

Supporting Information for
Cultural similarity among co-religionists within and between countries

Methods – Additional Details

Data checks prior to analyses

Data were drawn from the World Values Survey (WVS, Inglehart et al., 2014), Waves 5 - 7 (2005 – 2019). These datasets contain responses from 243,118 participants from nationally representative samples of 88 countries around the world. As preregistered, we used the most recent available version of these datasets.

Muthukrishna et al. (2020) used Waves 5 & 6 (2005 – 2014) to investigate cultural distances between countries (Wave 7 was not available at the time). These datasets have not previously been used to investigate cultural distance between different religious denominations. Therefore, before preregistering this study we analyzed the frequency of religious denominations in the dataset, to ensure that there was sufficient data available to investigate religious cultural distances.

Measures

Religious affiliation

Religious denominations were drawn from WVS variable #F025. Religious denomination responses were grouped into broader categories for analysis as described below:

- **Christianity:** Evangelical, Armenian Apostolic Church, The Church of Sweden, Christian, Anglican, Independent African Church (e.g. ZCC, Shembe, etc.), ZA Evangelical/Apostolic Faith Mission, Jehovah witnesses, Pentecostal, Alliance, Presbyterian, Other Christian com, Aglipayan, Dutch Reformed (Nederlands Hervormd), Seven Day Adventist, Baptist, Reformed Churches in the Netherlands (Gereformeerd), Christian Reform, Greek Catholic, Methodists, Iglesia ni Cristo (INC), Mormon, Free church/Non-denominational church, Ratana, Gregorian, New Apostolic Church, Salvation Army, AU Uniting Church, Lutheran, Church of Christ / Church of Christ / Church of Christ of Latter-day Saints, DZ Christian (Quakers, Jehovahs Witnesses, Evangelical, Protestant), Assembly of God, Israelita Nuevo Pacto Universal (FREPAU), Unitarian, Born again, Orthodox, Protestant, Roman Catholic, Wesleyan Methodist Church, Grace Communion International (Worldwide Church of God)
- **Islam:** Al-Hadis, Muslim, Shia, Sunni
- **Buddhism:** Buddhist, Hoa hao
- **Judaism:** Jewish, Zionist
- **Daoism:** Taoist, Daoism
- **Spiritualism/paganism:** Spiritista, Paganism, Other Brasil Espirit, Candomblé, Umbanda, esoterism, occult, Spiritualists, Other Brasil Espirit, Candomblé, Umbanda, esoterism, occultism, HT Vodou, HT Vodou and Christian, Wicca
- **Native or folk religion:** Native, Native, Folk religion, ZAAfrican Traditional Religion
- **No religious denomination**

As preregistered, analyses dropped any religious groups with <100 members across all countries that could not be meaningfully classified into one of the previous categories (e.g., Sikh, Zoroastrian, Jain, Bahai, Confucianism), and individuals with “other” or missing data for this question were not analyzed as a unique religious group due to this response option not representing a coherent social category.

In this process of assessing the frequency of religious denominations in the dataset (Longitudinal data file containing Waves 1-6), we discovered that the religious denomination variable in Haiti was not properly coded to match the scheme used to categorize religions in other countries in the dataset (e.g., 1 = “Vodou” in Haiti, whereas 1 = “Aglipayan” in the other countries in the dataset). After consulting with the administrators of the WVS data file, we altered the coding of religious denominations in Haiti to appropriately match the coding scheme used in the remainder of the dataset. These coding errors had been corrected in more recent versions of the dataset (“WVS_TimeSeries_1981_2020_spss_v1_2”), used in the present analyses.

Table S1. Number of participants with each religious affiliation in each country

	Ancestral worshipping	Bahai	Buddhist	Confucian	Daoist	Druze	Hindu	Jain	Jewish	Muslim	Native or folk religion	No religious denomination	Orthodox	Other	Protestant or other Christian	Roman Catholic	Sikh	Spiritualist and pagan	Zoroastrian
Algeria	0	0	0	0	0	0	0	0	0	1194	0	0	0	0	6	0	0	0	0
Andorra	0	0	6	0	0	0	18	0	1	23	0	714	20	15	20	1186	0	0	0
Argentina	0	0	71	0	0	0	9	0	12	3	0	581	3	188	40	2102	0	0	0
Armenia	0	0	1	0	0	0	0	0	2	1	0	67	998	14	0	1	0	12	0
Australia	0	5	75	0	1	1	28	0	41	34	0	2020	87	22	1233	1037	6	8	0
Azerbaijan	0	0	0	0	0	0	0	0	2	966	0	15	17	0	2	0	0	0	0
Bangladesh	0	0	10	0	0	0	109	0	0	1081	0	0	0	0	0	0	0	0	0
Belarus	0	0	0	0	0	0	0	0	4	4	0	205	1127	1	30	155	0	0	0
Bolivia	0	0	0	0	0	0	0	0	2	0	0	306	1	4	467	1225	0	1	0
Brazil	0	0	8	0	0	0	0	0	4	1	0	683	6	103	1232	2513	0	145	0
Bulgaria	0	0	2	0	0	0	0	0	1	98	0	142	736	0	4	1	0	0	0
Burkina Faso	0	0	0	0	0	0	1	0	2	818	76	16	3	8	120	473	0	0	0
Canada	0	0	14	0	0	0	3	0	9	23	0	609	17	249	339	876	0	0	0
Chile	0	0	2	0	0	0	3	0	8	0	0	720	3	45	353	1804	0	0	0
China	0	0	553	0	9	0	1	0	0	104	0	6214	2	24	216	26	0	0	0
Colombia	0	0	2	0	0	0	0	0	0	2	0	1429	0	30	819	3769	0	1	0
Cyprus	0	0	0	0	0	0	0	0	3	1432	0	118	1465	8	3	12	0	0	0
Ecuador	0	0	0	0	0	0	0	0	0	0	0	707	1	11	300	1361	0	0	0
Egypt	0	0	0	0	0	0	0	0	0	4019	0	0	0	0	232	0	0	0	0
Estonia	0	0	1	0	0	0	0	0	0	3	0	979	361	19	116	30	0	0	0
Ethiopia	0	0	1	0	0	0	0	0	6	577	20	10	1558	5	510	25	0	0	0
Finland	0	0	0	0	0	0	0	0	0	1	0	139	11	6	847	2	0	0	0
France	0	0	5	0	0	0	0	0	2	49	0	496	2	2	26	411	0	0	0
Georgia	0	0	1	0	0	0	1	0	1	91	0	31	2539	0	18	11	0	0	5

	Ancestral worshipping	Bahai	Buddhist	Confucian	Daoist	Druze	Hindu	Jain	Jewish	Muslim	Native or folk religion	No religious denomination	Orthodox	Other	Protestant or other Christian	Roman Catholic	Sikh	Spiritualist and pagan	Zoroastrian
Germany	0	0	5	0	0	0	2	0	2	138	0	2347	47	57	1679	1312	0	0	0
Ghana	0	0	1	0	0	0	1	0	1	417	28	72	201	72	1723	531	0	0	0
Greece	0	0	0	0	0	0	2	0	2	27	0	47	1096	5	1	6	0	0	0
Guatemala	0	0	5	0	0	0	2	0	1	3	0	241	1	49	731	1152	0	0	0
Haiti	0	0	0	0	0	0	1	0	3	16	0	209	1	502	667	511	0	0	0
Hong Kong SAR	0	0	443	0	0	0	8	0	1	9	0	3042	2	62	592	156	0	0	0
Hungary	0	0	0	0	0	0	0	0	2	0	0	297	4	12	182	502	0	0	0
India	0	0	62	0	0	0	4852	25	12	609	0	77	0	193	127	0	65	0	0
Indonesia	0	0	10	8	0	0	101	0	2	4518	0	7	0	9	428	125	0	0	0
Iran	0	8	0	0	0	0	0	0	0	4072	0	47	4	0	5	0	0	0	7
Iraq	0	0	0	0	0	0	0	0	0	5058	0	0	8	0	19	11	0	0	0
Italy	0	0	2	0	0	0	1	0	0	0	0	121	0	2	0	885	0	0	0
Japan	0	0	1618	0	0	0	0	0	2	0	0	2793	8	140	39	20	0	0	0
Jordan	0	0	0	0	0	0	0	0	0	3525	0	0	20	0	28	29	0	0	0
Kazakhstan	0	0	10	0	0	0	2	0	1	1630	0	410	636	0	11	20	0	0	0
Kuwait	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kyrgyzstan	0	0	2	0	0	0	1	0	23	2356	0	106	92	2	92	8	0	0	0
Lebanon	0	0	0	0	0	100	0	0	0	1252	0	0	238	104	310	325	0	0	0
Libya	0	0	0	0	0	0	0	0	0	2058	0	0	0	35	0	0	0	0	0
Macau SAR	0	0	201	0	0	0	0	0	1	2	0	693	0	20	59	45	0	0	0
Malaysia	0	0	689	44	0	0	256	0	3	2268	0	63	0	26	378	84	0	0	0
Mali	0	0	1	0	0	0	8	0	11	1426	12	5	1	4	8	27	0	0	0
Mexico	0	0	3	0	0	0	9	0	2	3	0	834	8	25	479	3832	0	0	0
Moldova	0	0	0	0	0	0	0	0	4	1	0	23	965	8	35	10	0	0	0
Morocco	0	0	0	0	0	0	3	0	7	2384	0	0	1	1	1	2	0	0	0
Myanmar	0	0	1031	0	0	0	9	0	0	43	0	89	0	0	22	6	0	0	0

	Ancestral worshipping	Bahai	Buddhist	Confucian	Daoist	Druze	Hindu	Jain	Jewish	Muslim	Native or folk religion	No religious denomination	Orthodox	Other	Protestant or other Christian	Roman Catholic	Sikh	Spiritualist and pagan	Zoroastrian
Netherlands	0	0	7	0	0	0	7	0	3	54	0	1607	57	147	338	595	0	0	0
New Zealand	0	0	10	0	0	0	28	0	9	15	0	1018	4	40	1245	346	0	4	0
Nicaragua	0	0	0	0	0	0	0	0	0	0	0	227	0	0	463	510	0	0	0
Nigeria	0	0	0	0	0	0	3	0	22	1233	0	183	93	8	903	545	0	0	0
Norway	0	0	5	0	0	0	0	0	1	10	0	327	2	20	642	13	0	0	0
Pakistan	0	0	0	0	0	0	19	0	0	3157	0	0	0	14	1	0	0	0	0
Palestine	0	0	0	0	0	0	0	0	0	997	0	0	0	1	0	2	0	0	0
Peru	0	0	0	0	0	0	9	0	2	1	0	387	0	17	657	2996	0	0	0
Philippines	0	0	0	0	0	0	0	0	0	146	0	141	0	47	293	1768	0	0	0
Poland	0	0	1	0	0	0	0	0	1	0	0	68	21	12	9	1833	0	0	0
Puerto Rico	0	0	5	0	0	0	1	0	0	0	0	227	0	227	103	554	0	0	0
Qatar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Romania	0	0	2	0	0	0	0	0	2	11	0	59	3889	2	307	232	0	0	0
Russia	0	0	24	0	0	0	7	0	8	430	0	1906	3674	23	52	18	0	0	0
Rwanda	0	0	5	0	0	0	1	0	3	305	1	201	32	94	753	1639	0	0	0
Serbia	0	0	0	0	0	0	0	0	8	48	0	120	1949	6	22	91	0	0	0
Singapore	0	0	532	0	154	0	143	0	6	324	0	375	0	90	214	133	0	0	0
Slovenia	0	0	3	0	0	0	1	0	0	31	0	589	40	10	31	1370	0	0	0
South Africa	0	0	22	0	0	0	116	0	13	121	161	1021	24	425	3274	899	0	0	0
South Korea	0	0	688	8	0	0	2	0	3	3	0	1631	4	22	732	542	0	0	0
Spain	0	0	5	0	0	0	1	0	0	3	0	494	3	22	14	1817	0	0	0
Sweden	0	0	1	0	0	0	2	0	1	32	0	663	7	21	1427	32	0	0	0
Switzerland	0	0	0	0	0	0	0	0	6	20	0	240	0	47	407	509	0	0	0
Taiwan ROC	0	0	712	0	643	0	0	0	0	1	649	875	0	578	175	46	0	0	0
Tajikistan	0	0	0	0	0	0	0	0	0	1158	0	42	0	0	0	0	0	0	0
Thailand	0	0	4011	0	0	0	1	0	3	156	0	7	26	6	3	16	0	0	0

	Ancestral worshipping	Bahai	Buddhist	Confucian	Daoist	Druze	Hindu	Jain	Jewish	Muslim	Native or folk religion	No religious denomination	Orthodox	Other	Protestant or other Christian	Roman Catholic	Sikh	Spiritualist and pagan	Zoroastrian
Trinidad and Tobago	0	0	5	0	0	0	435	0	0	122	0	126	8	28	850	404	0	0	0
Tunisia	0	0	0	0	0	0	0	0	2	2390	0	13	0	0	0	1	0	0	0
Turkey	0	0	0	0	0	0	0	0	2	5281	0	58	1	3	0	0	0	0	0
Ukraine	0	0	5	0	0	0	2	0	14	12	0	481	1706	0	42	191	0	0	0
United Kingdom	0	0	5	0	0	0	8	0	2	40	0	496	4	26	326	106	0	0	0
United States	0	0	45	0	0	0	22	0	115	24	0	2140	24	700	1594	1250	0	0	0
Uruguay	0	0	2	0	0	0	1	0	5	0	0	1157	0	110	144	575	0	0	0
Uzbekistan	0	0	1	0	0	0	3	0	1	1426	0	9	45	0	4	1	0	0	0
Vietnam	776	0	540	0	0	0	2	0	3	1	0	1173	0	27	28	145	0	0	0
Yemen	0	0	0	0	0	0	0	0	0	1000	0	0	0	0	0	0	0	0	0
Zambia	0	0	2	0	0	0	4	0	1	20	22	82	2	160	694	513	0	0	0
Zimbabwe	14	0	1	0	0	0	1	0	1	15	0	93	12	0	1063	300	0	0	0
TOTAL	790	13	11474	60	807	101	6250	25	417	60926	969	45960	23917	5015	31359	46611	71	171	12

Cultural distances across religious denominations

Table S2. Cultural distance between religions, with bootstrapped 95% confidence intervals (collapsed across countries and across sub-denominations of each religion). Values of CF_{ST} range closer to zero indicate similarity between populations, and CF_{ST} values closer to one indicate greater differences between populations. Includes all cultural traits (including explicitly religious traits).

	Ancestral worship.	Buddhist	Daoist	Druze	Hindu	Jewish	Muslim	Native or folk religion	No religious denom.	Orthodox	Protestant or other Christian	Roman Catholic	Spiritualist and pagan
Ancestral worshipping		0.120, 0.141	0.126, 0.215	0.246, 0.575	0.190, 0.221	0.149, 0.182	0.366, 0.464	0.0887, 0.112	0.174, 0.20	0.194, 0.218	0.211, 0.236	0.238, 0.263	0.417, 0.542
Buddhist	0.125		0.0554, 0.0968	0.0995, 0.162	0.0494, 0.0532	0.0594, 0.0848	0.0933, 0.0987	0.0364, 0.0432	0.0715, 0.0757	0.0294, 0.0312	0.0374, 0.0395	0.0496, 0.0521	0.179, 0.245
Daoist	0.136	0.061		0.142, 0.199	0.129, 0.155	0.0586, 0.0831	0.232, 0.288	0.0135, 0.0429	0.116, 0.146	0.0954, 0.123	0.101, 0.125	0.102, 0.129	0.147, 0.186
Druze	0.475	0.140	0.177		0.156, 0.207	0.103, 0.157	0.0936, 0.156	0.112, 0.178	0.271, 0.326	0.116, 0.179	0.120, 0.173	0.116, 0.175	0.105, 0.155
Hindu	0.195	0.051	0.134	0.183		0.137, 0.29	0.072, 0.148	0.0886, 0.102	0.215, 0.234	0.0537, 0.0584	0.0886, 0.108	0.0871, 0.112	0.225, 0.398
Jewish	0.159	0.067	0.062	0.135	0.193		0.267, 0.369	0.0454, 0.0617	0.0589, 0.0824	0.0763, 0.145	0.0392, 0.0626	0.0512, 0.0787	0.0553, 0.0774
Muslim	0.394	0.096	0.247	0.126	0.086	0.307		0.161, 0.188	0.147, 0.158	0.0516, 0.112	0.0483, 0.0644	0.0466, 0.0596	0.330, 0.445
Native or folk religion	0.092	0.038	0.015	0.156	0.094	0.050	0.172		0.0932, 0.106	0.0581, 0.0685	0.0656, 0.0773	0.0684, 0.0804	0.14, 0.183
No religious denomination	0.181	0.074	0.124	0.299	0.223	0.067	0.148	0.098		0.0728, 0.115	0.0606, 0.0632	0.0582, 0.0603	0.184, 0.226
Orthodox	0.200	0.030	0.099	0.150	0.056	0.105	0.069	0.062	0.105		0.0193, 0.0733	0.0187, 0.073	0.147, 0.229
Protestant or other Christian	0.218	0.038	0.106	0.148	0.097	0.046	0.049	0.070	0.062	0.061		0.0053, 0.00615	0.0817, 0.118
Roman Catholic	0.244	0.051	0.107	0.150	0.095	0.060	0.047	0.073	0.059	0.052	0.005		0.0771, 0.116
Spiritualism and paganism	0.457	0.199	0.152	0.130	0.279	0.057	0.368	0.150	0.195	0.174	0.089	0.084	

Table S3. Cultural distance between religions. Excludes explicitly religious cultural traits.

