**Supplemental Materials**

**Relationships between Spirituality and Right-wing Authoritarianism in Japan**

**Table S1.**

*Loadings from exploratory factor analyses whether each of the ancestor and nature worship scales load on a single construct and their zero-order correlations with authoritarianism and conventionalism in Study 1*

|  |  |  |
| --- | --- | --- |
| Items | Correlations with RWA*r* [95% CI] | Factor Loadings |
| Authoritarianism | Conventionalism |
| Ancestor worship (α = .85) |  |  |  |
| 1 | We all become precious beings as ancestor spirits when we die. | .30 [.24, .36] | .03 [-.04, .10] | 0.71 |
| 2 | It is important to respect the spirit of our ancestors. | .18 [.11, .25] | -.12 [-.18, -.05] | 0.76 |
| 3 | We do not need a New Year’s visit to the temple or *Obon* festival to honor our ancestors (reversed item). | .09 [.02, .16] | -.04 [-.11, .03] | 0.59 |
| 4 | If you do not honor your ancestors properly, you will receive divine punishment. | .32 [.25, .38] | .04 [-.03, .11] | 0.77 |
| 5 | The ancestors are watching over the people who are alive today. | .21 [.14, .28] | -.05 [-.12, .02] | 0.86 |
| Nature worship (α = .85) |  |  |  |
| 1 | Things that have been used for a long time will come to possess a soul. | .18 [.11, .25] | -.08 [-.14, -.01] | 0.76 |
| 2 | Something mysterious resides in forests and lakes. | .15 [.08, .22] | -.08 [-.15, -.01] | 0.89 |
| 3 | Animals are just animals, and no spirit will inhabit them (reversed item). | -.01 [-.08, .06] | -.18 [-.24, -.11] | 0.42 |
| 4 | I think that words have spiritual power. | .08 [.01, .15] | -.09 [-.16, -.02] | 0.74 |
| 5 | I feel a mystical power from old trees. | .13 [.06, .20] | -.11 [-.18, -.04] | 0.83 |
| *Note*. Responses to reverse-coded questions have been inverted. Factor loadings were estimated using maximum likelihood with promax rotation. |

**Table S2.**

*Result of the confirmatory factor analysis for the Japanese version of right-wing authoritarianism scale in Study 1*

|  |  |  |
| --- | --- | --- |
| 　 | Items of Altemeyer (1996)’s RWA scale | Factor Loadings |
| Authoritarianism Factor (α = .89) |  |
| 1 | Our countrya desperately needs a mighty leader who will do what has to be done to destroy the radical new ways and sinfulness that are ruining us. | 0.63 |
| 2 | Our country will be great if we honor the ways of our forefathers, do what the authorities tells us to do, and get rid of the "rotten apples" who are ruining everything. | 0.75 |
| 3 | The real keys to the "good life" are obedience, discipline, and sticking to the straight and narrow. | 0.61 |
| 4 | There are many radical, immoral people in our country today, who are trying to ruin it for their own godless purposes, whom the authorities should put out of action. | 0.66 |
| 5 | It is always better to trust the judgment of the proper authorities in government and religion than to listen to the noisy rabble-rousers in our society who are trying to create doubt in people's minds. | 0.49 |
| 6 | Our country will be destroyed someday if we do not smash the perversions eating away at our moral fiber and traditional beliefs. | 0.54 |
| 7 | The situation in our country is getting so serious, the strongest methods would be justified if they eliminated the troublemakers and got us back to our true path. | 0.56 |
| 8 | It may be considered old fashioned by some, but having a normal, proper appearance is still the mark of a gentleman and, especially, a lady. | 0.46 |
| 9 | What our country really needs is a strong, determined leader who will crush evil, and take us back to our true path. | 0.69 |
| 10 | The only way our country can get through the crisis ahead is to get back to our traditional values, put some tough leaders in power, and silence the troublemakers spreading bad ideas. | 0.77 |
| 11 | It would be best for everyone if the proper authorities censored magazines so that people could not get their hands on trashy and disgusting material. | 0.45 |
| 12 | What our country really needs , instead of more "civil rights", is a good stiff dose of law and order. | 0.58 |
| 13 | Obedience and respect for authority are the most important virtues children should learn. | 0.60 |
| 14 | Once our government leaders give us the "go ahead," it will be the duty of every patriotic citizen to help stomp out the rot that is poisoning our country from within. | 0.69 |
| 15 | The facts on crime, sexual immortality, and the recent public disorders all show we have to crack down harder on deviant groups and troublemakers if we are going to save our moral standards and preserve law and order. | 0.51 |
| Conventionalism Factor (α = .85) |  |
| 1 | Gays and lesbians are just as healthy and moral as anybody else. | 0.88 |
| 2 | Atheists and others who have rebelled against the established religions are no doubt every bit as good and virtuous as those who attend church regularly. | 0.35 |
| 3 | A lot of our rules regarding modesty and sexual behavior are just customs which are not necessarily any better or holier than those which other people follow. | 0.46 |
| 4 | There is absolutely nothing wrong with nudist camps. | 0.50 |
| 5 | There is no "ONE right way" to live life; everybody has to create their own way. | 0.52 |
| 6 | Homosexuals and feminists should be praised for being brave enough to defy "traditional family values". | 0.59 |
| 7 | Everyone should have their own lifestyle, religious beliefs, and sexual preferences, even if it makes them different from everyone else. | 0.56 |
| 8 | A "woman's place" should be wherever she wants to be. The days when women are submissive to their husbands and social conventions belong strictly in the past. | 0.47 |
| 9 | People should pay less attention to (the Bible and)b the other old traditional forms of religious guidance, and instead develop their own personal standards of what is moral and immoral. | 0.42 |
| 10 | Our country needs free thinkers who will have the courage to defy traditional ways, even if this upsets many people. | 0.45 |
| 11 | There is nothing wrong with premarital sexual intercourse. | 0.38 |
| 12 | It is wonderful that young people today have greater freedom to protest against things they don't like, and to make their own "rules" to govern their behavior. | 0.54 |
| 13 | Some of the best people in our country are those who are challenging our government, criticizing religion, and ignoring the "normal way" things are supposed to be done. | 0.37 |
| 14 | Nobody should "stick to the straight and narrow." Instead, people should break loose and try out lots of different ideas and experiences. | 0.52 |
| 15 | We should treat protestors and radicals with open arms and open minds, since new ideas are the lifeblood of progressive change. | 0.40 |
| *Note*. aIn the Japanese version, the term “our country” was replaced with “Japan.” bIn the Japanese version, this parenthesis has been omitted to reflect the religious background in Japan. All questions of conventional factor were reversed items. Responses to reverse-coded questions have been inverted. All reversed items also loaded a method factor.  |

