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Demographic, economic, and genetic factors related to national differences in ethnocentric attitudes

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ABSTRACT

We conducted a review of factors associated with individual and group level differences in positive ethnocentrism (PE) and negative ethnocentrism (NE). We inter-correlated datasets on national differences in these factors with data from the World Values Survey with regard to national differences in measures of PE and NE. The two different survey items for each construct were strongly correlated, but the constructs themselves were not significantly associated. Multiple regression analyses indicated that NE was mainly related to high levels of cousin marriage and frequency of the DRD4-repeat gene, and that PE was mainly related to a young median population age. Cousin marriage may indicate low levels of trust, DRD4 implies a fast Life History strategy, and young median age is associated with many factors predicting PE.

1. Introduction

The word *Ethnocentrism* was introduced to English by Sumner (1906) and defined as the belief that 'one's own group is the centre of everything' against which all other groups are judged. It entails the belief that one's own race or ethnic group is the most important and/or that some or all aspects of its culture are superior to those of other groups. It has been divided into *Positive Ethnocentrism* (PE), meaning commitment to and a belief in the importance/superiority of one's own ethnic group, and *Negative Ethnocentrism* (NE); a dislike of and belief in the inferiority of other ethnic groups (Bizumic, 2015). Ethnic groups are unified by language, culture, religion and genetics. The genetic dimension to ethnocentrism is widespread, as shown by a large body of evidence that people generally prefer friends and partners who are genetically similar to themselves (see Rushton, 2005, for a review).

Many scientists argue that ethnocentrism can be explained by the sociobiology model; ethnic groups that are genetically similar may increase their inclusive fitness interest by cooperating (see Eibl-Eibesfeldt, 1998; Salter, 2007). Thus, ethnocentrism increases 'inclusive fitness' by aiding collateral relatives (Hamilton, 1964; Van Den Berghe, 1978). The effect of ethnocentrism in the promotion of inclusive fitness has been shown in computer simulations demonstrating that ethnocentric groups always eventually triumph over groups of individualists or altruists (e.g. Hartshorn, Katnatcheev, & Shultz, 2013).

While some degree of ethnocentrism is widespread, it may vary across racial and ethnic groups. Studies of school children have found that those of Northeast Asian descent are more positively ethnocentric than are those of European descent (e.g. Neuliep, Chaudoir, & McCroskey, 2001) as evidenced in the extent and perceived quality of interaction with school children of different races. Judd, Park, Ryan, Brauer, and Krauss (1995) review four studies which find that African American youths are more negatively ethnocentric than white youths. Hooghe, Reeskens, Stolle, and Trappers (2009) surveyed 20 European countries in terms of generalized trust, a proxy for ethnocentrism in the sense that trusting members of your own society would likely be associated with making sacrifices for it. They found significant differences. Greece was strongly negatively ethnocentric with low generalized trust while Scandinavians had high generalized trust and low NE.

A number of factors are associated with ethnocentrism at the individual level. (1) Life History Strategy: Figueredo, Gladden, and Black (2012) proposed Life History (LH) strategy, on the basis that fast Life History strategy and NE are correlated at 0.26. Life History (LH) theory is a mid-level evolutionary account of differences in evolved reproductive strategies. LH theory allows the categorization of species along a continuum ranging from fast to slow reproductive strategies. A fast LH strategy is associated with an unstable environment and involves, in essence, living fast and dying young. Fast LH strategists create weak bonds, invest little in their offspring and tend towards aggressive, short-termist behaviour. Slow LH strategists have fewer offspring, but provide higher levels of parental care. They mature more slowly and

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live longer than fast LH strategists. A slow LH strategy is observed in more stable ecologies. Due to this stability, the environment's maximum carrying capacity for the species is reached and its members begin to compete with each other. They do this by investing less energy in reproduction and more in the competitive advantage of their offspring. This includes the need for future-oriented alliances and strong bonds. Testosterone has been shown to be linked to a fast LH strategy (Dutton, Van der Linden, & Lynn, 2016).

(2) Stress: Pratto and Glasford (2008) have identified stress and inter-ethnic competition as positive correlates of ethnocentrism in general. As such, ethnocentrism might be associated with the stresses caused by poverty or mortality salience, for example.

(3) Age and sex: NE is strong in male adolescents (Figueredo, Andrzejczak, Jones, Smith-Castro, & Montero, 2011).