	Ancestral worship.	Buddhist	Daoist	Druze	Hindu	Jewish	Muslim	Native or folk religion	No religious denom.	Orthodox	Protestant or other Christian	Roman Catholic	Spiritualist and pagan
Ancestral worshipping		0.0952, 0.111	0.109, 0.196	0.197, 0.545	0.115, 0.127	0.133, 0.166	0.137, 0.156	0.079, 0.0954	0.173, 0.188	0.137, 0.153	0.139, 0.152	0.165, 0.179	0.375, 0.501
Buddhist	0.099		0.0564, 0.0999	0.083, 0.154	0.0361, 0.0393	0.0537, 0.0792	0.0466, 0.0499	0.033, 0.0402	0.0402, 0.0432	0.0216, 0.0232	0.0259, 0.0279	0.0358, 0.0381	0.162, 0.237
Daoist	0.121	0.062		0.136, 0.201	0.112, 0.138	0.0583, 0.0827	0.162, 0.212	0.0138, 0.0433	0.0661, 0.0917	0.0896, 0.12	0.0871, 0.112	0.0904, 0.119	0.132, 0.176
Druze	0.455	0.132	0.177		0.136, 0.185	0.0881, 0.148	0.0739, 0.131	0.112, 0.182	0.144, 0.204	0.098, 0.159	0.105, 0.161	0.103, 0.163	0.0987, 0.154
Hindu	0.119	0.037	0.116	0.165		0.112, 0.281	0.065, 0.138	0.0711, 0.0822	0.123, 0.142	0.0516, 0.0558	0.095, 0.117	0.0922, 0.12	0.239, 0.421
Jewish	0.144	0.062	0.061	0.126	0.176		0.155, 0.22	0.044, 0.0599	0.0229, 0.0361	0.0591, 0.133	0.0227, 0.0354	0.0334, 0.0501	0.0458, 0.0684
Muslim	0.143	0.048	0.173	0.108	0.079	0.180		0.105, 0.125	0.0751, 0.0851	0.0327, 0.0987	0.0425, 0.0573	0.041, 0.0525	0.298, 0.41
Native or folk religion	0.083	0.035	0.016	0.159	0.075	0.048	0.113		0.0515, 0.0623	0.0502, 0.0597	0.053, 0.0639	0.058, 0.0684	0.131, 0.178
No religious denomination	0.178	0.042	0.071	0.181	0.131	0.026	0.076	0.055		0.0327, 0.0816	0.014, 0.0153	0.0151, 0.0164	0.0804, 0.111
Orthodox	0.142	0.022	0.094	0.135	0.053	0.090	0.052	0.053	0.069		0.0162, 0.0771	0.0177, 0.0789	0.138, 0.233
Protestant or other Christian	0.143	0.027	0.092	0.138	0.104	0.025	0.043	0.057	0.015	0.063		0.0052, 0.0062	0.0788, 0.118
Roman Catholic	0.170	0.037	0.096	0.141	0.102	0.038	0.041	0.061	0.016	0.056	0.005		0.073, 0.115
Spiritualism and paganism	0.416	0.184	0.140	0.127	0.298	0.047	0.336	0.141	0.084	0.169	0.086	0.081	

Table S4. Cultural distances between religions. Lower diagonal = point estimates, upper diagonal = bootstrapped 95% confidence intervals. Includes all cultural traits (including explicitly religious traits).

	Ancestral worshipping	Buddhist	Christian	Daoist	Druze	Hindu	Jewish	Muslim	Native or folk religion	No religious denomination	Spiritualist and pagan
Ancestral worshipping		0.120, 0.140	0.222, 0.248	0.124, 0.211	0.248, 0.563	0.189, 0.222	0.150, 0.182	0.364, 0.464	0.0887, 0.114	0.173, 0.198	0.417, 0.539
Buddhist	0.125		0.0507, 0.0533	0.0556, 0.0935	0.099, 0.160	0.0492, 0.0532	0.0584, 0.0844	0.0936, 0.0989	0.0367, 0.0433	0.0716, 0.0758	0.178, 0.25
Christian	0.229	0.052		0.0937, 0.117	0.109, 0.167	0.0977, 0.115	0.0429, 0.0703	0.0409, 0.0533	0.0601, 0.0717	0.0698, 0.072	0.0815, 0.120
Daoist	0.136	0.061	0.098		0.142, 0.200	0.129, 0.156	0.0591, 0.0827	0.233, 0.288	0.0134, 0.0406	0.117, 0.144	0.145, 0.186
Druze	0.475	0.140	0.141	0.177		0.156, 0.207	0.103, 0.156	0.0941, 0.155	0.113, 0.178	0.271, 0.328	0.104, 0.154
Hindu	0.195	0.051	0.105	0.134	0.183		0.135, 0.292	0.0735, 0.152	0.0889, 0.102	0.214, 0.234	0.223, 0.387
Jewish	0.159	0.067	0.052	0.062	0.135	0.193		0.263, 0.366	0.0459, 0.0614	0.0602, 0.0825	0.0549, 0.0771
Muslim	0.394	0.096	0.041	0.247	0.126	0.086	0.307		0.162, 0.188	0.147, 0.156	0.331, 0.443
Native or folk religion	0.092	0.038	0.064	0.015	0.156	0.094	0.050	0.172		0.0934, 0.106	0.138, 0.183
No religious denomination	0.181	0.074	0.071	0.124	0.299	0.223	0.067	0.148	0.098		0.184, 0.228
Spiritualist and paganist	0.457	0.199	0.088	0.152	0.130	0.279	0.057	0.368	0.150	0.195	

Table S5. Cultural distances between religions. Lower diagonal = point estimates, upper diagonal = bootstrapped 95% confidence intervals. Excludes explicitly religious traits.

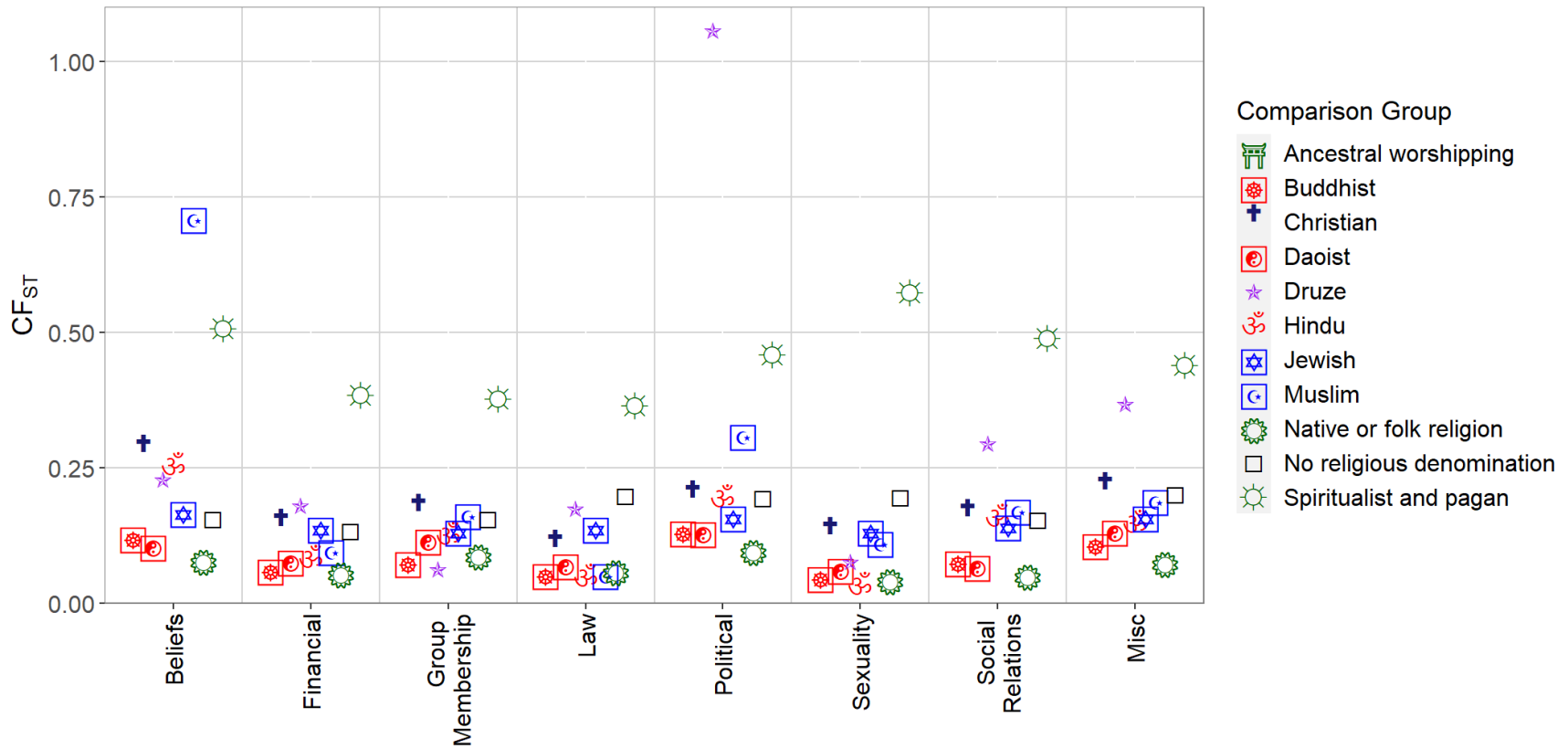
	Ancestral worshipping	Buddhist	Christian	Daoist	Druze	Hindu	Jewish	Muslim	Native or folk religion	No religious denomination	Spiritualist and pagan
Ancestral worshipping		0.0941, 0.109	0.148, 0.164	0.109, 0.206	0.195, 0.545	0.115, 0.126	0.132, 0.166	0.137, 0.155	0.0785, 0.0951	0.172, 0.189	0.375, 0.506
Buddhist	0.099		0.032, 0.0341	0.057, 0.104	0.0821, 0.154	0.0361, 0.0392	0.0543, 0.0791	0.0469, 0.0499	0.0328, 0.0399	0.0403, 0.0434	0.161, 0.238
Christian	0.154	0.033		0.0828, 0.112	0.0946, 0.154	0.104, 0.124	0.0275, 0.0445	0.0353, 0.0506	0.0485, 0.0592	0.0179, 0.0191	0.0772, 0.119
Daoist	0.121	0.062	0.088		0.135, 0.202	0.112, 0.14	0.0574, 0.0836	0.163, 0.215	0.0135, 0.0454	0.0658, 0.0938	0.132, 0.177
Druze	0.455	0.132	0.131	0.177		0.136, 0.185	0.0884, 0.147	0.0734, 0.132	0.109, 0.182	0.143, 0.206	0.0974, 0.152
Hindu	0.119	0.037	0.112	0.116	0.165		0.113, 0.286	0.0605, 0.15	0.071, 0.0819	0.123, 0.142	0.235, 0.419
Jewish	0.144	0.062	0.032	0.061	0.126	0.176		0.157, 0.219	0.0434, 0.0594	0.0227, 0.0356	0.046, 0.0691
Muslim	0.143	0.048	0.036	0.173	0.108	0.079	0.180		0.105, 0.125	0.0751, 0.0869	0.299, 0.407
Native or folk religion	0.083	0.035	0.052	0.016	0.159	0.075	0.048	0.113		0.0516, 0.0619	0.13, 0.179
No religious denomination	0.178	0.042	0.018	0.071	0.181	0.131	0.026	0.076	0.055		0.08, 0.114
Spiritualist and paganist	0.416	0.184	0.086	0.140	0.127	0.298	0.047	0.336	0.141	0.084	

Table S6. Cultural distance between religions, excluding "beliefs" dimension of cultural values. Lower diagonal = point estimates, upper diagonal = bootstrapped 95% confidence intervals.

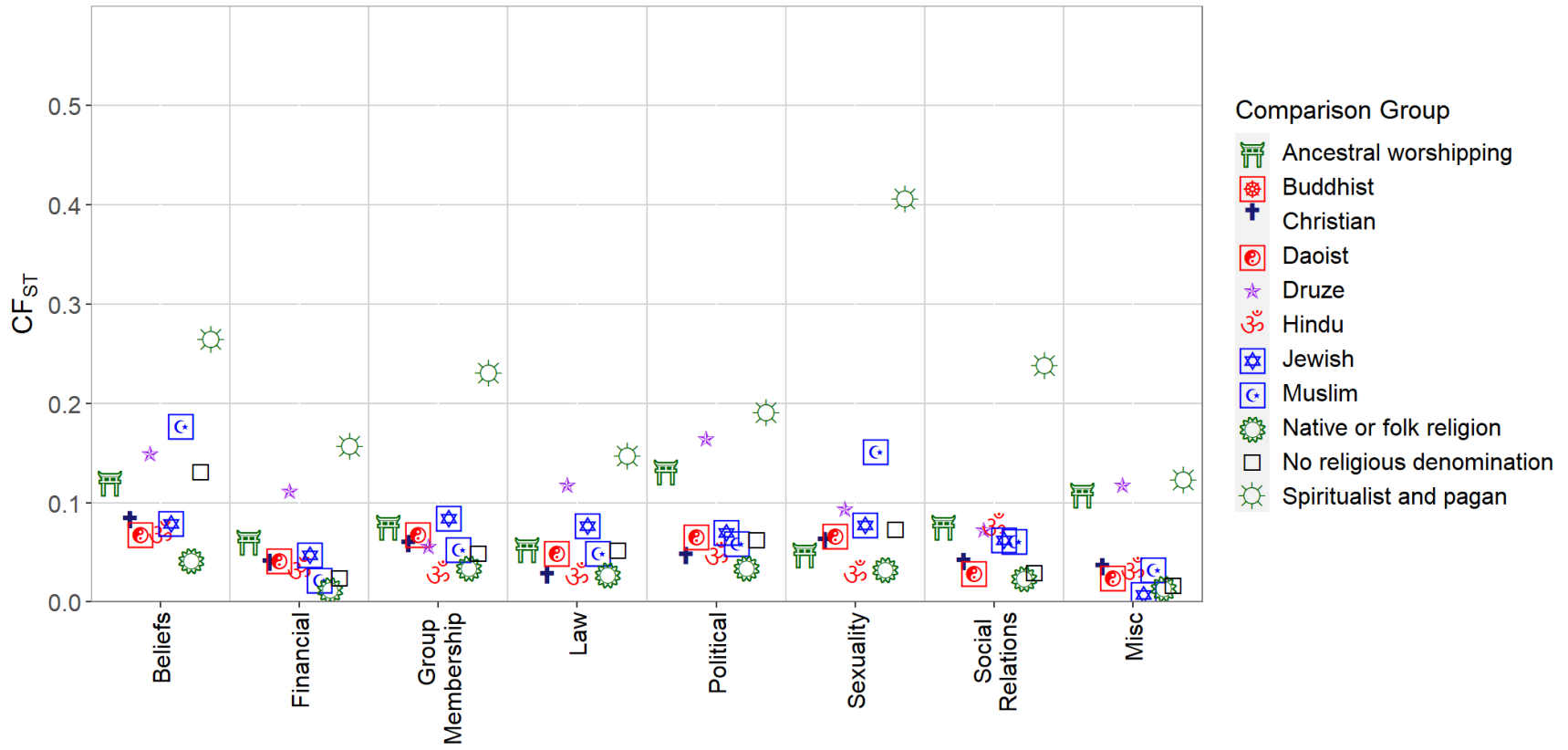
	Ancestral worshipping	Buddhist	Christian	Daoist	Druze	Hindu	Jewish	Muslim	Native or folk religion	No religious denomination	Spiritualist and pagan
Ancestral worshipping		0.127, 0.150	0.184, 0.205	0.145, 0.313	0.249, 0.747	0.149, 0.166	0.130, 0.165	0.167, 0.192	0.0979, 0.119	0.185, 0.208	0.346, 0.493
Buddhist	0.134		0.0338, 0.0366	0.0482, 0.113	0.0878, 0.158	0.0345, 0.0381	0.045, 0.0658	0.0323, 0.0351	0.0305, 0.0391	0.0285, 0.0311	0.120, 0.178
Christian	0.192	0.035		0.0768, 0.113	0.0872, 0.145	0.120, 0.148	0.0259, 0.0442	0.0189, 0.0418	0.0477, 0.0595	0.0102, 0.0112	0.0675, 0.104
Daoist	0.168	0.054	0.082		0.134, 0.188	0.087, 0.126	0.0546, 0.0881	0.0968, 0.168	0.0122, 0.0661	0.0651, 0.096	0.103, 0.148
Druze	0.626	0.132	0.120	0.159		0.140, 0.189	0.0754, 0.119	0.0738, 0.139	0.110, 0.179	0.120, 0.175	0.0764, 0.118
Hindu	0.155	0.036	0.132	0.092	0.166		0.0886, 0.342	0.0738, 0.193	0.0576, 0.068	0.104, 0.132	0.178, 0.448
Jewish	0.141	0.051	0.032	0.059	0.098	0.179		0.0877, 0.136	0.0455, 0.0643	0.0167, 0.0304	0.0387, 0.0641
Muslim	0.175	0.034	0.019	0.107	0.111	0.097	0.103		0.0558, 0.0717	0.0399, 0.0591	0.152, 0.237
Native or folk religion	0.103	0.033	0.052	0.014	0.152	0.062	0.052	0.062		0.0516, 0.0642	0.102, 0.143
No religious denomination	0.194	0.030	0.011	0.070	0.149	0.116	0.022	0.041	0.056		0.063, 0.0925
Spiritualist and pagan	0.396	0.136	0.075	0.111	0.096	0.268	0.041	0.177	0.112	0.068	

Figure S1. Cultural distance between religions, for each separate dimension of cultural values. Each figure depicts the distance of all religions from the specified reference group.