**Table S3.**

*Fit indices of the confirmatory factor analyses for the Japanese version of right-wing authoritarianism scale in Study 1*

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Model | χ2 | *df* | *p*-value | GFI | AGFI | CFI | RMSEA | AIC | BIC |
| One Factor | 3644.16 | 405 | < .001 | 0.62 | 0.56 | 0.57 | 0.10 | 85454.23 | 85735.15 |
| Two factors  | 1638.55 | 404 | < .001 | 0.87 | 0.84 | 0.84 | 0.06 | 83450.62 | 83736.23 |
| Two factors + One method factor | 1503.91 | 390 | < .001 | 0.87 | 0.85 | 0.85 | 0.06 | 83343.98 | 83695.14 |
| *Note*. GFI = goodness of fit index; AGFI = adjusted GFI; CFI = comparative fit index; RMSEA = root-mean-square error of approximation; AIC = Akaike information criterion; BIC = Bayesian information criterion. |

**Table S4**.

*Predicting Authoritarianism and Conventionalism from Spirituality and Attitudes to Religious Symbols (Shinto, Buddhism and Christianity) in Study 1*

|  |  |  |  |
| --- | --- | --- | --- |
| 　 | Authoritarianism | 　 | Conventionalism |
| 　 | *B* | 95% CI | β | *p*-value | 　 | *B* | 95% CI | β | *p*-value |
| Authoritarianism | —  | — | — | —  |  | 0.22 | 0.17 – 0.28 | 0.28 | < .001 |
| Conventionalism | 0.32 | 0.24 – 0.40 | 0.26 | < .001 |  | —  | — | — | —  |
|  |  |  |  |   |  |  |  |  |   |
| Ancestor Worship | 0.20 | 0.11 – 0.30 | 0.21 | < .001 |  | -0.02 | -0.10 – 0.05 | -0.03 | .544 |
| Nature Worship | -0.08 | -0.16 – 0.01 | -0.08 | .071 |  | -0.16 | -0.23 – -0.09  | -0.21 | < .001 |
| Symbols of Shinto | 0.24 | 0.08 – 0.40 | 0.29 | .003 |  | 0.07 | -0.07 – 0.20 | 0.10 | .341 |
| Symbols of Buddhism | -0.08 | -0.25 – 0.09 | -0.09 | .358 |  | -0.04 | -0.18 – 0.10 | -0.06 | .556 |
| Symbols of Christianity | -0.00 | -0.09 – 0.08 | -0.01 | .912 |  | 0.05 | -0.02 – 0.12 | 0.07 | .145 |
| *Note*. CI = Confidence Interval for the unstandardized *B*. |

