .01$, *** $p < .001$

Supplemental Table C: Multilevel linear regression models on self-rated health controlling for ethnic polarization and ethnic fractionalization from the 2010–2014 WVS (Individual N = 58,626; Country N = 44)

Variable	Model 1	Model 2	Model 3
Key predictors and interactions			
Religious polarization index	–.758***(.221)	–.829***(.214)	–.613**(.221)
Religious fractionalization index	.858**(.286)	.884**(.275)	.585(.301)
Polity index	.018*(.007)	–.004(.013)	–.003(.012)
Polarization* Polity		.039*(.019)	
Fractionalization* Polity			.045*(.021)
Individual-level controls			
Religious identity			
Protestant	.036**(.013)	.036**(.013)	.036**(.013)
Catholic	.018(.013)	.018(.013)	.018(.013)
Orthodox	–.079***(.016)	–.079***(.016)	–.080***(.016)
Jew	–.012(.042)	–.012(.042)	–.013(.042)
Muslim	.030(.017)	.028(.017)	.029(.017)
Buddhist	.030(.020)	.031(.020)	.031(.020)
Hindu	.014(.028)	.013(.028)	.013(.028)
Other religions	–.006(.019)	–.006(.019)	–.006(.019)
Religious none (reference)			
Religious service attendance	.011***(.002)	.011***(.002)	.011***(.002)
Pray frequency	–.003(.002)	–.003(.002)	–.003(.002)
Self-rated religiosity	–.007(.008)	–.007(.008)	–.007(.008)
Age	–.014***(.000)	–.014***(.000)	–.014***(.000)
Women	–.074***(.006)	–.074***(.006)	–.074***(.006)
Income level	.051***(.002)	.051***(.002)	.051***(.002)
Education	.043***(.002)	.043***(.002)	.043***(.002)
Married	.073***(.007)	.073***(.007)	.073***(.007)
Country-level controls			
Logged GDP per capita	.033(.041)	.028(.040)	.040(.040)
Mean religiosity	.025(.093)	.079(.094)	.088(.094)
Gini index	.009*(.004)	.007(.004)	.007*(.004)
Religious regulation index	.005(.004)	.005(.004)	.004(.004)
Ethnic polarization index	–.436(.246)	–.383(.237)	–.421(.234)
Ethnic fractionalization index	.557(.328)	.490(.316)	.536(.312)
Intercept	2.570***(.159)	2.658***(.158)	2.630***(.154)
Variance components			
Level-1 residual	.548(.003)	.548(.003)	.548(.003)
Level-2 intercept variance	.030(.007)	.027(.006)	.027(.006)

Note: Unstandardized coefficients are presented with standard errors in parentheses. One-tailed tests.
Standard errors in parentheses
* $p < .05$, ** $p < .01$, *** $p < .001$

Supplemental Table D: Multilevel linear regression models on self-rated health with the imputed sample from the 2010–2014 WVS (Individual N = 74,574; Country N = 51)

Variable	Model 1	Model 2	Model 3
Key predictors and interactions			
Polarization index	–.617**(.237)	–.750***(.225)	–.458*(.233)
Fractionalization index	.908**(.279)	.926***(.260)	.564(.299)
Polity index	.015*(.008)	–.014(.012)	–.008(.012)
Polarization* Polity		.054**(.019)	
Fractionalization* Polity			.053*(.022)
Individual-level controls			
Religious identity [a]			
Christians	–.004(.010)	–.004(.010)	–.004(.010)
Muslims	.025(.016)	.024(.016)	.024(.016)
Other religions	–.000(.013)	–.000(.013)	.000(.013)
Religious none (reference)			
Religious service attendance	.012***(.002)	.012***(.002)	.012***(.002)
Pray frequency	–.003(.002)	–.003(.002)	–.003(.002)
Self-rated religiosity	–.008(.008)	–.008(.008)	–.008(.008)
Age	–.015***(.000)	–.015***(.000)	–.015***(.000)
Women	–.070***(.006)	–.070***(.006)	–.070***(.006)
Income level	.054***(.001)	.054***(.001)	.054***(.001)
Education	.039***(.002)	.039***(.002)	.039***(.002)
Married	.073***(.006)	.073***(.006)	.073***(.006)
Country-level controls			
Logged GDP per capita	–.004(.040)	–.006(.037)	.006(.038)
Mean religiosity	–.016(.096)	.066(.094)	.060(.096)
Gini index	.007(.004)	.006(.004)	.007(.004)
Religious regulation index	.003(.003)	.004(.003)	.003(.003)
Intercept	2.614***(.167)	2.698***(.158)	2.662***(.159)
Variance components			
Level-1 residual SD	.743(.002)	.743(.002)	.743(.002)
Level-2 intercept variance SD	.197(.020)	.183(.018)	.186(.019)

Note: Unstandardized coefficients are presented with standard errors in parentheses.
One-tailed tests.
Standard errors in parentheses
* $p < .05$, ** $p < .01$, *** $p < .001$

[a] The only difference between the models based on the listwise-deletion sample (Table 2) and the models based on the multiple-imputation sample (Appendix Table D) is that we combined the individual religious identity variable from nine categories (Protestant, Catholic, Orthodox Christian, Buddhist, Hindu, Jew, Muslim, followers of other religions, religious none) into four categories (Christian, Muslim, followers of other religions, religious none). This is because there are only a few missing values in the religious identity variable in several countries, and thus the multiple-imputation model with the original nine-category variable failed to converge due to the small cell sizes. Since religious identity was treated only as a control in the models, we think the models using the multiple-imputation sample are still useful in checking the robustness of our findings.