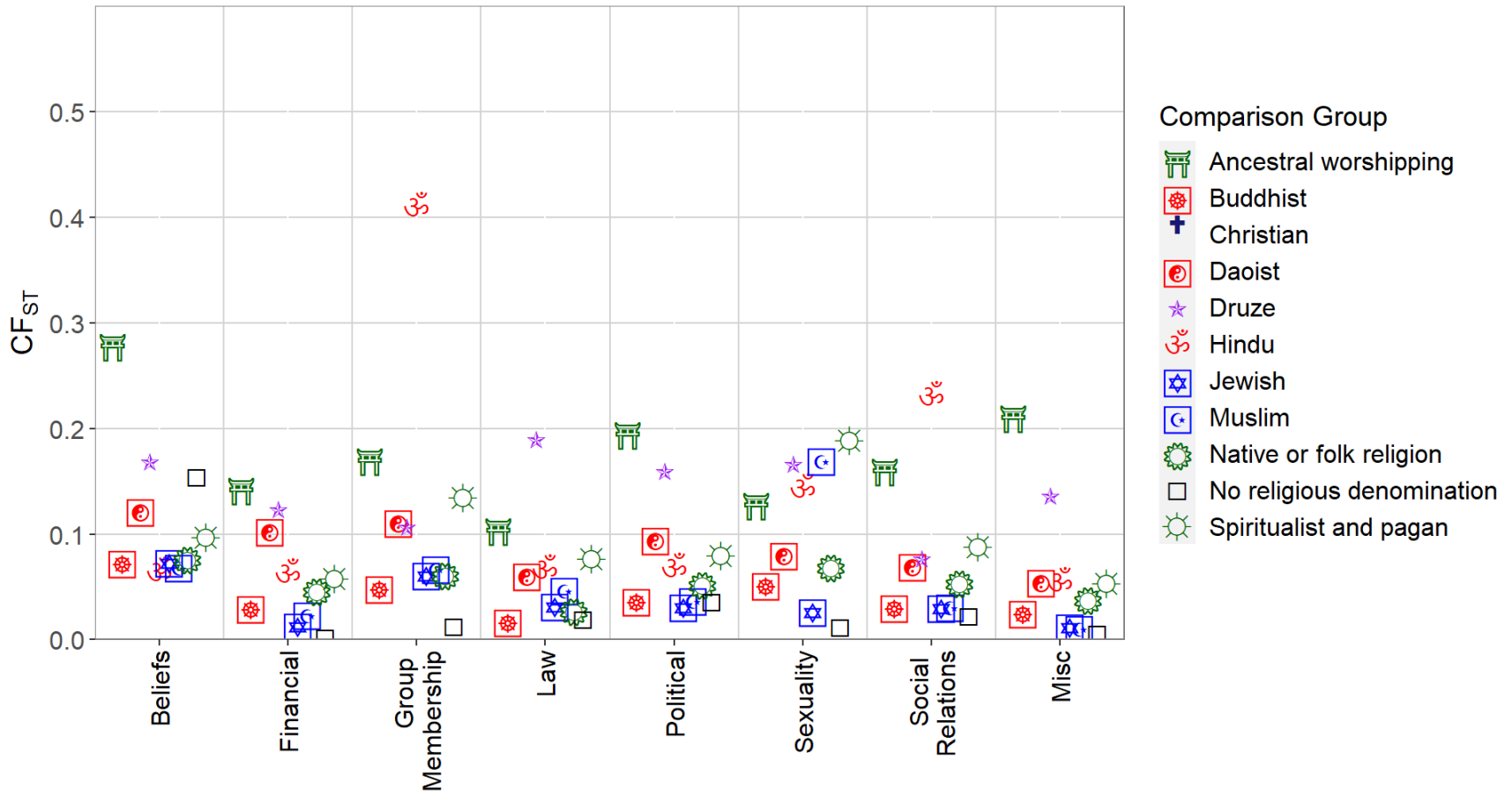
(a) Reference group: Ancestral worshipping