**Table S5**.

*Predicting Authoritarianism and Conventionalism from Gender, Age, Spirituality, Attitudes to Religious Symbols (Shinto, Buddhism, and Christianity), and Religious Affiliation in Study 1*

|  |  |  |  |
| --- | --- | --- | --- |
| 　 | Authoritarianism | 　 | Conventionalism |
| 　 | *B* | 95% CI | β | *p*-value | 　 | *B* | 95% CI | β | *p*-value |
| Gender | -0.21 | -0.35 – -0.07 | -0.10 | .003  |  | 0.05 | -0.06 – 0.17 | 0.03 | .356  |
| Age | 0.00 | -0.01 – 0.01 | 0.00 | .957  |  | 0.01 | 0.01 – 0.02 | 0.15 | <.001  |
| Religious Affiliation (Yes = 1, No = 0) | -0.00 | -0.15 – 0.14 | -0.00 | .979  |  | -0.02 | -0.14 – 0.10 | -0.01 | .718  |
|  |  |  |  |  |  |  |  |  |   |
| Authoritarianism | —  | — | — | —  |  | 0.22 | 0.16 – 0.27 | 0.27 | < .001  |
| Conventionalism | 0.31 | 0.23 – 0.39 | 0.25 | <.001  |  | —  | — | — | —  |
|  |  |  |  |   |  |  |  |  |   |
| Ancestor Worship | 0.20 | 0.11 – 0.29 | 0.21 | <.001  |  | -0.03 | -0.10 – 0.05 | -0.03 | .519  |
| Nature Worship | -0.05 | -0.14 – 0.03 | -0.06 | .228  |  | -0.17 | -0.24 – -0.10 | -0.23 | <.001  |
| Symbols of Shinto | 0.24 | 0.08 – 0.40 | 0.28 | .004  |  | 0.07 | -0.06 – 0.21 | 0.11 | .297  |
| Symbols of Buddhism | -0.07 | -0.24 – 0.10 | -0.08 | .424  |  | -0.04 | -0.18 – 0.10 | -0.06 | .580  |
| Symbols of Christianity | -0.01 | -0.09 – 0.08 | -0.01 | .834  |  | 0.05 | -0.02 – 0.12 | 0.07 | .151  |
| *Note*. CI = Confidence Interval for the unstandardized *B*. |

**Table S6**.

*Predicting Authoritarianism and Conventionalism from Gender, Age, Spirituality, Attitudes to Religious Symbols (Shinto/Buddhism and Christianity) in Study 1*

|  |  |  |  |
| --- | --- | --- | --- |
| 　 | Authoritarianism | 　 | Conventionalism |
| 　 | *B* | 95% CI | β | *p*-value | 　 | *B* | 95% CI | β | *p*-value |
| Gender | -0.22 | -0.36 – -0.08 | -0.10 | .002  |  | 0.06 | -0.06 – 0.17 | 0.03 | .350  |
| Age | 0.00 | -0.01 – 0.01 | 0.00 | .977  |  | 0.01 | 0.01 – 0.02 | 0.15 | <.001  |
|  |  |  |  |  |  |  |  |  |  |
| Authoritarianism | —  | — | — | —  |  | 0.22 | 0.16 – 0.28 | 0.27 | <.001  |
| Conventionalism | 0.32 | 0.24 – 0.40 | 0.26 | <.001  |  | —  | — | — | —  |
|  |  |  |  |   |  |  |  |  |   |
| Ancestor Worship | 0.19 | 0.10 – 0.28 | 0.20 | <.001  |  | -0.03 | -0.11 – 0.05 | -0.04 | .438  |
| Nature Worship | -0.04 | -0.13 – 0.04 | -0.05  | .301  |  | -0.17 | -0.24 – -0.10 | -0.23  | <.001  |
| Symbols of Shinto/Buddhism | 0.17 | 0.08 – 0.27 | 0.20 | .001  |  | 0.03 | -0.05 – 0.12 | 0.05 | .417  |
| Symbols of Christianity | -0.02 | -0.10 – 0.07 | -0.02 | .706  |  | 0.05 | -0.02 – 0.12 | 0.07 | .180  |
| *Note*. CI = Confidence Interval for the unstandardized *B*. |

**Figure S1**.

*Scree plots of parallel analysis for ancestor (A) and nature worship (B) in Study 1*

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