(4) Intelligence: NE negatively associated with intelligence (e.g. Dhont & Hodson, 2014).

(5) Religiousness: NE is positively associated with religiousness (Shinert & Ford, 1958), which is in turn associated with holding nationalistic beliefs (Eisinga, Felling, & Peeters, 1990).

(6) Cousin Marriage: Drawing upon the sociobiological model, we might expect cousin marriage to increase ethnocentrism because of the ethnic genetic interests of an individual would be higher in a more inbred population.

(7) Ethnic heterogeneity (see Vanhanen, 2012) might also have an effect as people might be less inclined to make sacrifices for those who are not co-ethnics.

(8) Genes: Genetic explanations for national differences in ethnocentrism have been proposed by, for example, Way and Lieberman (2010) who find that differences in its strength are predicted by the population percentage who have a particular form of the A118G (OPRM1) gene. Anderson (1983) and many other social scientists have proposed purely cultural-environmental explanations. In this study, we will also be able to test which model explains the most with the fewest assumptions.

There appears thus to be significant group differences in the strength of ethnocentrism. Our objective here is to examine and identify factors responsible for these differences. We will draw upon two levels of ethnic grouping: (1) Nation states which, in many cases, approximately parallel ethnic groups, and (2) Broad racial groups, by classifying each nation as African, European, East Asian, or South Asian, according to the largest ethnic group within their population and excluding countries whose population is too variegated to allow one meaningful classification.

2. Method

Measures of ethnocentrism in 57 countries are taken from the World Values Survey 6 (2010–2014) (WVS, 2016). Items scored for PE were the percentage of respondents who affirmed 'Would fight for your country' and (negatively) 'Not at all proud of my nationality'. Items scored for NE were affirmative responses to 'Would not want as a neighbour': 'someone of a different race' and 'an immigrant'. The following variables were examined as potential causal factors for national differences in ethnocentrism. Our review indicated a number of individual level potential causes of ethnocentrism and so they are grouped along these lines. Table A1 lists all countries included in the study together with their values for the variables that were not complete for all countries, thus disclosing missing data.

2.1. Stress

The variables believed to be related to stress were (1) *Ethnic Conflict* (EC). Assessed on a scale of 1 to 5 given for 176 countries by Vanhanen (2012). (2). Per capita income (PCI). This is per capita income at purchasing power parity (PPP-GNI 08) given by Lynn and Vanhanen (2012). (3) Life Expectancy. This is the life expectancy 08 variable given by Lynn and Vanhanen (2012). (4) Infant Mortality. Figures from 2008 by the CIA World Factbook. (5) Crime Rate per Capita (Crime). Figures from 2008 taken from Lynn and Vanhanen (2012). (6) Gross Domestic Product per Capita (GDP). Figures from 2008 taken from CIA World Factbook. (7) Population. Data for 2014 from CIA World Factbook.

2.2. Religiousness

(8) *Atheism*. Percentage of population that does not believe in God (Lynn, Harvey, & Nyborg, 2009).

2.3. Intelligence

(9) *National IQ* (NIQ). The most recent data given by Lynn and Vanhanen (2012).

2.4. Age and gender

(10) Median Age. The population median age in 2014 from the CIA World Fact Book (2016).

(11) Male to Female Ratio (M-F). At ages between 16 and 64 in 2014 from the CIA World Factbook.

2.5. Genetic similarity

(12) *Ethnic Heterogeneity* (EH). Percentage of population that is not part of the largest ethnic group, given by Vanhanen (2012).

(13) *Cousin Marriage*. Percentage of population in either a cousin or second cousin marriage given by Bittles (2016). The median value has been taken where there are a number of studies in a country.