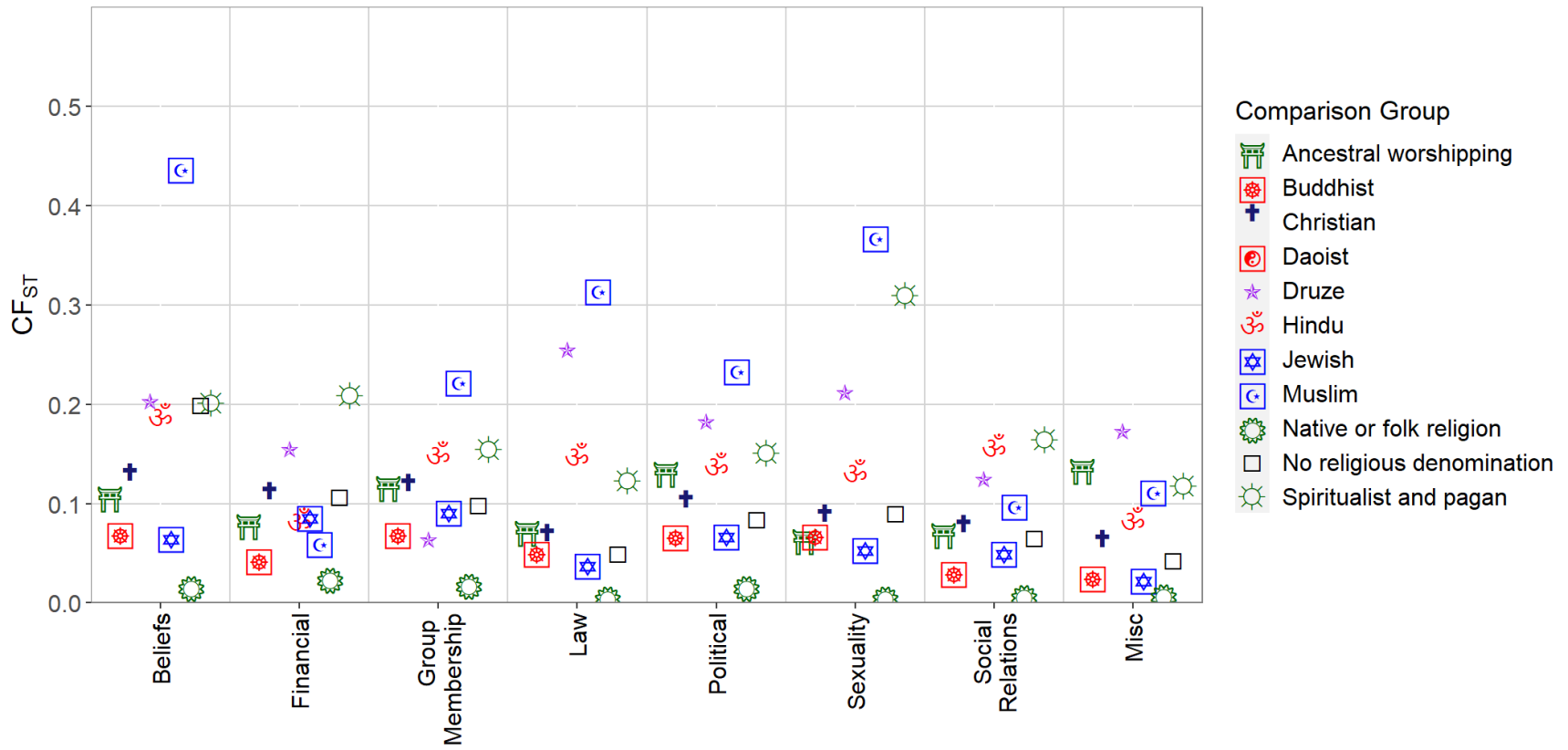
(b) Reference group: Buddhist



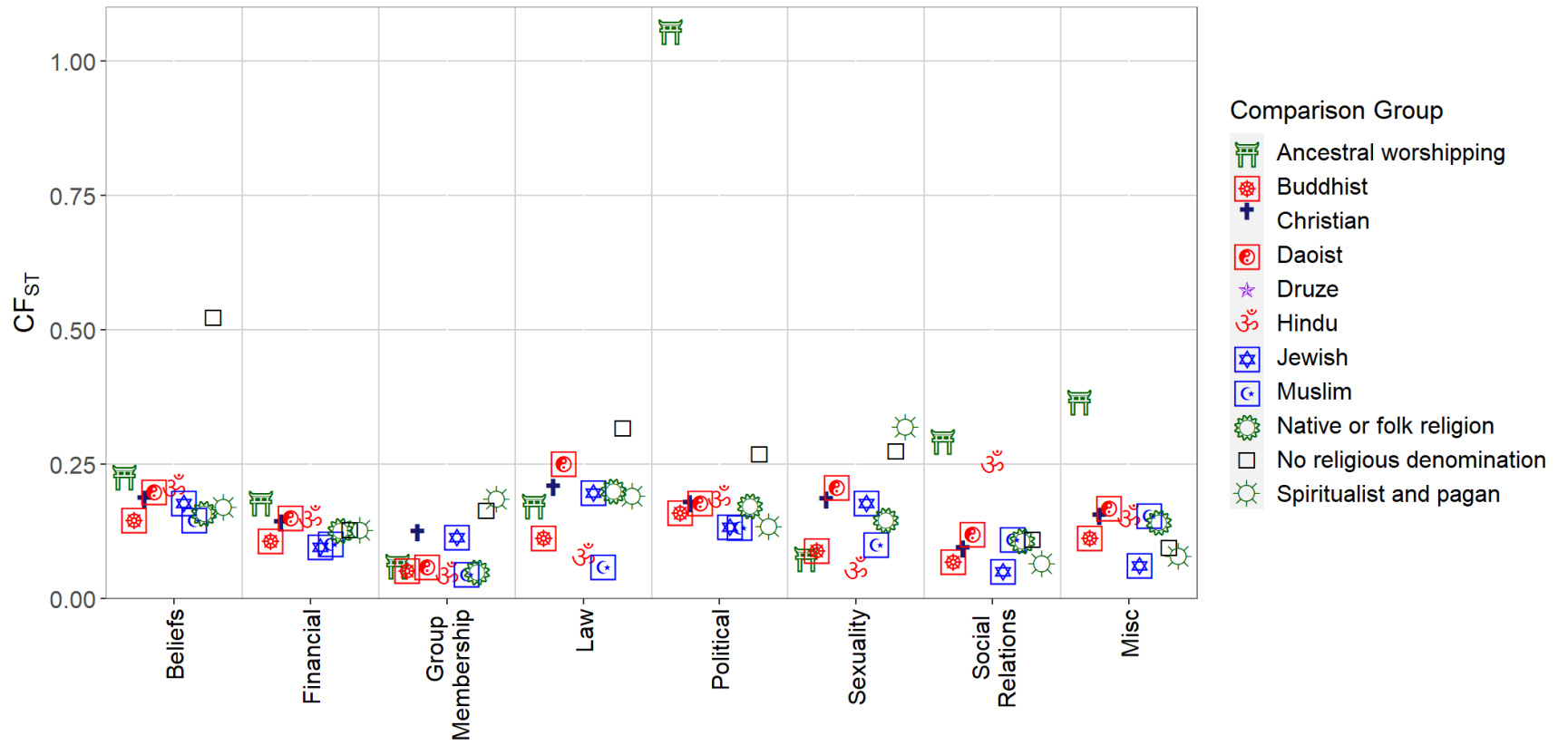
(c) Reference Group: Christian



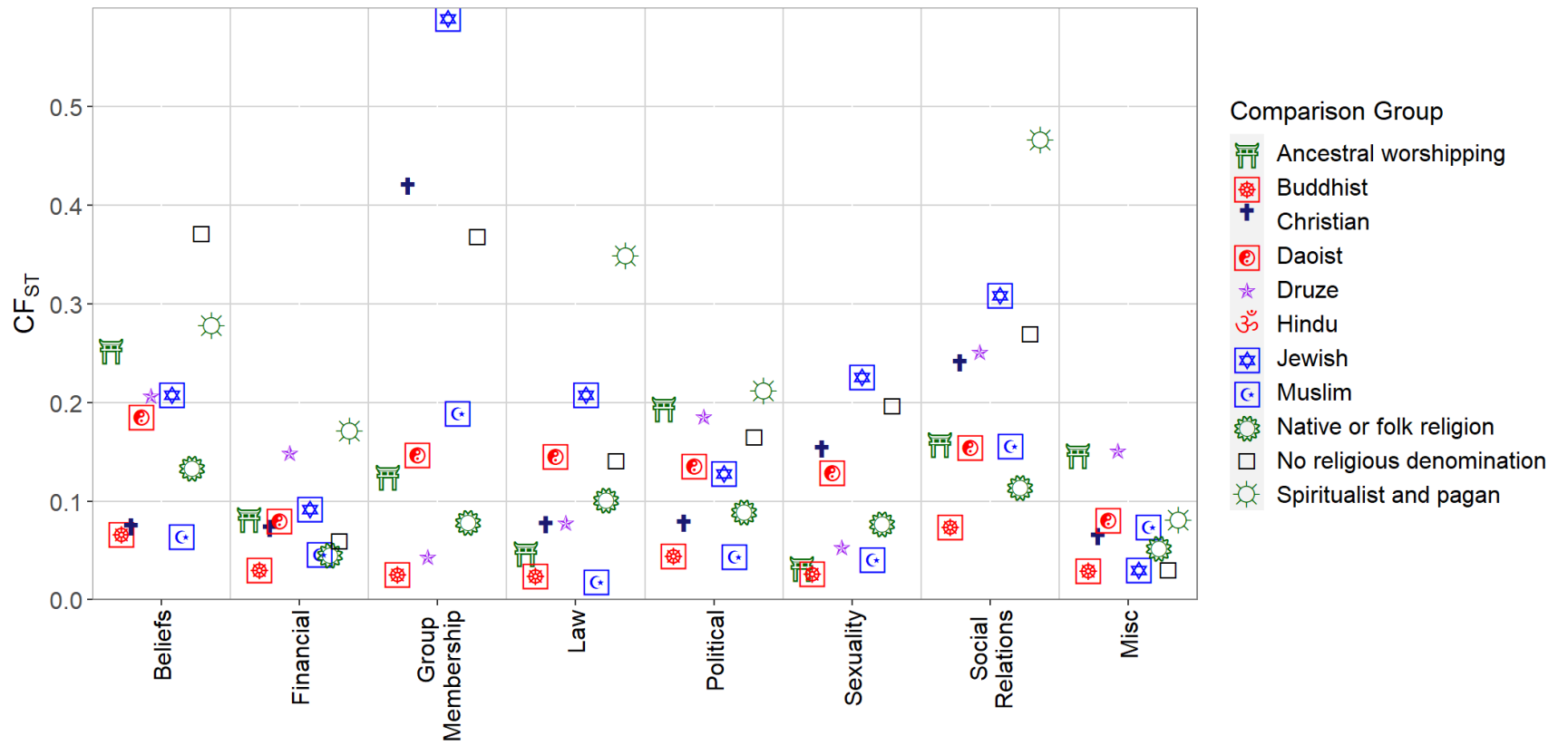
(d) Reference group: Daoist



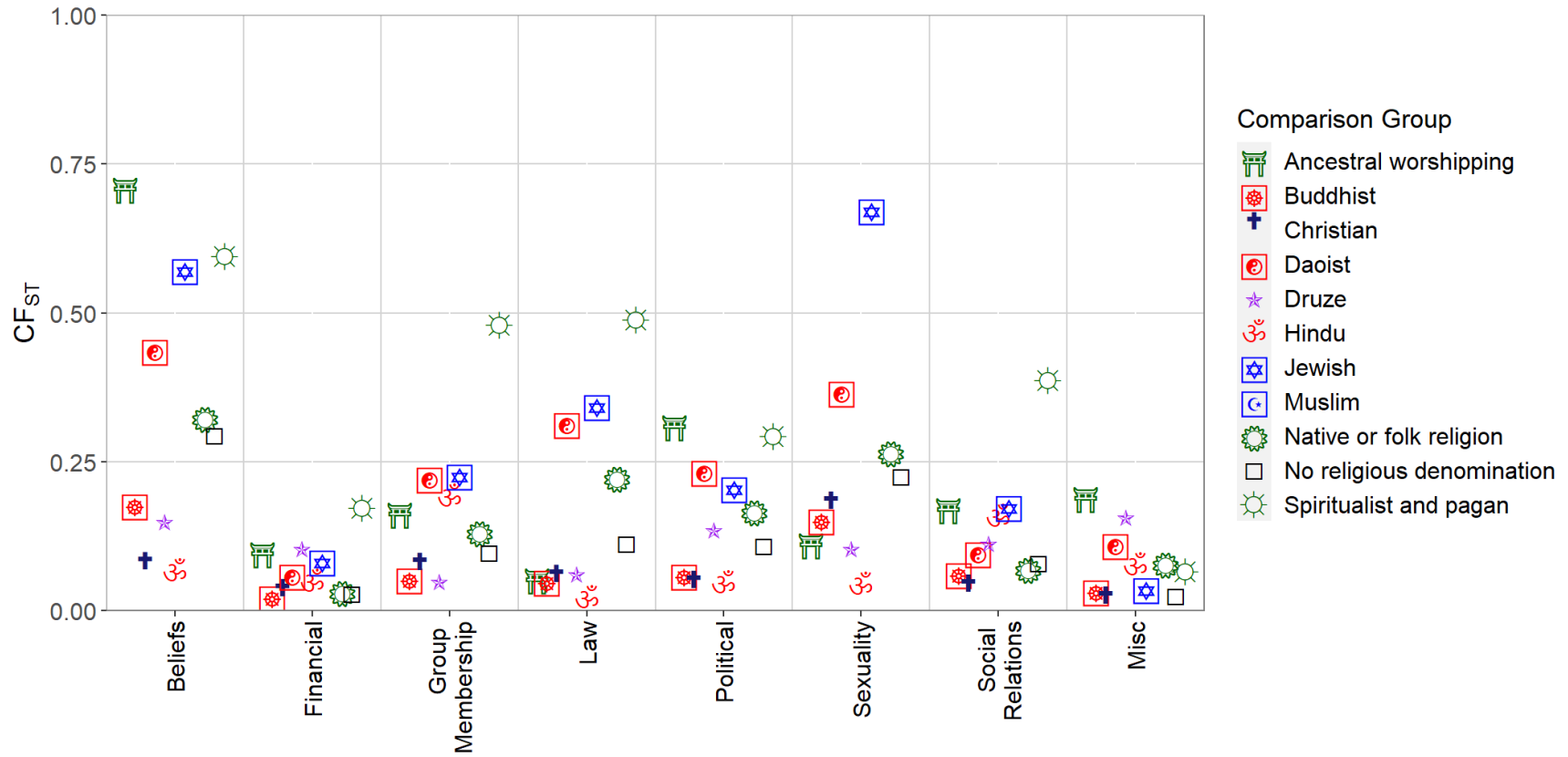
(e) Reference group: Druze



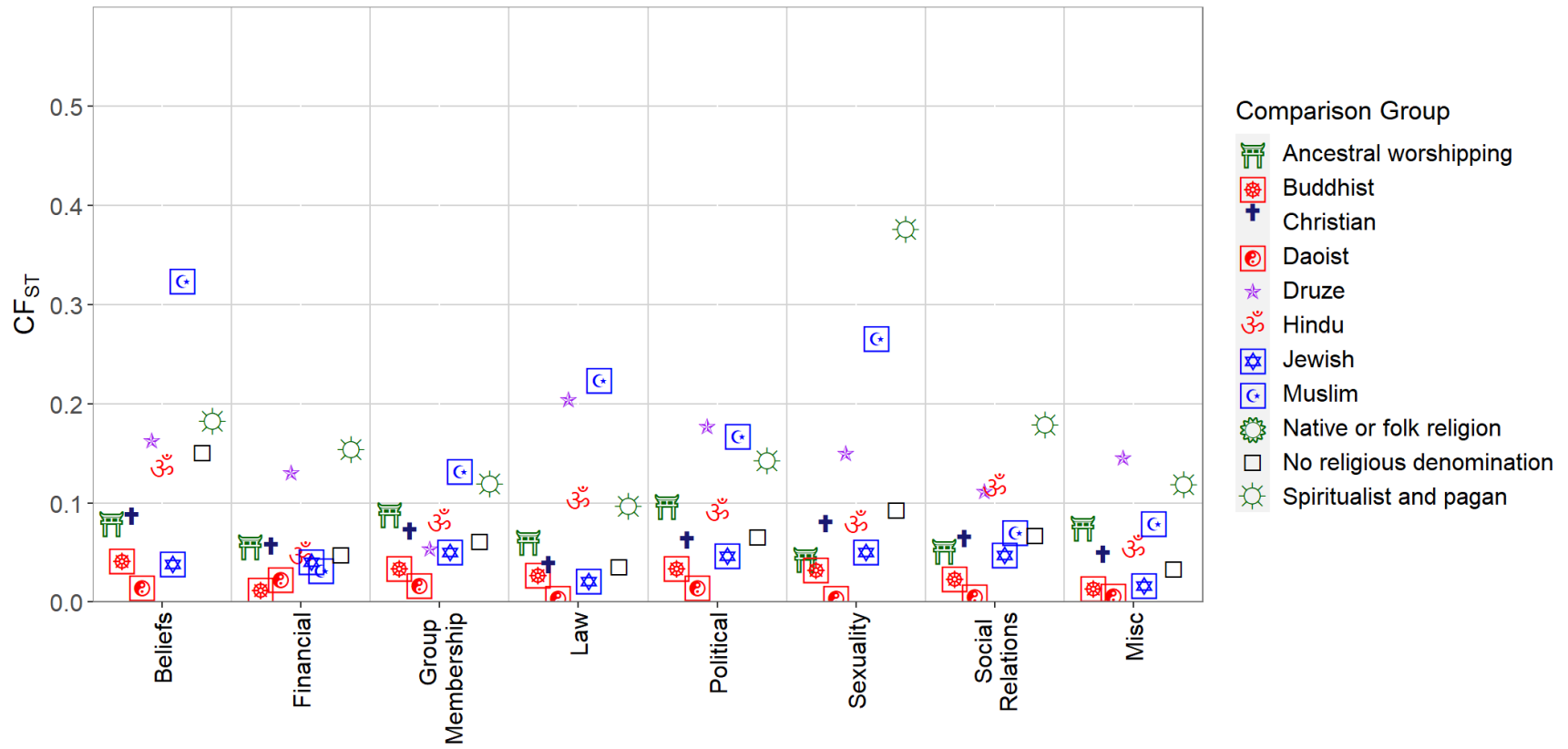
(f) Reference group: Hindu



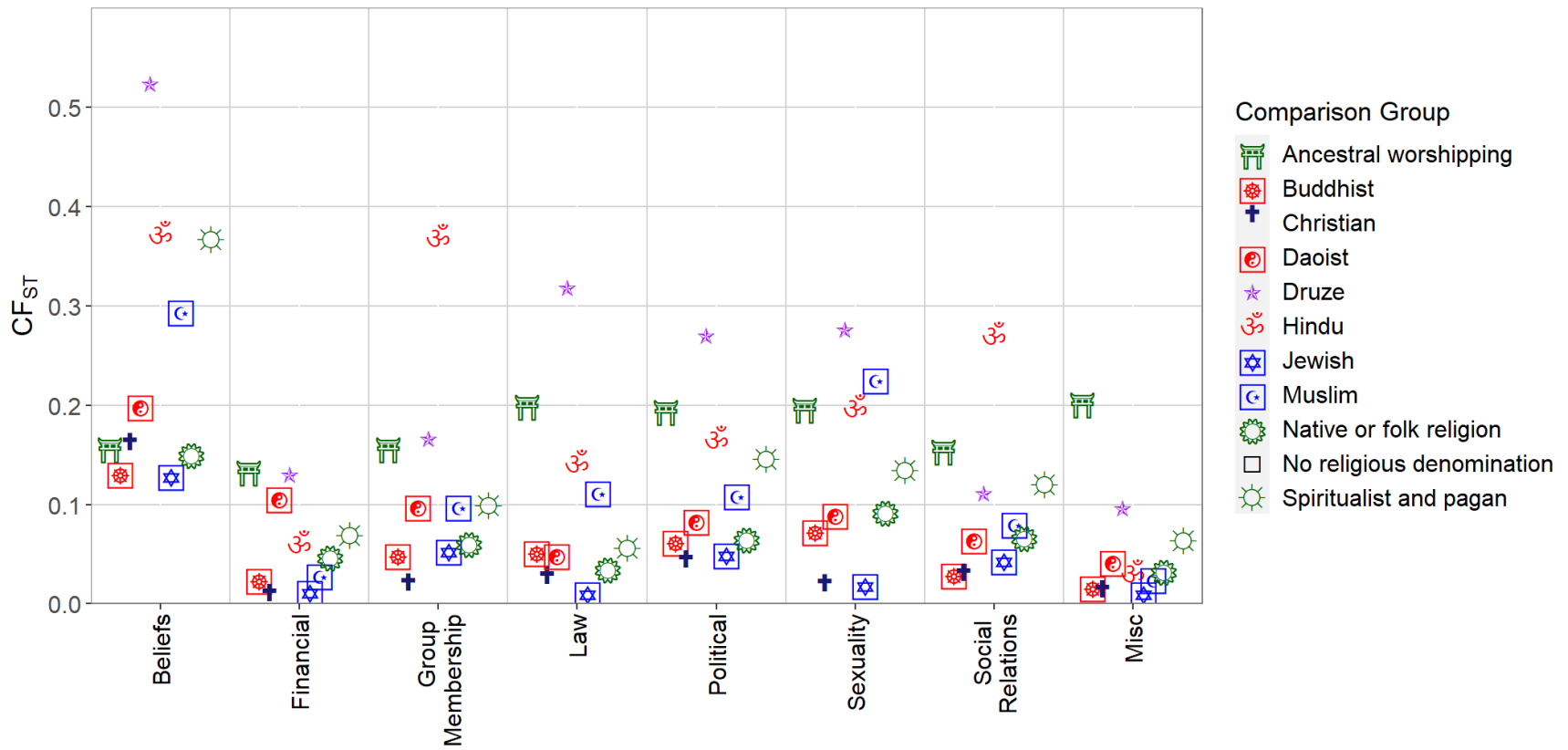
(h) Reference group: Muslim



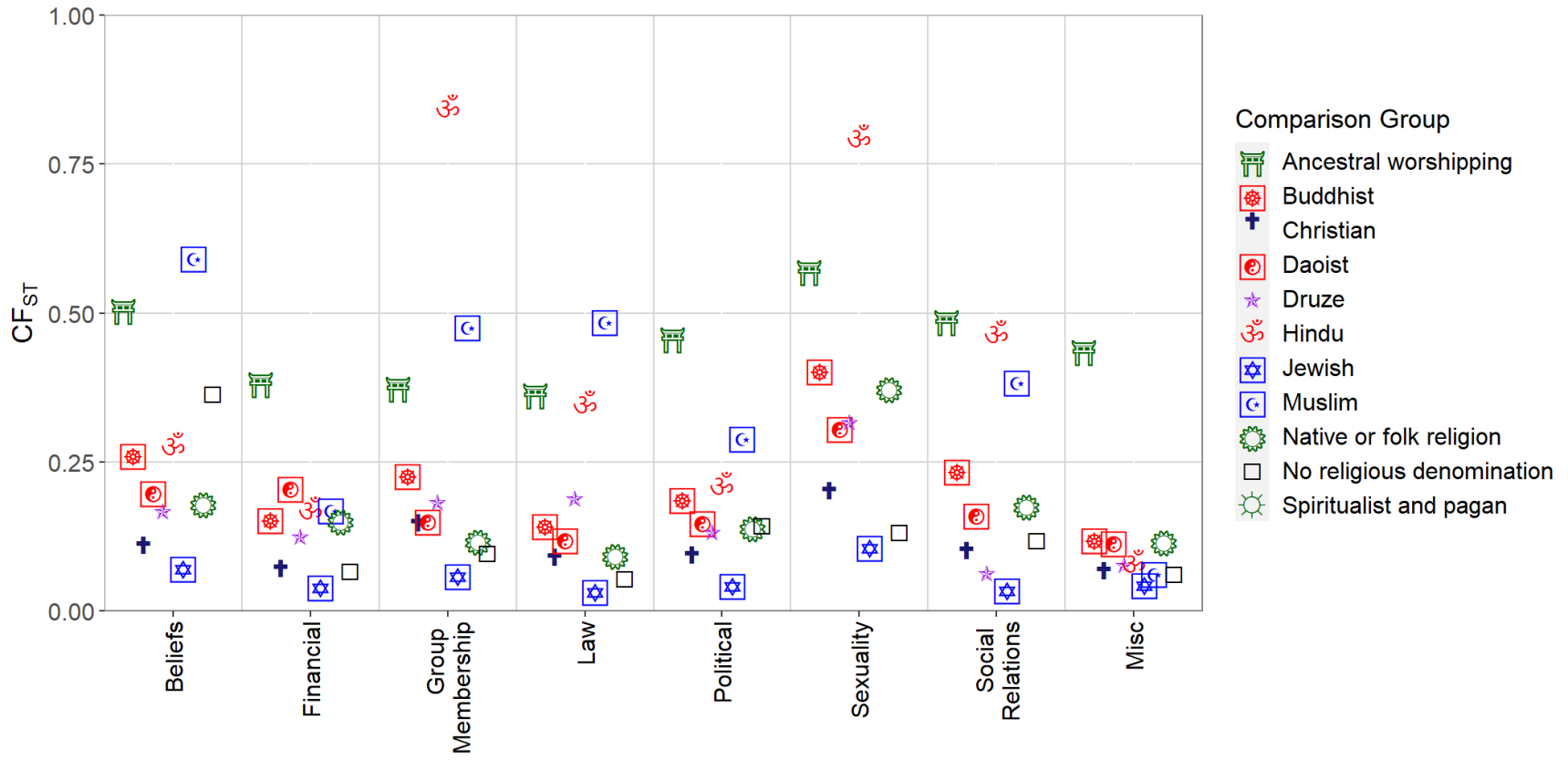
(i) Reference group: Native or folk religion



(j) Reference Group: No religious denomination



(k) Reference group: Spiritualist and pagan



Cultural Distances Between Religious Denominations and the USA

We also conducted exploratory analyses of the cultural distance between the United States and members of each religious denomination who live outside of the USA. The United States is a prototypically Western, Educated, Industrialized, Rich, and Democratic (WEIRD) society in which the majority of psychological and other behavioral science research is conducted (Henrich et al., 2010; Rad et al., 2018), and cultural distance from the USA has been found to predict cross-national variation in several psychological outcomes, including individualism, extraversion, egalitarianism, tightness/looseness, and prosocial behaviour (Muthukrishna et al., 2020). Recent research has also found that historical exposure to the Christian church is associated with the package of cultural traits sometimes called WEIRD psychology, with the United States as a historically majority-Christian country (Henrich, 2020; Muthukrishna et al., 2021; Schulz et al., 2019). This raises the question as to whether members of Christian denominations around the world to some extent share WEIRD cultural traits, defined as cultural proximity to the USA. As depicted in Tables S7 and S8, this was indeed the case, consistent with this work. However, this should be interpreted with the understanding that one's country mattered considerably more in explaining global variation in cultural traits than one's religious denomination.

Table S7. Distance, with bootstrapped 95% confidence intervals, between the USA and each religious denomination (collapsed across all other countries excluding the USA), among (a) all participants, (b) those who report religion is very important in their lives, and (c) those who report religion is not important in their lives. Includes all cultural traits.

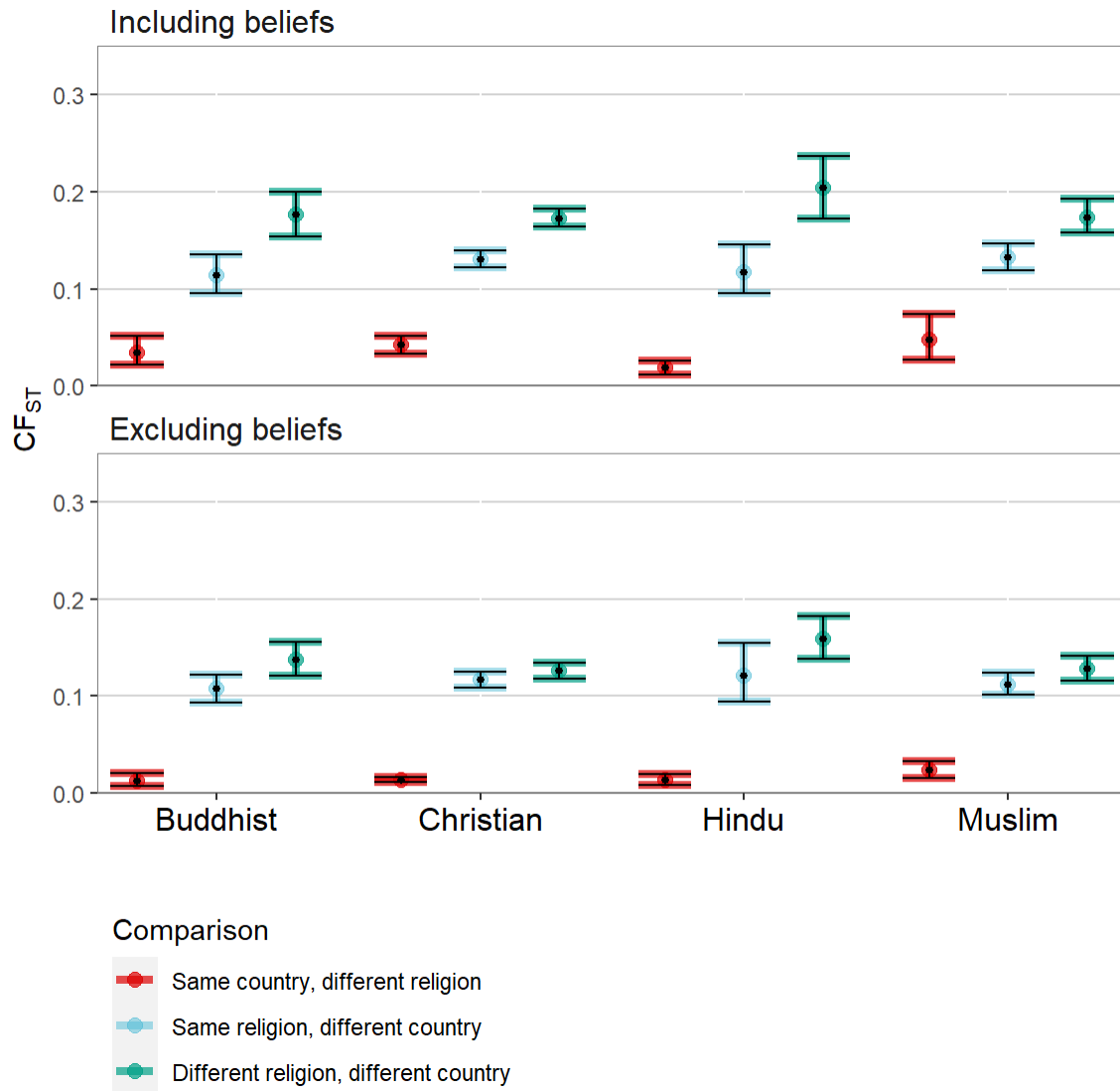
Religion	All			High Religiosity			Low Religiosity		
	Mean	LL	UL	Mean	LL	UL	Mean	LL	UL
Ancestral worshipping	0.246	0.239	0.265	0.320	0.307	0.375	0.270	0.260	0.286
Buddhist	0.089	0.087	0.093	0.105	0.102	0.109	0.088	0.083	0.094
Daoist	0.154	0.147	0.174	0.174	0.168	0.200	0.190	0.180	0.229
Druze	0.296	0.262	0.326	--	--	--	--	--	--
Hindu	0.114	0.111	0.118	0.106	0.103	0.110	0.172	0.163	0.187
Jewism	0.099	0.090	0.120	0.134	0.123	0.164	0.086	0.073	0.135
Muslim	0.298	0.290	0.307	0.244	0.237	0.253	0.129	0.124	0.136
Native or folk religion	0.131	0.125	0.141	0.135	0.127	0.148	0.183	0.173	0.203
No religious denomination	0.105	0.102	0.109	0.074	0.072	0.077	0.078	0.074	0.084
Orthodox	0.111	0.108	0.116	0.113	0.110	0.118	0.112	0.107	0.118
Protestant or other Christian	0.065	0.063	0.069	0.074	0.072	0.078	0.037	0.035	0.041
Roman Catholic	0.093	0.090	0.097	0.093	0.090	0.097	0.074	0.070	0.080
Spiritualist and pagan	0.119	0.114	0.150	0.147	0.137	0.191	--	--	--

Table S8. Distance, with bootstrapped 95% confidence intervals, between the USA and each religious denomination (collapsed across all other countries excluding the USA), among (a) all participants, (b) those who report religion is very important in their lives, and (c) those who report religion is not important in their lives. Excludes explicitly religious traits, but includes moral/norm beliefs and all other cultural traits.

Religion	All			High Religiosity			Low religiosity		
	Mean	LL	UL	Mean	LL	UL	Mean	LL	UL
Ancestral worshipping	0.215	0.208	0.226	0.243	0.233	0.264	0.256	0.247	0.274
Buddhist	0.089	0.086	0.092	0.097	0.094	0.101	0.086	0.081	0.092
Daoist	0.149	0.141	0.170	0.155	0.147	0.181	0.180	0.169	0.221
Druze	0.278	0.239	0.311	--	--	--	--	--	--
Hindu	0.112	0.109	0.116	0.112	0.108	0.116	0.151	0.143	0.165
Jewish	0.098	0.089	0.120	0.127	0.113	0.153	0.082	0.071	0.132
Muslim	0.263	0.256	0.271	0.247	0.239	0.256	0.114	0.109	0.121
Native or folk religion	0.123	0.117	0.133	0.116	0.110	0.128	0.169	0.158	0.189
No religious denomination	0.056	0.054	0.059	0.054	0.052	0.057	0.067	0.063	0.073
Orthodox	0.107	0.104	0.111	0.109	0.105	0.114	0.102	0.096	0.109
Protestant or other Christian	0.061	0.059	0.064	0.073	0.071	0.077	0.035	0.033	0.039
Roman Catholic	0.086	0.084	0.090	0.090	0.087	0.095	0.063	0.059	0.069
Spiritualist and pagan	0.112	0.106	0.145	0.133	0.126	0.173	--	--	--

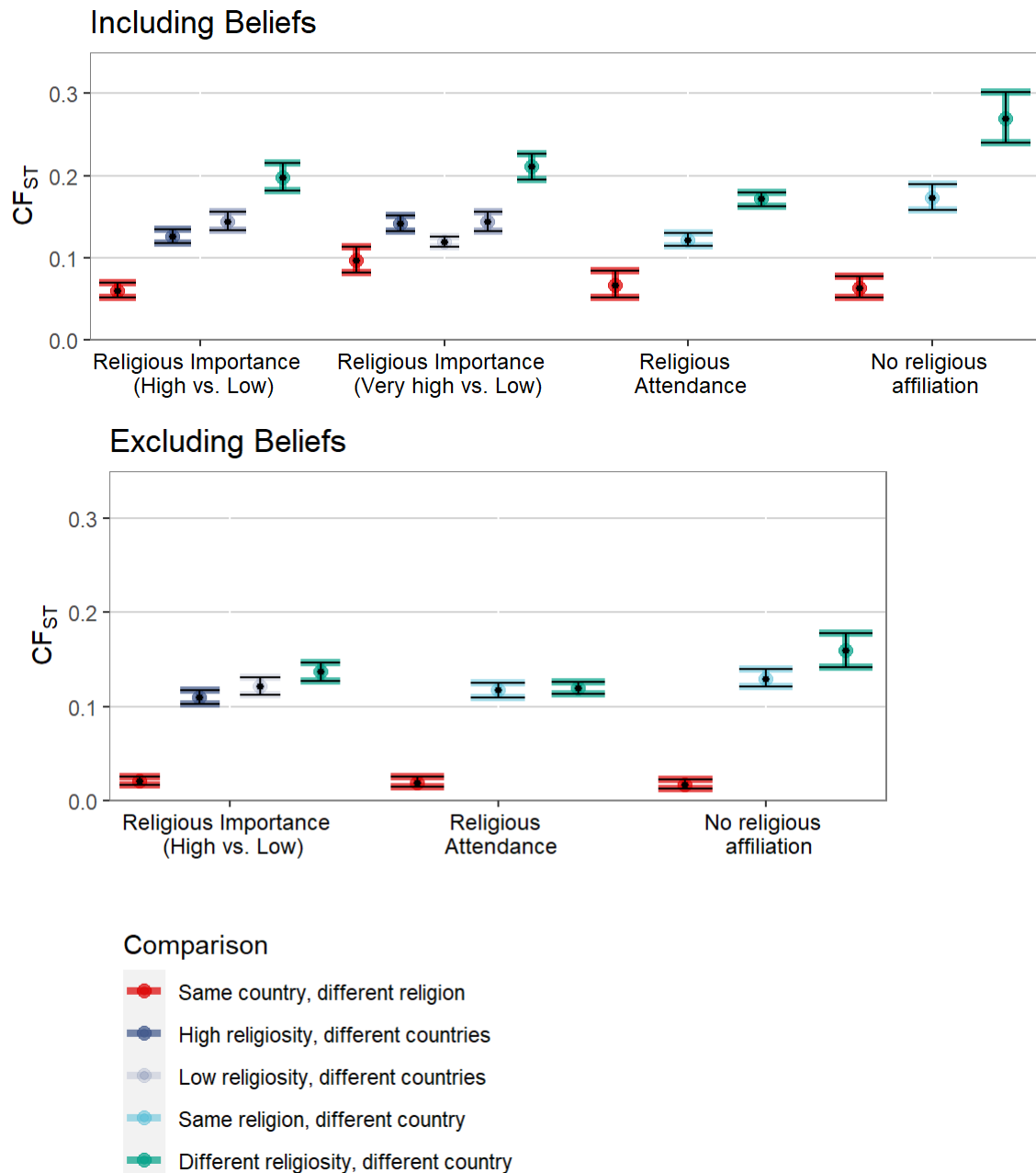
Cultural distances across countries and religious denominations

Figure S2. Cultural distance between (a) in red: co-religionists and members of all other denominations within a country, (b) in blue: co-religionists within a country to co-religionists in foreign countries, and (c) in green: co-religionists and members of all other denominations in foreign countries. Analyses were performed including all WVS cultural traits (upper panel) and excluding the religious and moral “beliefs” dimension from the cultural traits (lower panel). Separate analyses were conducted for members vs. non-members of each religion.



Cultural distance across levels of religiosity

Figure S3. Cultural distance between (a) in red: individuals with high vs. low religiosity within a country, (b) in blue/violet: individuals who share high a level of religiosity across countries, (c) in green: individual high vs. low in religiosity across countries. “Religiosity” was calculated using three separate methods: (a) importance of religion in life (high vs. low), (b) importance of religion in life (high vs. mid vs. low), (c) attendance at religious services (highly frequent, infrequent), and (d) choosing “No religious denomination” as their religious affiliation. Analyses were performed including all WVS cultural traits (upper panel) and excluding the religious and moral “beliefs” dimension from the cultural traits (lower panel).



Cultural distances according to level of religiosity, across countries and religious denominations

Figure S4. Cultural distance between members and non-members of each religion, according to level of attendance at religious services (high or low, dropping mid-level religious service attendance). Analyses were performed including all WVS cultural traits (upper panel) and excluding the religious and moral “beliefs” dimension from the cultural traits (lower panel).

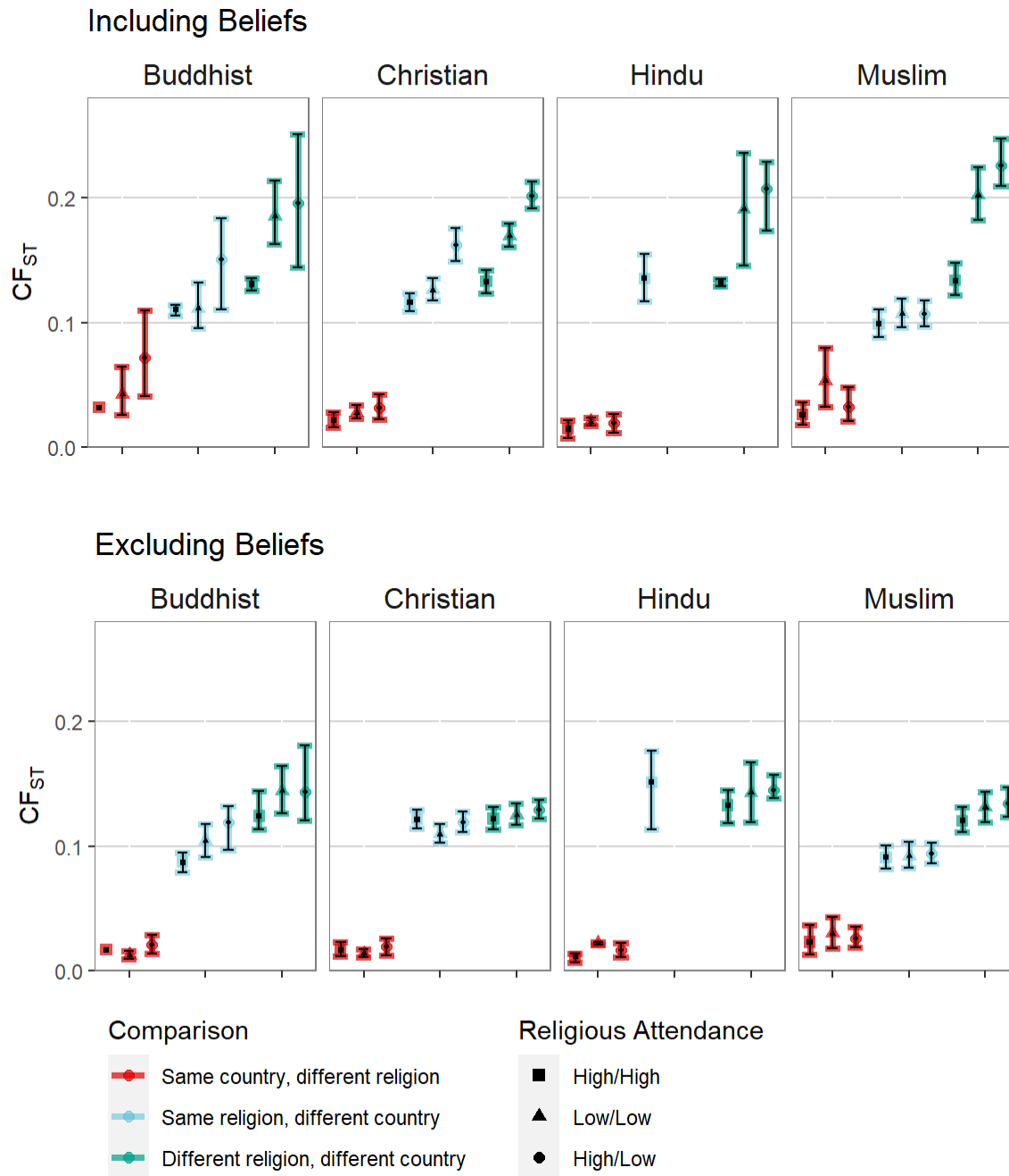


Figure S5. Cultural distance between members and non-members of each religion, according to importance of religion in one's life (high or low). Analyses were performed including all WVS cultural traits (upper panel) and excluding the religious and moral "beliefs" dimension from the cultural traits (lower panel).

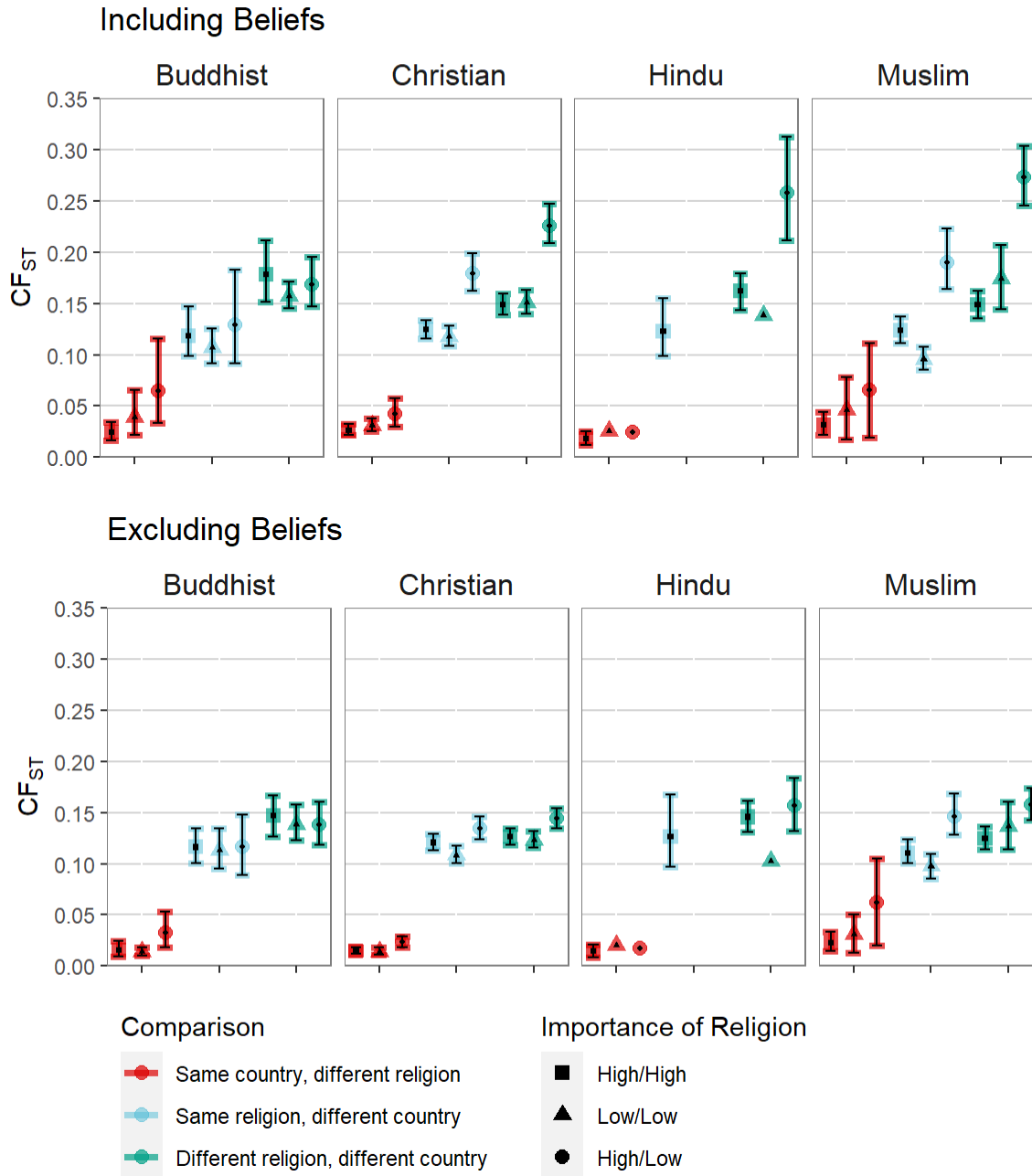


Figure S6. Cultural distance between members and non-members of each religion, according to importance of religion in one's life (very high vs. low, dropping mid-level importance of religion). All WVS cultural traits.

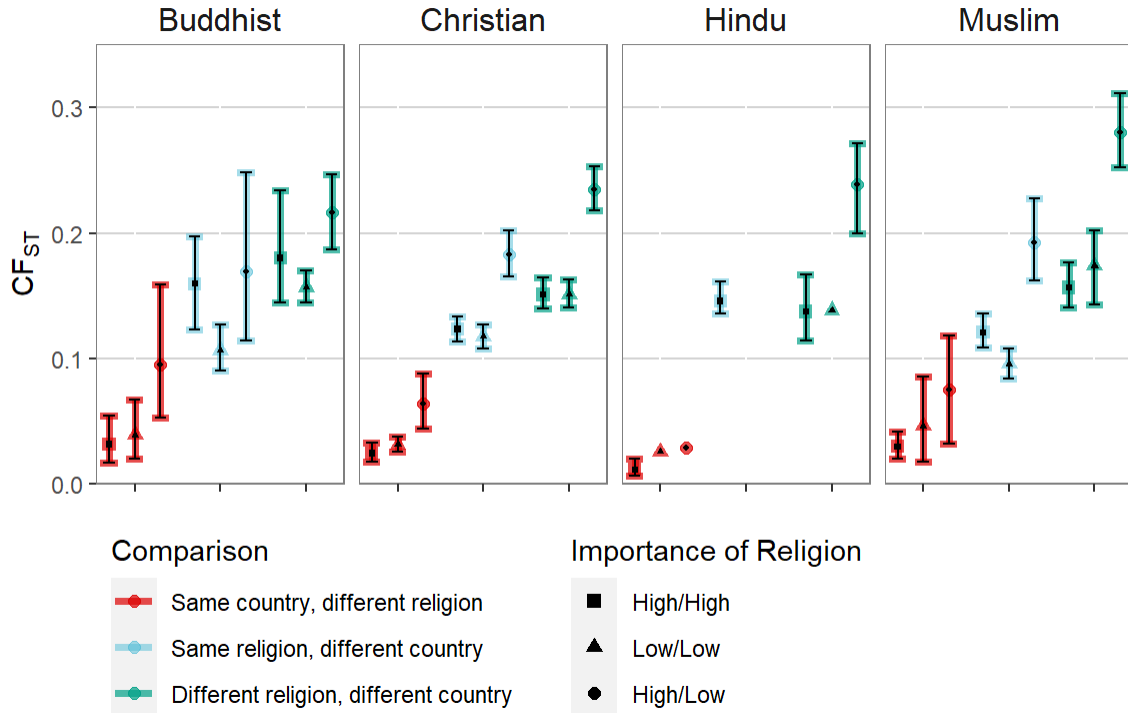


Table S9. Cultural distance between religions, among those who think religion is important (upper diagonal) and those who think that religion is not important (lower diagonal). Includes all cultural traits (including explicitly religious traits).

	Ancestral worshipping	Buddhist	Christian	Daoist	Hindu	Jewish	Muslim	Native or folk religion	No religious denomination	Spiritualist and pagan
Ancestral worshipping		0.147	0.274	0.158	0.234	0.127	0.348	0.113	0.170	0.288
Buddhist	0.117		0.07	0.081	0.049	0.073	0.09	0.044	0.028	0.23
Christian	0.214	0.04		0.113	0.107	0.035	0.031	0.06	0.043	0.104
Daoist	0.173	0.045	0.087		0.14	0.067	0.216	0.023	0.079	0.135
Hindu	0.127	0.064	0.131	0.078		0.103	0.087	0.089	0.077	0.325
Jewish	0.281	0.08	0.047	0.084	0.133		0.159	0.037	0.029	0.054
Muslim	0.135	0.032	0.06	0.092	0.036	0.183		0.137	0.132	0.399
Native or folk religion	0.138	0.049	0.093	0.022	0.067	0.105	0.065		0.037	0.125
No religious denomination	0.219	0.059	0.024	0.131	0.24	0.047	0.14	0.132		0.098

Table S10. Cultural distance between religions, among those who think religion is important (upper diagonal) and those who think that religion is not important (lower diagonal). Excludes explicitly religious traits.