2.6. Genes and LH strategy

The following variables are measures of testosterone and are included to assess the role LH strategy (see Dutton et al., 2016). (14) *CAG repeats on the AR Gene* (CAG). Data for national differences in LH strategy using genetic polymorphisms given by Minkov and Bond (2015). They collected national-level data on a polymorphic androgen receptor gene. Higher numbers of CAG repeats (i.e. longer CAGs) have been linked to less sensitivity to testosterone. (15) *Androgenic hair*. Data for the percentage of the male population that has mid-phalangeal hair as a proxy for androgenic hair as a measure of androgen levels given in Dutton et al. (2016). (16) *DRD4–repeats* (DRD4). DRD4 is a dopamine receptor gene that is associated with many aspects of a fast LH when it is repeated 7 or 8 times, such as impulsiveness, financial risk-taking, gambling and delinquency. Data were taken from Minkov and Bond (2015) and denote the national frequencies of 7-repeats and of 7-or-8-repeats. (17) *5HTTLPR S-Allele* (5HTT). Data are the national frequency taken from Minkov and Bond (2015). This serotonin transporter gene is associated with sensitivity to context and especially to stressful situations. Those possessing the s-form display higher levels of ingroup-bias and out-group hostility. (18) Life history strategy (LHS). Data are the combination of the 3 LH strategy measures given by Minkov and Bond (2015) as *LHS-GFI* and based on self-reported behaviour.

3. Results

The 4 ethnocentrism measures and the 18 possible predictor variables were checked for skewness and kurtosis and were considered to have acceptable distributions if they were within the range $-1 > X < 1$. For skewness, 12 were within the range, 9 had a positive, and 1 a negative skew (Life expectancy: −1.53). Population, Atheism, EH, No Pride, PCI, Life Expectancy, M-F, Androgenic Hair, Infant Mortality, Crime, and GDP were either log or square root, or inverse transformed, depending on which provided the smallest skew.

Ten variables were within the limits for kurtosis, but this increased to 18 after the above transformations. The 4 that remained outside limits were DRD4 (−1.22), Atheism (−1.60), cousin marriage (−1.11), and M-F (5.89). Spearman zero-order correlations were therefore computed, demonstrating that M-F ratio was uncorrelated (<0.05) with the dependent variables and was therefore dropped from further analysis. Histograms showed that DRD4 has a slight bimodal distribution, and the remaining two had a peak at zero. They were used as they were because (1) the nature of these distributions could not be substantially improved by further transformations, (2) they were not far below −1, and (3) Pearson correlations and multiple regressions are fairly robust to modest non-normality.

In the next step common variance among the ethnocentrism variables was assessed for possible data reduction. A principal component factor analysis yielded two factors with eigenvalues >1 and factor loadings that reflected the contents of the questions, which were interpreted as NE and PE, respectively. The factors were orthogonally rotated (varimax normalized), which marginally equalized the variance explained between them, as seen in Table 1.

The largest number of pairwise data per cases including NE and PE varied from 23 for DRD4, over 34 for cousin marriage, EC, and EH, up to 56 for GDP, PCI, NIQ, and several other common indices. The correlations and level of statistical significance between these factors and the variables employed are in Table 2.

As the N for some variables approached the number of variables, the number of predictors had to be limited to estimate an evaluation of their common contribution in multiple regression analyses. We therefore only included variables with significant correlations with each of the dependent variables. For NE, these were cousin marriage, DRD4 and infant mortality. PE was correlated with CAG, Atheism, crime rate, GDP, Infant mortality, Life expectancy, Median age, NIQ, and PCI. For NE, there were only 13 cases that had data for all of these variables, and the model provided a poor fit. Also, the two DRD4 variables are very similar and therefore yield multi-collinearity in the model, so we excluded the one with both 7- and 8-repeats. Mean substitution yielded the model in Table 3, explaining 27% of the variance with significant contributions from DRD4 and cousin marriage. A forward stepwise model excluded Atheism, and a backward model also excluded cousin marriage, as it only contributed to 1.26% unique variance, in which case DRD4 alone accounted for 18.2% (adjusted). Note that since there were only 23 values for DRD4, this result was based on mean substitutions for 36 countries, and the high R^2 must be attributed to the very strong relation between DRD4 and cousin marriage (−0.59).

PE was correlated with many more variables with more complete data (N = 27). A simultaneous model explained 53.8% (29.4% adjusted)

Table 1
Factor loadings for both unrotated and normalized varimax rotated factors based on the four ethnocentrism items.