	Ancestral worshipping	Buddhist	Christian	Daoist	Hindu	Jewish	Muslim	Native or folk religion	No religious denomination	Spiritualist and pagan
Ancestral worshipping		0.146	0.272	0.157	0.232	0.125	0.348	0.113	0.168	0.284
Buddhist	0.115		0.07	0.081	0.049	0.071	0.09	0.045	0.028	0.222
Christian	0.209	0.041		0.113	0.107	0.034	0.03	0.059	0.043	0.101
Daoist	0.172	0.044	0.086		0.139	0.067	0.216	0.023	0.079	0.132
Hindu	0.125	0.064	0.13	0.078		0.102	0.086	0.089	0.077	0.321
Jewish	0.27	0.076	0.045	0.081	0.131		0.153	0.036	0.029	0.054
Muslim	0.134	0.032	0.059	0.092	0.035	0.174		0.138	0.131	0.384
Native or folk religion	0.137	0.048	0.09	0.022	0.066	0.1	0.065		0.037	0.12
No religious denomination	0.214	0.059	0.024	0.129	0.239	0.046	0.138	0.129		0.095

Christian-Buddhist Cultural Similarity

The similarity between Christians and Buddhists was surprising given their divergent cultural phylogenies (Abrahamic vs Dharmic). One possibility is that this difference is driven by Christian converts to Buddhism in the West. However, additional analyses looking at the cultural distance between Buddhists and other religions *within* different world regions showed that Buddhists are roughly equidistant to Christians and Hindus: East Asia = 0.07 vs. 0.16; Europe and Central Asia = 0.23 vs. 0.23; North America = 0.45 vs. 0.37 (Christians vs. Hindus, respectively). These results suggest that the Buddhist-Christian similarity is not just driven by Western converts to Buddhism, though it remains possible that Buddhist conversion to Christianity (or vice versa) in non-Western contexts or both Hindus and Christians converting to Buddhism may drive this effect. Further investigation is required.

Robustness check: Age

We conducted additional analyses to explore whether the cultural distances between religious groups were confounded with other demographic clusters within the population. For example, younger individuals may be more likely to identify as non-religious than older individuals, meaning that cultural distances may reflect generational differences rather than religious distances. To test this, we investigated the cultural distances between members of different religious groups separately for older participants (over 40 years old) and younger participants (40 or under). As depicted in Figures S7 and S8, both younger and older participants showed the same general pattern across different comparisons, such that those with different religions are slightly different within a country, and across countries those who share a religion are less distant than those with different religions.

Furthermore, if cultural differences were attributable to demographic distances, then we would expect that the degree of cultural distance between religious groups within a country would be correlated with the degree of cultural distance between demographic clusters within a country. We found no evidence of this: A country's mean level of distance between religions was not significantly correlated with the country's cultural distance between older vs. younger adults, those high vs. low in subjective social status, those high vs. low in income, those living in different regions, or between ethnic groups (all r s < .15). Therefore, a country's level of religious cultural heterogeneity is a unique source of variance that is not obviously confounded with other differences in cultural traits across demographic clusters.

Figure S7. Cultural distances between members of different religious groups, among younger participants (≤ 40 years old). Excludes explicitly religious traits.

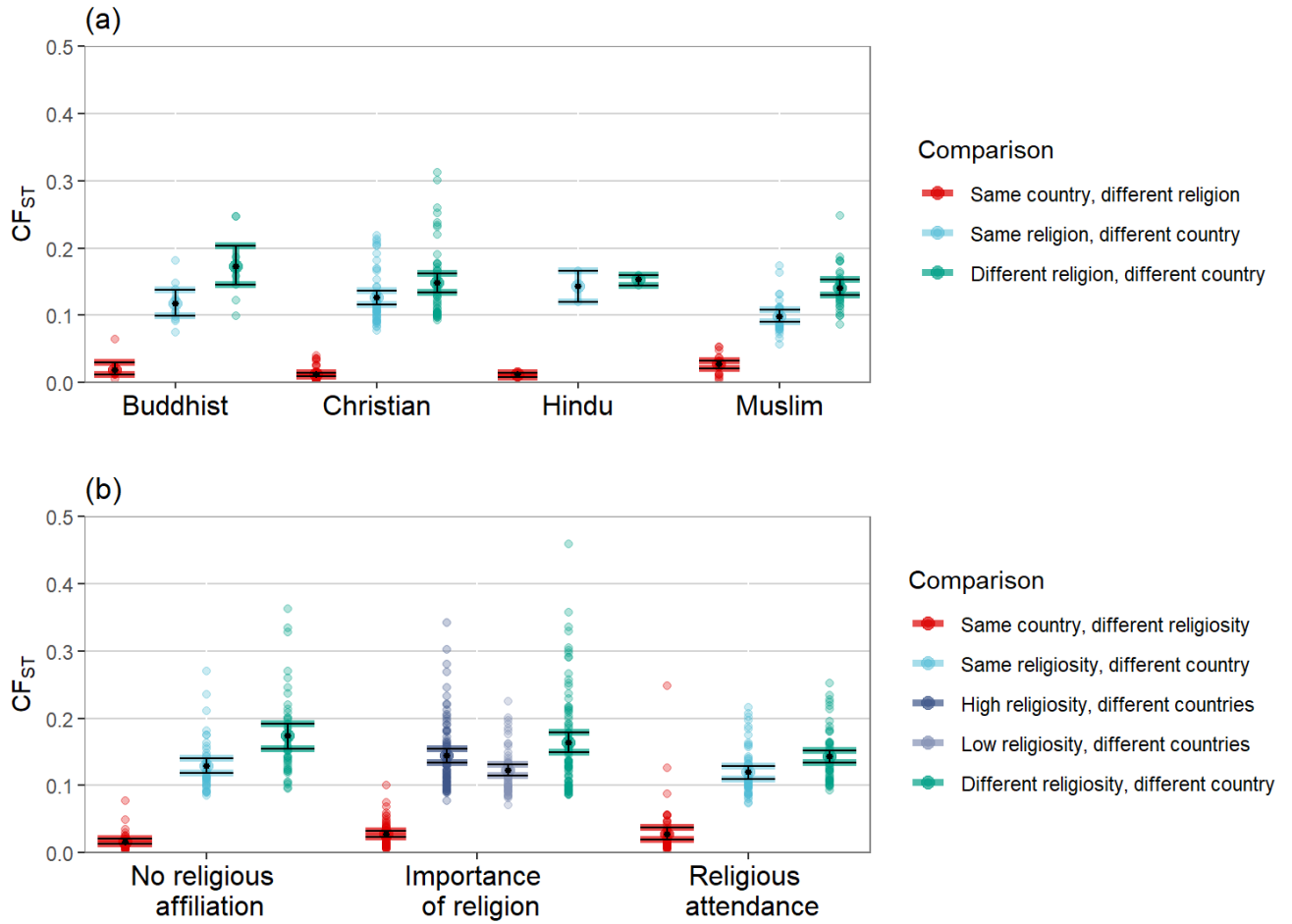


Figure S8. Cultural distances between members of different religious groups, among older participants (>40). Excludes explicitly religious traits.

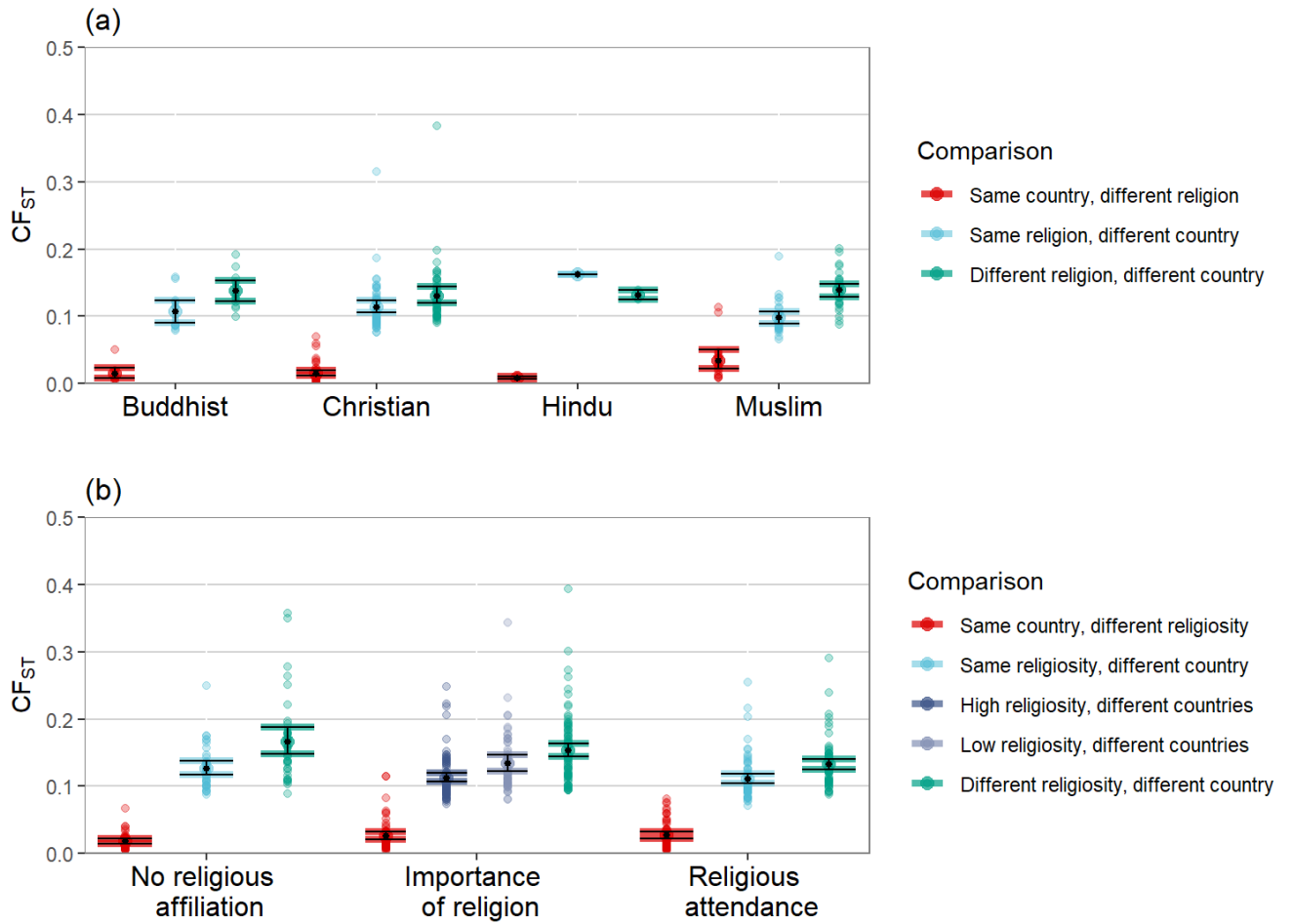


Figure S9. Cultural distances between members of different religious groups, among younger participants (≤ 40 years old). Excludes all traits from the religious and moral “beliefs” dimension.

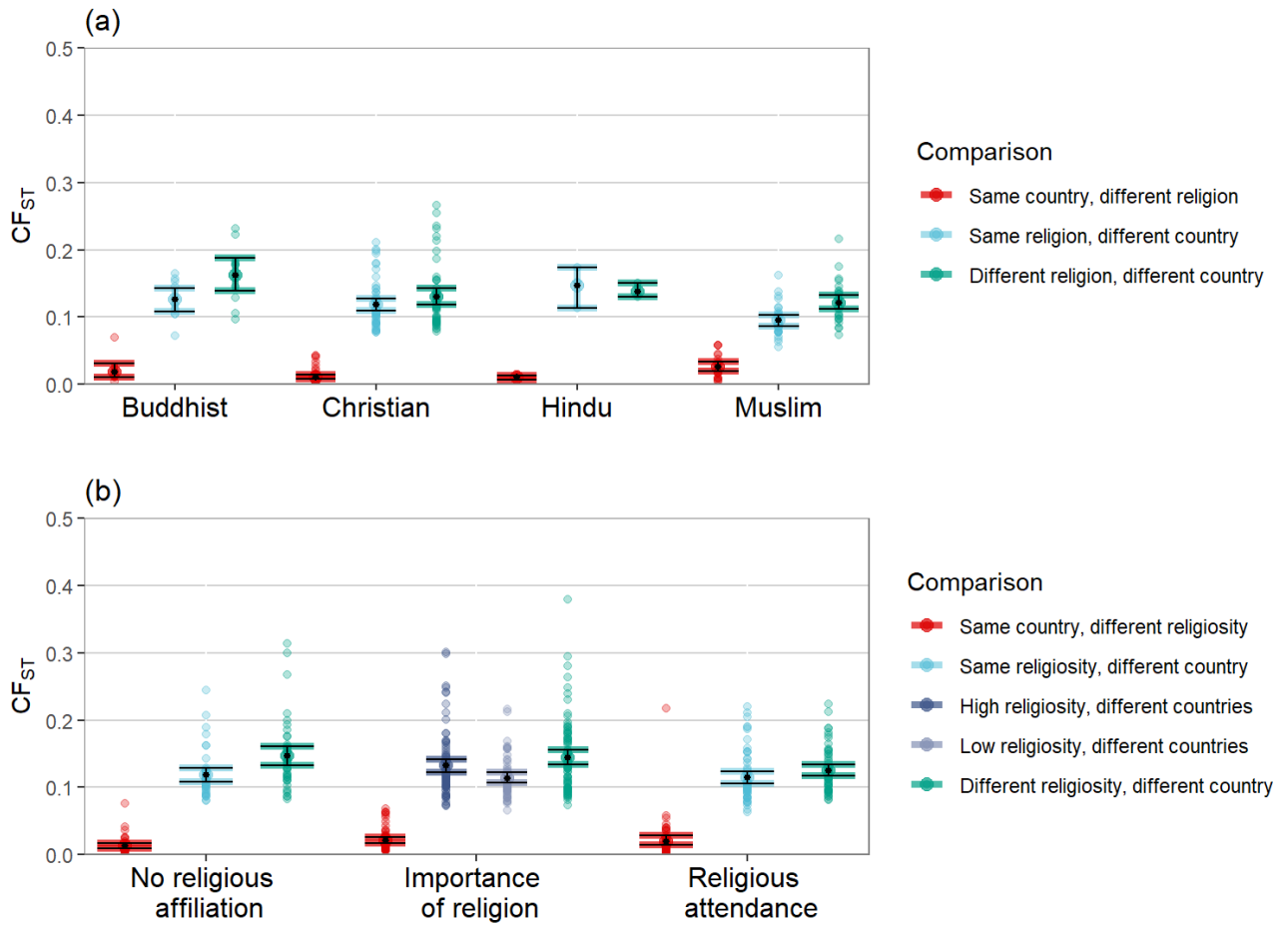
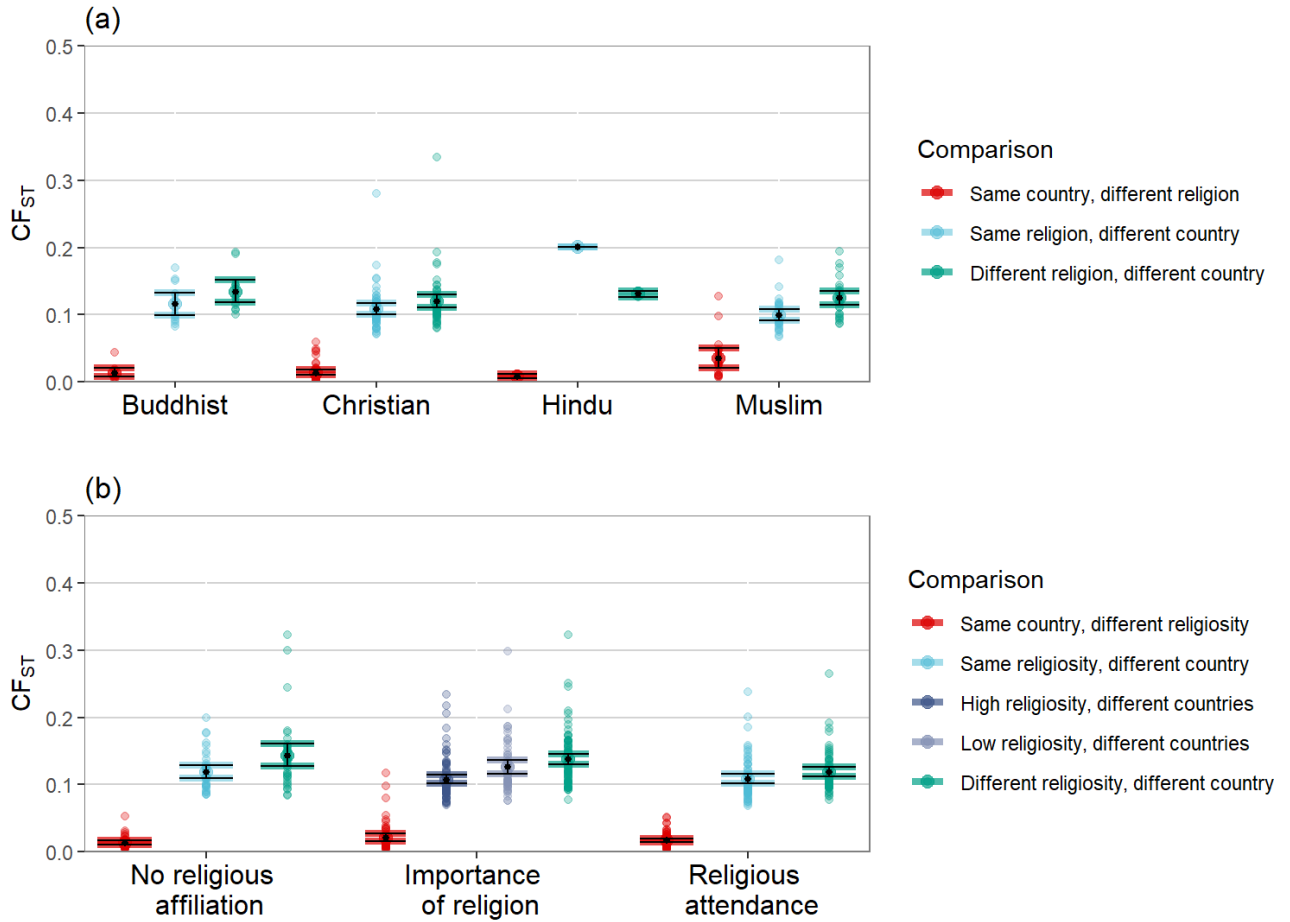


Figure S10. Cultural distances between members of different religious groups, among older participants (>40). Excludes all traits from the religious and moral “beliefs” dimension.