	Negative Ethnocentrism	Positive Ethnocentrism
Unrotated		
'Would not want as a neighbour' - 'an immigrant'	0.873	−0.396
'Would not want as a neighbour' - 'someone of a different race'	0.922	−0.274
'Would fight for your country'	0.565	0.698
'Not at all proud of my nationality'	−0.233	−0.878
Eigenvalue	1.986	1.492
Variance explained	0.496	0.373
Rotated		
'Would not want as a neighbour' - 'an immigrant'	0.958	−0.019
'Would not want as a neighbour' - 'someone of a different race'	0.955	0.112
Would fight for your country'	0.243	0.865
'Not at all proud of my nationality'	0.133	−0.899
Eigenvalue	1.909	1.569
Variance explained	0.477	0.392

Table 2
Two-way correlation matrix between PE and NE, on the one hand, and the predictor variables on the other.

	Negative Ethnocentrismt	Positive Ethnocentrism
	−0.7359	0.0795
DRD4 7rep	N = 23	N = 23
	p = 0.000	p = 0.718
	−0.6569	0.1087
DRD4 7/8rep	N = 23	N = 23
	p = 0.001	p = 0.622
	0.1579	−0.0543
5HTTLPR	N = 25	N = 25
	p = 0.451	p = 0.797
	0.3424	−0.1936
LHS	N = 36	N = 36
	p = 0.041	p = 0.258
	−0.0982	−0.2571
CAG	N = 58	N = 58
	p = 0.463	p = 0.051
	−0.0802	−0.0199
Population	N = 57	N = 57
	p = 0.553	p = 0.883
	−0.2761	−0.4915
Atheism	N = 53	N = 53
	p = 0.045	p = 0.000
	−0.1420	−0.4273
NIQ	N = 51	N = 51
	p = 0.320	p = 0.002
	−0.0824	0.0742
EH	N = 57	N = 57
	p = 0.542	p = 0.583
	0.1840	0.1177
EC	N = 49	N = 49
	p = 0.206	p = 0.420
	0.6018	0.3119
Cousin Marriage	N = 34	N = 34
	p = 0.000	p = 0.072
	−0.0355	−0.4588
PCI	N = 57	N = 57
	p = 0.793	p = 0.000
	−0.0507	−0.2436
Life Expectancy	N = 56	N = 56
	p = 0.711	p = 0.070
	−0.0977	−0.5645
Median Age	N = 58	N = 58
	p = 0.466	p = 0.000
	−0.0684	−0.0414
M-F	N = 58	N = 58
	p = 0.610	p = 0.758
	−0.0749	−0.2590
Androgenic Hair	N = 47	N = 47
	p = 0.617	p = 0.079
	−0.0658	−0.1854
Life Expectancy	N = 57	N = 57
	p = 0.627	p = 0.167
	0.1083	0.4571
Infant Mortality	N = 57	N = 57
	p = 0.422	p = 0.000
	−0.1466	0.2326
Crime	N = 58	N = 58
	p = 0.272	p = 0.079
	−0.0780	−0.3377
GDP	N = 57	N = 57
	p = 0.564	p = 0.010

Table 3
Regression summary for Negative Ethnocentrism.

	Beta	Semipartial R^2	p
Intercept			0.951
DRD4	−0.361	0.117	0.003
Atheism	0.123	0.012	0.323
Cousin M	0.275	0.056	0.038

Note. R = 0.555, R^2 = 0.308, Adjusted R^2 = 0.270.

with a significant contribution only from Median Age. Mean substitution (N = 59) increased adjusted R^2 to 33.5%, with semi-partial correlations indicating miniscule contributions (<0.5%) from all variables except Median Age, PCI, Life Expectancy, CAG, and GDP (in that order). A forward stepwise model included Median Age, Life Expectancy and PCI, jointly explaining 41.8% (38.7% adjusted), as seen in Table 4.

It could be argued that all these three predictors are correlated and driven by common underlying genetic factors, such as NIQ, even though they all provide some unique contributions (~6–14%), which makes this model trivial. The regression analysis is of course oblivious to the nature of the variables, so we attempted to examine how much variance more likely causal variables could explain. We first retained Median Age because of its very high correlation, and added CAG, NIQ, Life Expectancy and Androgenic Hair: a simultaneous model explained 38.0% (32.2 adjusted) (see Table 5). While only Median Age was significant, it explained somewhat less of the variance than IQ and Life expectancy. These results suggest multicollinearity, which is consistent with Median Age being very strongly correlated with other predictors in the model, namely CAG, Atheism, cousin marriage, Life Expectancy, NIQ, PCI, Infant Mortality and GDP (all >0.60). It is possible that Median Age is an effect of several of these variables, and we removed it from the model to force it to estimate the aggregated effects of them. A simultaneous model explained only 18.0% (12.7 adjusted), but a forward model retained IQ and Androgenic Hair, explaining 17.8 (14.8 adjusted) with only two predictors (NIQ = 13.4% and Androgenic Hair 2.3% unique variance).

Thus, Median Age has a substantial unique contribution to PE, in and above those for more directly genetic predictors, and there may be a simple psychological explanation for this. With the variables at our disposal, we could account for about 30% of the variance in NE and about 40% of the variance in PE across countries, although values for up to 40% of the countries were missing and had to be mean substituted in the regression models. The pattern of correlations suggests different causes of NE and PE, as they are significantly related to different genetic biomarkers, and to different predictor variables. Also suggestive are the very strong correlations between DRD4 and NE, cousin marriage, Crime, and EC (−0.47), Androgenic Hair (−0.80), and between CAG and Atheism; national NIQ, cousin marriage, Crime, Life Expectancy and Median Age. It should be noted that these genetic data were available for few countries, so the relationships may be unreliable or driven by other genetic differences between populations.

Finally, we examined possible racial differences in ethnocentrism, according to the categorization of countries listed in Table A1. Absolute levels are relevant for this analysis, and we therefore used the population percentage that affirmed 'Fight for country' as the PE measure, and also because national pride is known to vary widely and inconsistently across these small subgroups of countries due to tribalism and Life history. For NE we simply took the mean of the two "Would not want as a neighbour" items: 'someone of a different race' and 'an immigrant'. As seen in Table 6, effect sizes were medium to large between South Asian and other populations, but only one pairwise difference in the sequence from African to South Asian was statistically significant ($p < 0.05$), partly owing to the small numbers of African and East Asian countries. However, all differences between European and South Asian countries were both large and significant.

Table 4
Regression summary for Positive Ethnocentrism.

	Beta	Semipartial R^2	p
Intercept			<0.00001
Median Age	−0.585	0.137	<0.0005
PCI	−0.392	0.066	0.0152
Life Expectancy	0.389	0.059	0.0217

Note. R = 0.647; R^2 = 0.418; Adjusted R^2 = 0.387.

Table 5
Regression summary for Positive Ethnocentrism regressed upon more likely causal predictors.

	Beta	Semipartial R^2	P
Intercept			0.791
CAG	0.249	0.026	0.133
NIQ	−0.206	0.065	0.423
Life Expectancy	0.323	0.041	0.116
Median Age	−0.784	0.037	<0.0001
Androgenic Hair	−0.030	0.014	0.807

Note. R = 0.617, R^2 = 0.381, Adjusted R^2 = 0.322.

4. Discussion

There are five principal points of interest in the results. First, NE and PE are correlated with different predictors. Even at the item level are no correlations larger than 0.25 between NE and PE items. It appears that PE and NE are largely functions of different environmental and genetic factors. This would be congruous with their being the products of different LH strategies. Thus, the ability to create strong bonds, for example, would limit the ability to be aggressive to outsiders.

Second, it appears that there is a genetic contribution to national differences in these factors as having a large percentage of the population with 7 (r = −0.7) or 8 (r = −0.6) repeats on DRD4 predicts NE. South Asian countries were substantially more ethnocentric, both positively and negatively, conspicuously associated with the level of cousin-marriage, which is very high amongst South Asians and very low in Europe (Bittles, 2016).

Third, the results support the sociobiological model in showing that cousin marriage and the DRD4 gene are predictors of NE, so implying a partly genetic explanation. In addition, they hint at genetic causes for PE, which is associated with CAG at −0.25 and Cousin Marriage at 0.31 (both slightly short of statistical significance). These associations make sense, inasmuch as DRD4 is associated with a fast LH, which in turns leads to weak bonds, low levels of trust and to fear of outsiders. In an unstable ecology, people adopt a fast LH strategy and so have weak bonds and little trust with other people. In such ecologies, following the computer models already discussed, there will be group selection and the group that is more positively ethnocentric and hence more internally cooperative will predominate. Such cooperation is founded on trust and this can be achieved by adopting a slower LH strategy, but this would leave the group insufficiently aggressive and impulsive to promote itself genetically. The adoption of cousin marriage allows the general LH strategy to be held constant. However, it means that people have more to gain genetically by cooperating because that increases their inclusive fitness to a greater extent than it would otherwise. It also means that male paternity anxiety can be alleviated because even if the offspring is not theirs it is still likely closely related and so there is more reason to invest in the progeny and its mother. In general,

Table 6
Differences in Negative and Positive Ethnocentrism indicators as a function of race.