Robustness check: Religious freedom

We conducted additional exploratory analyses to test the possibility that results were driven by people choosing to affiliate with particular religions, rather than exposure to religions shaping individuals' cultural traits. If our results were driven by people with similar traits selecting certain religions, then we would expect similarity among co-religionists who have freedom to choose their denomination, but not expect the similarity when religion is more tightly constrained by external factors. We tested whether results were different between countries with relatively high vs. low levels of government restrictions on religion (GRI; provided by Pew Research Center, 2019, comprised of favoritism of religious groups, general laws and policies, harassment of religious groups, and limits on religious activity; analyses used the average levels of GRI between 2007 and 2017).

We found no evidence for this alternative explanation. As depicted in Figures S9 and S10 below, the same patterns of results – with greater similarity among people who share a religious denomination – appeared in both countries with high levels of religious freedom and countries with low levels of religious freedom. These results cannot definitively establish the causal relationship between religion and cultural traits, but they do speak against the possibility that cultural differences between religious groups are typically caused by people with certain traits choosing to affiliate with certain traditions.

Countries with high religious freedom, listed from high to low freedom (below-average government restrictions on religion):

New Zealand, Japan, Trinidad and Tobago, Uruguay, South Africa, Brazil, Bolivia, Burkina Faso, Mali, Canada, Taiwan, Estonia, Macau, Australia, Chile, Philippines, Ghana, Hong Kong, Netherlands, Finland, Slovenia, Guatemala, Sweden, Hungary, Ecuador, Cyprus, Switzerland, Colombia, Nicaragua, Peru, Poland, South Korea, United Kingdom, Norway, Haiti, Italy, Lebanon, United States, Zambia, Zimbabwe, Georgia, Rwanda, Germany, Ukraine, Spain, Ethiopia

Countries with low religious freedom, listed from high to low freedom (above-average government restrictions on religion):

Armenia, Thailand, Serbia, Palestine, France, Moldova, Nigeria, Bangladesh, Mexico, Qatar, Yemen, Libya, Bulgaria, Greece, Kyrgyzstan, Romania, Jordan, Tunisia, India, Kuwait, Iraq, Singapore, Azerbaijan, Morocco, Tajikistan, Belarus, Pakistan, Kazakhstan, Turkey, Russia, Indonesia, Vietnam, Malaysia, Myanmar, Egypt, Uzbekistan, Iran, China

Figure S11. Cultural distances between members of different religious groups, among countries with relatively high levels of religious freedom. Excludes explicitly religious traits.

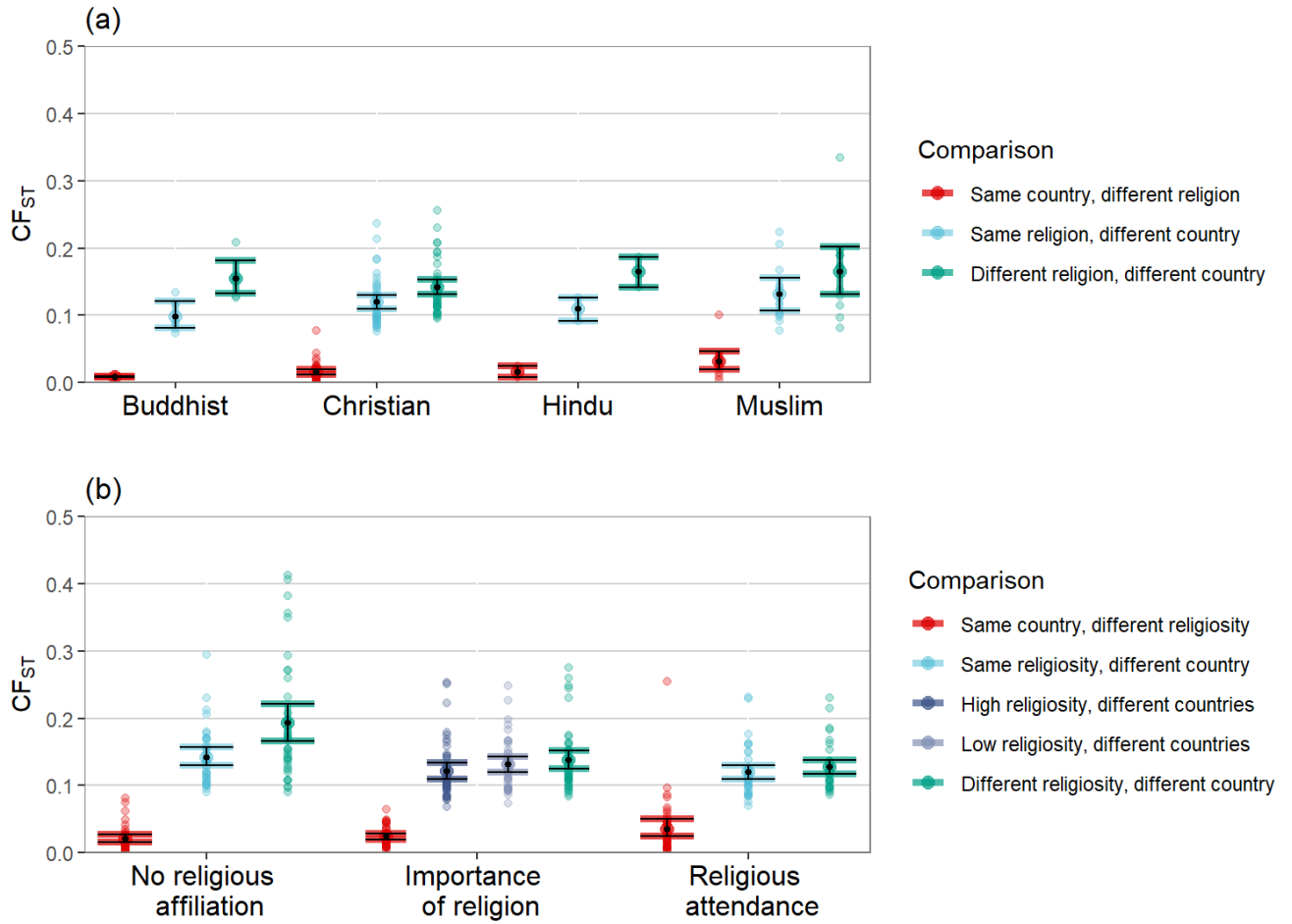


Figure S12. Cultural distances between members of different religious groups, among countries with relatively low levels of religious freedom. Excludes explicitly religious traits.

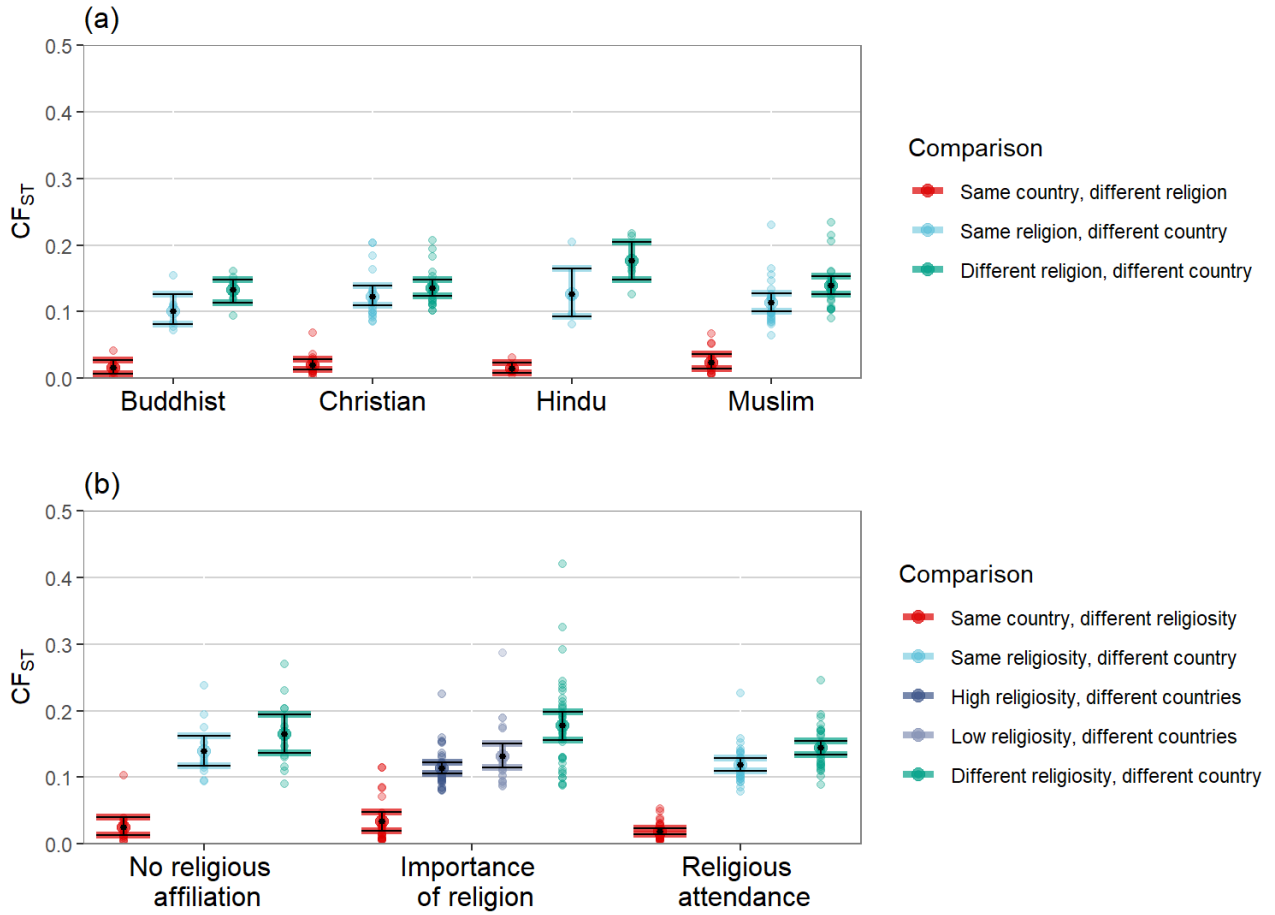


Figure S13. Cultural distances between members of different religious groups, among countries with relatively high levels of religious freedom. Excludes all traits from the religious and moral “beliefs” dimension.

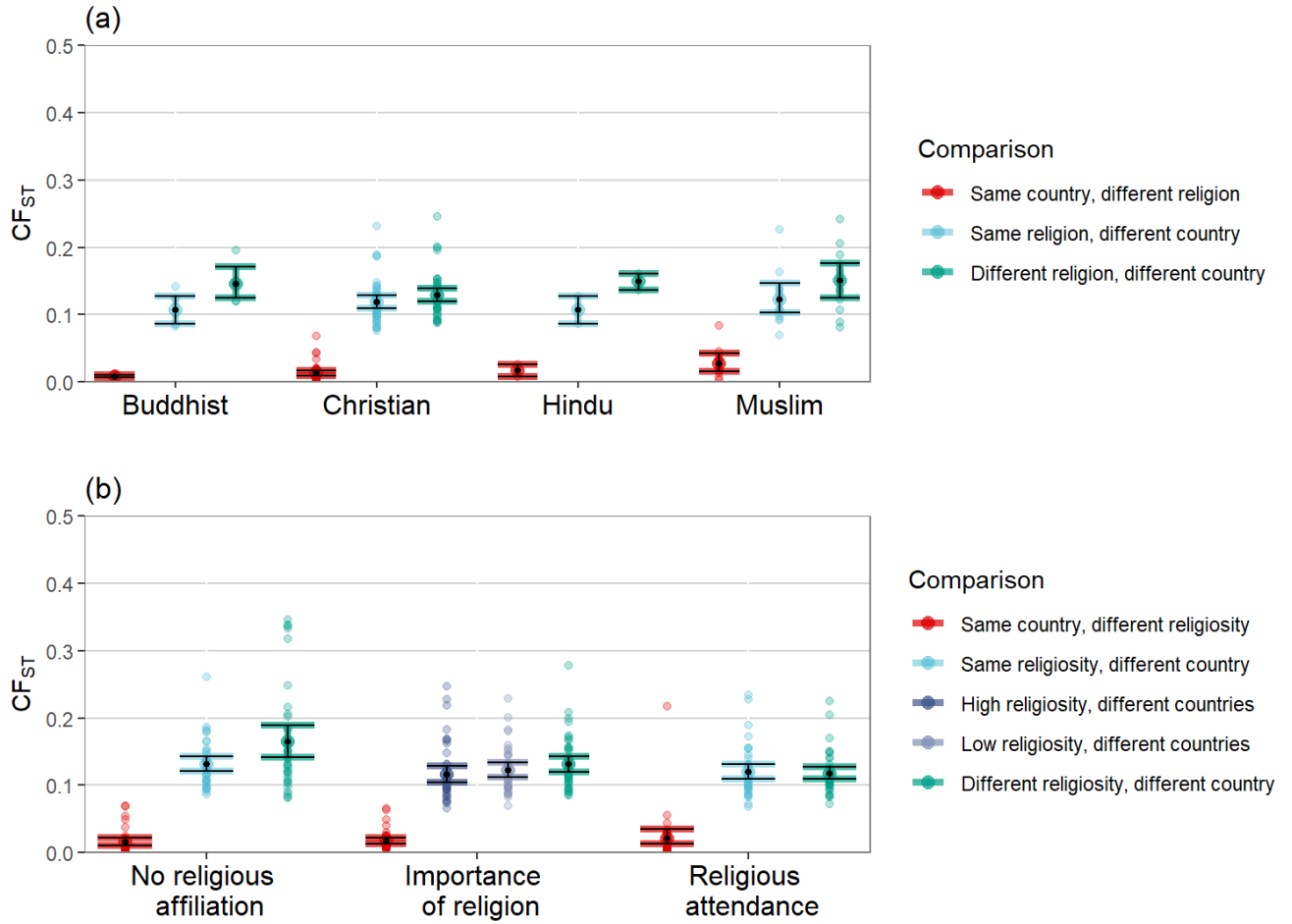


Figure S14. Cultural distances between members of different religious groups, among countries with relatively low levels of religious freedom. Excludes all traits from the religious and moral “beliefs” dimension.