	N	Negative Ethnocentrism	d	'Would fight for my country'	d
African	6	15.1		57.5	
Caucasian	23	16.9	0.138	55.5	-0.160
East Asian	8	25.6	0.666*	58.0	0.154
South Asian	14	31.2	0.463	70.8	0.735
Caucasian	23	16.9	-1.141*	55.5	-1.143*

Note. South Asian includes Arab and North African countries, as justified by genetic assay data (see Lynn, 2006). Effect sizes refer to the pairwise comparisons between adjacent race groups, i.e. with that of the row above.
* = statistically significant (p < .05), referring to pairwise differences.

there is, from a genetic point-of-view, more of a reason to make sacrifices for the good of the community.

However, this practice would only be necessary because of the relatively low levels of trust, as if people could be trusted then a cooperative society could develop without the incentive that cooperation is strongly and directly promoting your own genes. So, anyone who was not relatively close kin would be strongly distrusted and this would include people of different races and ethnic groups. In addition, the practice of cousin marriage would help to create a small gene pool, rendering such a group strongly different from any other group. Following Salter (2007), the damage that immigration would thus inflict on the genetic interests of such people would be proportionally higher than if they had a larger gene pool and thus were genetically closer to any foreigner. We would not expect cousin marriage to predict PE based on a national pride as cousin marriage would also predict the inability to create large ethnic groups because this would be based on trusting people with decreasing of kinship. Instead, it would create states that were divided along tribal lines; tribes being overt kinship groups with a common ancestor. We would expect cousin marriage, however, to associated with a willingness to fight for your country, as non-co-nationals would be even more genetically distant than co-nationals of a different tribe. (It might be argued that this renders 'fight for your country' a measure of NE but we would disagree as it is potentially making a positive sacrifice for the group.) Likewise, the near-significant negative correlation between CAG and PE implies that this is associated with low testosterone and a slow LH. In such a context, people would create strong bonds and high levels of trust and so we can see how PE would develop accordingly.

Fifth, we have seen that median age explains most of PE and the association is negative: a younger median age means a more nationalistic country. This may be because a relatively young age, and a society having a relatively young age, is associated with a series of factors which would predict generalized ethnocentrism. A young median age would tend to imply a high birth-rate and a low life expectancy. These traits are associated with societies that have high levels of poverty, low levels of socioeconomic development and low average IQ. Stress and mortality salience, as well as low IQ, have been shown to be associated with elevated levels of PE at the individual level. In addition, poorer countries, and lower IQ countries, tend to be more religious than wealthier countries, and religiousness has been shown to be associated with elevated levels of PE. It may be that a cluster of factors that are associated with PE are also associated with a country having a low median age, possibly explaining this result.

Sixth, there are a number of other interesting relationships in the data, whose direction of causation requires further investigation. We can see that atheism is negatively associated with PE. This can be interpreted in at least two non-mutually exclusive ways. On the one hand, it has been found that religiousness is associated with the same factors as general ethnocentrism: stress and mortality salience (e.g. Kay, Shepherd, Blatz, et al., 2010). An alternative explanation is that religious belief makes people more ethnocentric. This point has been made in a number of evolutionary studies of religiousness, including relating to religions which are overtly universalist (see Sloane & Van Slyke, 2015). And we have already noted that, at the individual level, religiousness predicts ethnocentrism. If people are religious then they will be more positively ethnocentric because they will believe that their people are blessed by God and a moral God is watching over them. They will be more negatively ethnocentric because they will believe that the outside groups are the enemies of God. Certainly, it has been found, based on the MIDUS survey, that a group's religiousness predicts how group-centric they are, both positively and negatively (Dunkel & Dutton, 2016). As such, we would expect religiousness to heighten ethnocentrism. This is apparently what we are seeing.

Appendix A

Table A1
List of all countries and their corresponding values for non-complete variables, as well as their categorization into broad racial groups.