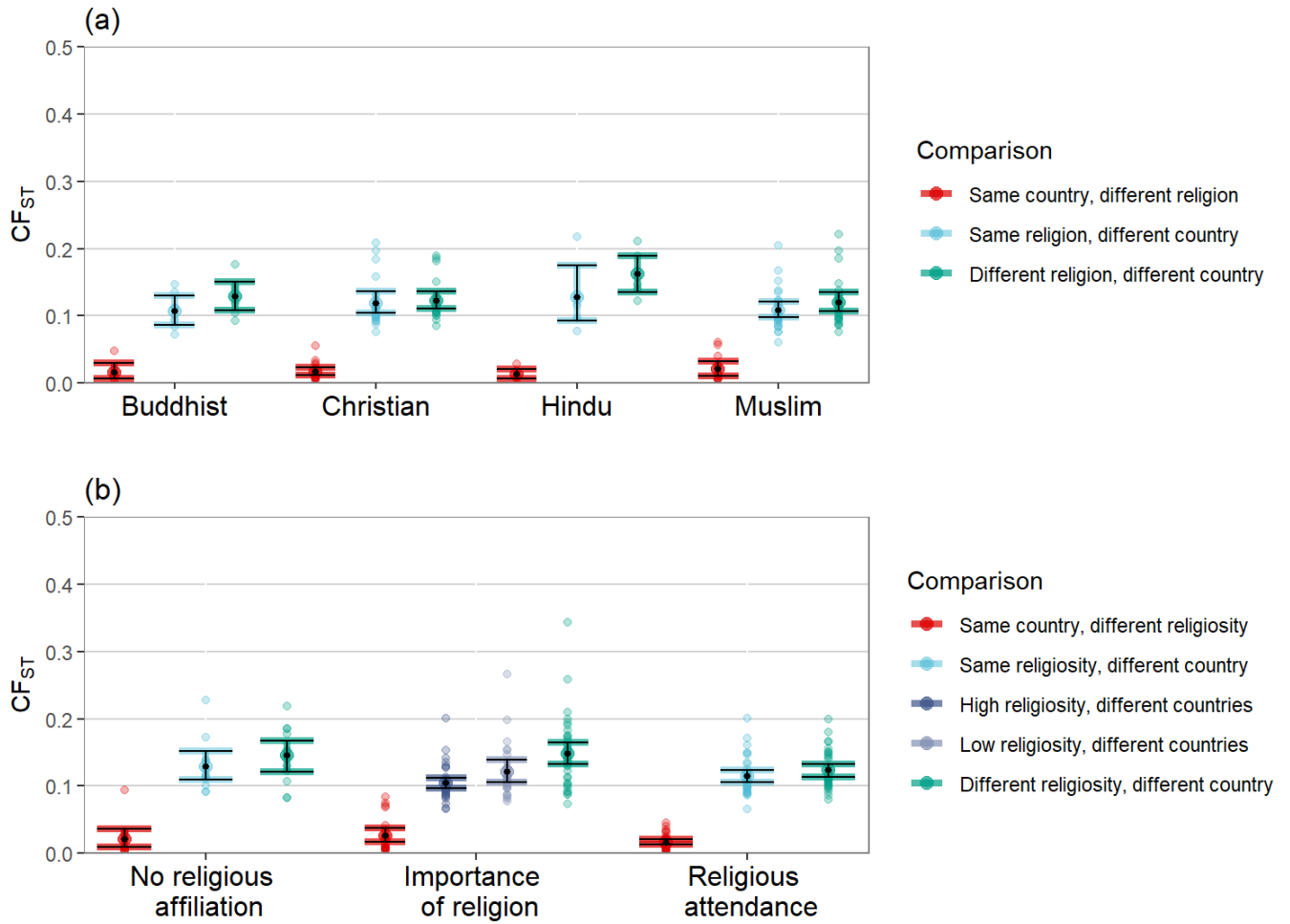
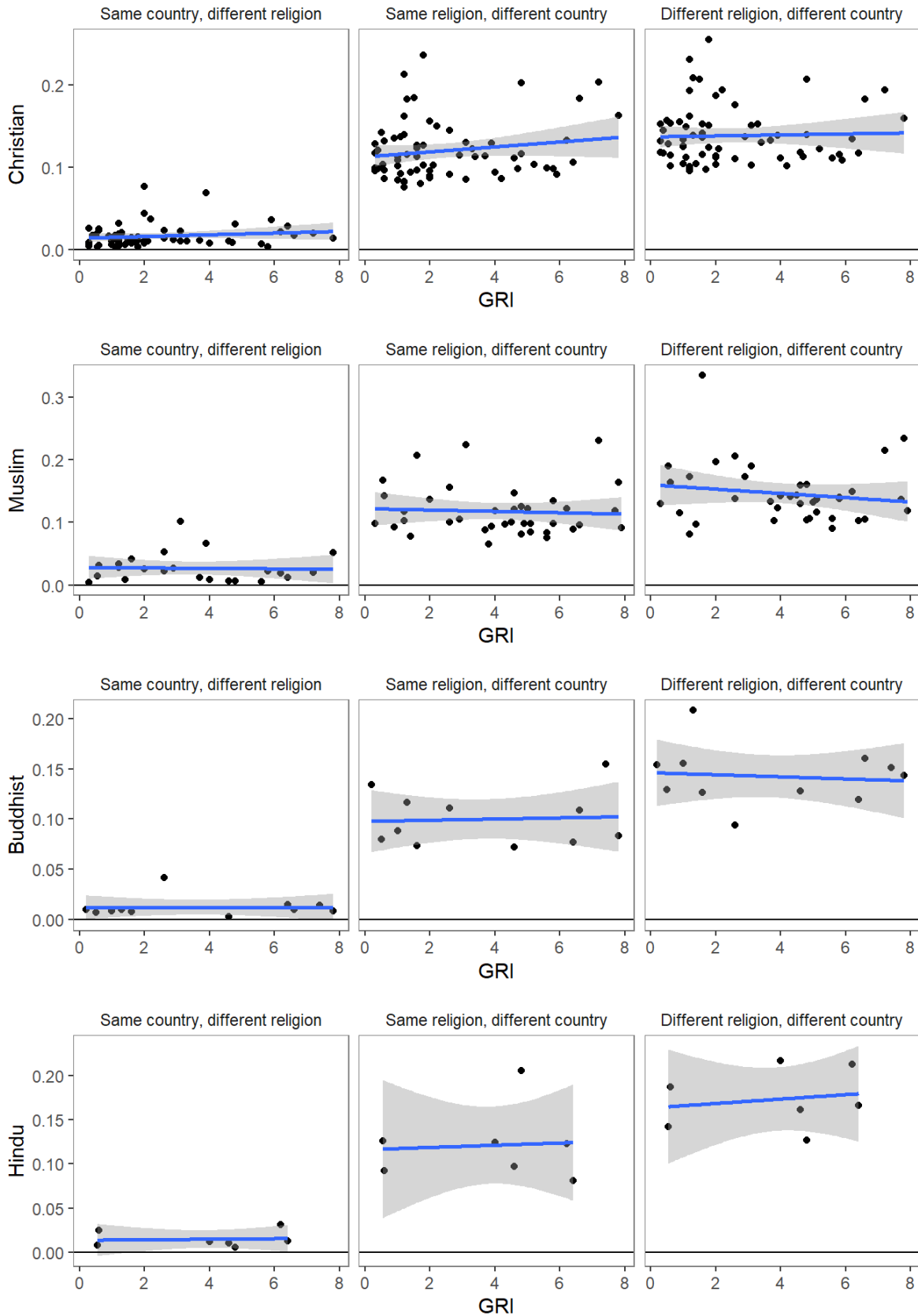
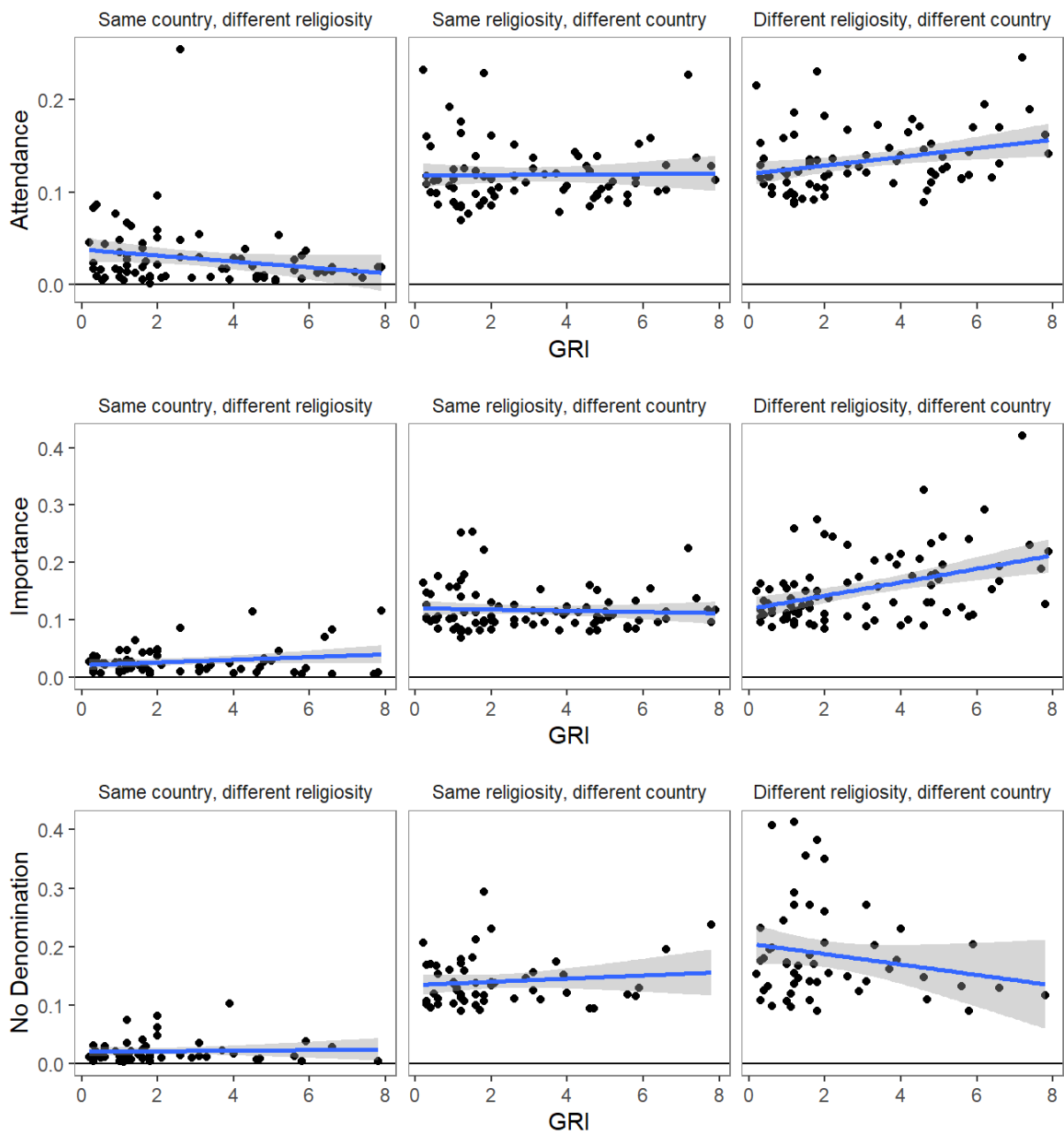


Fig S15. Government restrictions on religion (i.e., low religious freedom) predicting cultural distances. Each point reflects one pairwise comparison within/across countries. Excludes explicitly religious beliefs.





**Robustness checks:
Demographic variables and geographic, linguistic, and genetic distances**

We conducted additional analyses to explore whether the greater similarity between co-religionists across countries might be explained by geographic, genetic, or linguistic distances between countries. To test this possibility, we assessed whether these factors predict the set of pairwise cultural distances between all distinct country/religion groups, and whether distances between religions also predict these distances between country/religion groups when controlling for geographic, genetic, or linguistic distances. Specifically, the primary unit of analysis was the set of pairwise distances between all 184 unique country/religion groups. For example, the distance between Canadian Christians and Chinese Buddhists is defined by two countries (Canada and China) and two religious groups (Christian and Buddhist), and this was predicted from the geographic, genetic, or linguistic distances between Canada and China, as well as the cultural distances between Canada and China overall (collapsed across religious groups) and the cultural distances between Christians and Buddhists overall (collapsed across countries). Distances between identical groups were coded as zero, the maximally-similar CF_{ST} value (e.g., the country-level distance between Canadian Christians and Canadians with no denomination = 0, because both refer to Canadian participants).

Geographic distances were taken from Centre d'Études Prospectives et d'Informations Internationales (CEPII) GeoDist database (Mayer & Zignago, 2011), linguistic distances through the linguistic proximity measure taken from the CCEPII Language database (Melitz & Toubal, 2014, recoded to represent distances, such that 0 = maximally similar), and genetic distances were based on genetic data from the Pemberton, DeGiorgio, and Rosenberg (2013) study, matched to country by Spolaore and Wacziarg (2018). Countries that included missing data for geographic, linguistic, or genetic distances were dropped from those analyses, but retained on other analyses where data was available. Linguistic distances where data was missing from certain pairwise comparisons between countries, but where data was present for comparisons with other countries, were imputed using the additive method for filling in incomplete distance matrices (Makarevich & Lapointe, 2004). All distances were scored so that larger numbers represent larger distances between groups.

Analysis A: MRM

We first analyzed this using a Multiple regression on distance matrices approach (MRM, Lichstein, 2007; available in the *ecodist* package in R, Goslee & Urban, 2007). Geographic distance was not significantly associated with cultural distances between country/religion groups, $b = 0.000000323$, $p = .70$, $R^2 = .000093$, but cultural distances between religious groups did predict cultural distances between country/religion groups, $b = .799$, $p < .001$, $R^2 = .10$, after controlling for geographic distances, and even after also controlling for cultural distances between countries, $b_{Religion} = .714$, $p < .001$, $b_{Country} = 1.15$, $p < .001$, $b_{Geography} = -0.00000136$, $p = .044$, $R^2 = .39$.

Linguistic distance did predict cultural distances between country/religion groups, $b = 0.0189$, $p < .001$, $R^2 = .015$. Again, religious group distances also predicted cultural distances between country/religion groups, $b = .842$, $p < .001$, $R^2 = .12$, after controlling for linguistic

distances, and even after also controlling for linguistic distance and cultural distances between countries, $b_{Religion} = .761, p < .001, b_{Country} = 1.20, p < .001, b_{Language} = -0.003, p = .28, R^2 = .40$.

Genetic distance did not predict cultural distances between country/religion groups, $b = 0.118, p = .67, R^2 = .00017$, but religious group distances did predict cultural distances between country/religion groups, $b = .788, p < .001, R^2 = .10$, after controlling for genetic distances, and even after also controlling for genetic distance and cultural distances between countries, $b_{Religion} = .713, p < .001, b_{Country} = 1.18, p < .001, b_{Genes} = -0.36, p = .12, R^2 = .39$.

Analysis B: MLM

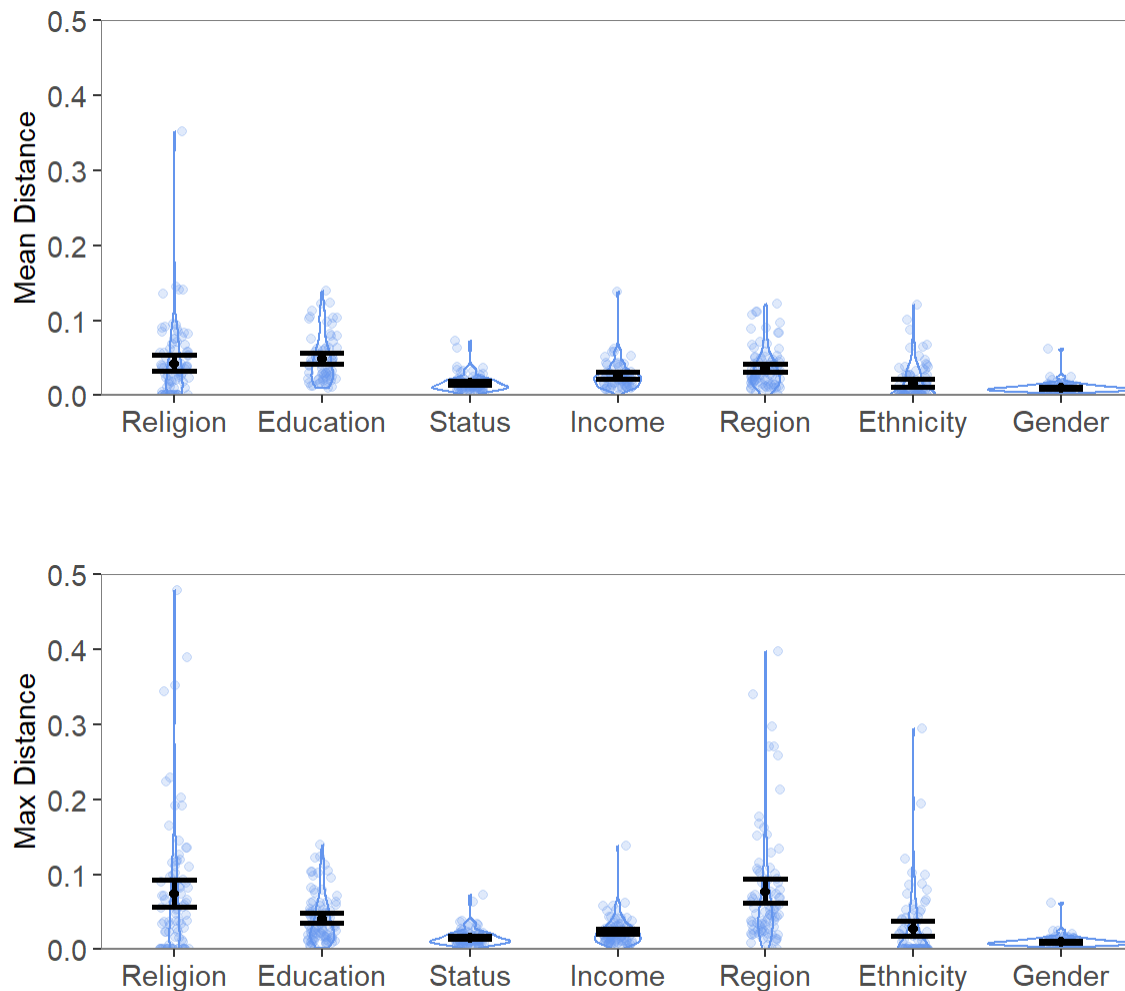
We also analyzed this data using a multilevel model that predicted these distances in a beta distributed model (available in the *glmmTMB* package in R, Brooks et al., 2017) that included clustering of observations within religions and within countries (results were nearly identical if fixed effects of continent were also included in the model, as a further source of covariation). For the GLMM we further standardized geographic, linguistic, and genetic distances prior to analysis, to ease in comparisons of effect sizes across different predictors.

In this analysis, geographic distance predicted slightly greater cultural distances between country/religion groups, $b = 0.126, p < .001$, and cultural distance between religious groups also predicted cultural distances between country/religion groups, $b = 4.74, p < .001$, even after also controlling for cultural distances between countries, $b_{Religion} = 3.77, p < .001, b_{Country} = 6.03, p < .001, b_{Geography} = 0.009, p = .10$. Linguistic distance also predicted cultural distances between country/religion groups, $b = 0.187, p < .001$. Again, religious group distances also predicted cultural distances between country/religion groups, $b = 4.98, p < .001$, even after also controlling for linguistic distance and cultural distances between countries, $b_{Religion} = 4.05, p < .001, b_{Country} = 6.12, p < .001, b_{Language} = 0.04, p < .001$. Genetic distance also predicted cultural distances between country/religion groups, $b = 0.204, p < .001$, but religious group distances also predicted cultural distances between country/religion groups, $b = 4.55, p < .001$, even after also controlling for genetic distance and cultural distances between countries, $b_{Religion} = 3.65, p < .001, b_{Country} = 6.17, p < .001, b_{Genes} = 0.04, p < .001$.

These patterns were similar when all variables were entered together into the same model: Cultural distances between country/religion groups were associated with both cultural distance between countries, $b = 6.05, p < .001$, and cultural distance between religious groups, $b = 3.97, p < .001$, in addition to the small relationships with geographic distance, $b = -0.021, p = .007$, genetic distance, $b = 0.042, p < .001$, and linguistic distance, $b = 0.041, p < .001$.

Overall, these results demonstrate that variation in cultural distances across groups defined by their religious denomination and their country can be predicted by both distances between broad religious groups and distances between nations, after accounting for variance attributable to geographic, linguistic, and genetic distances between populations. Geographic, linguistic, and genetic distances were much more weakly (sometimes non-significantly, and sometimes negatively) associated with cultural distances.

Figure S16. Cultural distances within a country, based on groups defined by various demographic characteristics. Mean distances depict the average distance between all pairwise within-country comparisons, and maximum distances depict that largest distance between any two groups within each country. Each point represents the CF_{ST} value within a country, black points represent the mean (and 95% confidence interval) across all countries. On average, religious groups were more culturally distant from one another than were groups within a country defined by other demographic characteristics, such as their ethnicity, gender, region of residence, or socioeconomic status.



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