Country	Race	DRD4	5HTTLPR	LHS	AR_CAG	Pop (Mn)	Atheism	IQ	EH	E C	Negat Ethno	Posit Ethno	Cousin marriage	PPP	Life exp	Median age	MF rat	Andro hair	Infant Mort	Crime	GDP
Algeria	S				21.11	38.81	1		17	2	0.2152	0.5576	22.6	7880	72	27.3	1.02	64.5	22.6	1.5	7.5
Argentina	C			−36	22.5	43.02	4	96.0	4	1	−1.3817	−0.9936	0.8	13990	75	31.2	1.00	54.5	10.2	5.5	18.6
Armenia	C				22.59	3.06	14	92.0	2	1	0.3130	0.5328		6310	74	33.7	0.88	54.5	17.6	1.4	6.3
Australia	C			−21	21.9	22.51	25	98.0	8	1	−1.0018	0.4004	0.7	37250	81	38.3	1.03	54.5	4.5	1.0	43.0
Azerbaijan	C				22.59	9.68	1		9	1	2.1572	−0.2706		7770	70	30.1	0.97	54.5	27.7	2.2	10.8
Bahrain	S				18.8	1.31		81.0	37	3	0.6558	−0.5222	26.2	33400	75	31.6	1.33	64.5	9.9	0.6	29.8
Belarus	C				22.35	9.61	17		7	1	0.6733	−0.8563		12110	71	39.4	0.94	54.5	3.7	4.9	16.1
Brazil	C			−43	20.23	202.63	1	88.0	46	3	−1.1618	−1.6865	7.8	10070	72	30.7	0.98	32.0	19.8	21.8	12.1
Chile	C	27	51	−23	22.5	17.32	2	91.0	8	2	−1.2488	−0.1566	1.0	13240	79	33.3	1.00	54.5	7.2	3.7	19.1
China	E			161	23.2	1355.7	12	105.5	8	2	−0.7066	0.9006	3.8	6010	73	36.7	1.06	15.0	15.2	1.0	9.8
Colombia		31	51	−62	20.33	46.22	1	83.5	27	2	−1.3713	1.3415	2.8	8430	73	28.9	0.97	44.5	15.0	31.4	11.1
Cyprus	C				21.33	1.17			1	1	0.6817	0.0705		24980	78	35.7	1.08	85.5	8.8	1.7	24.5
Ecuador					20.33		1	88.0	44	3	0.9230	0.6056	3.7	7770	75	26.1	0.97				
Egypt	S	5	44	−80	18.8	86.89	1	81.0	10	2				5470	70	25.1	1.03	85.5	23.3	1.2	6.6
Estonia	C	7	34.81	−4	21.5	1.25	49	99.0	32	2	0.9519	−1.5914		19320	74	41.2	0.91	54.5	6.8	5.2	22.4
Georgia	C				22.59	4.93	4		16	3	0.8632	0.8269		4920	72	37.7	0.93	64.5	14.2	2.5	6.1
Germany	C	21.7	43.03	−43	22	80.99	42	99.0	9	1	−0.1362	−1.5443		35950	80	46.1	1.04	64.5	3.5	0.8	39.5
Ghana	A			−203	20	25.75	1	70.0	28	2	−0.1598	1.0081		1320	57	20.8	1.00	15.0	39.7	15.7	3.5
Hong Kong	E	0	75	163	23.1	7.11		106.0			0.0140	−1.5298	1.8	43960	82	43.2	0.94	15.0	2.9	0.2	52.7
India	S	0.8	58.85	53	21.19	1236.34	3	82.0	59	4	1.8515	−0.2394	26.3	2930	64	27	1.13	32.0	44.6	3.5	4.0
Iraq	S				21.19	32.58	1	87.0	40	5	0.8595	0.2523	39.7	3600	68	21.5	1.03	85.5	38.9	2.0	7.1
Japan	E	1	80.25	194	23.7	127.10	65	105.0	2		0.3927	−1.9182	3.9	35190	83	46.1	1.02	32.0	2.2	0.3	37.1
Jordan	S	5	44	−80	18.18	7.930	1	84.0	2		0.8100	1.0654	38.8	5710	73	21.8	1.00	85.5	15.3	1.8	6.1
Kazakstan		0	79.45	86	22.59	17.949	12		37	3	−0.1167	0.9355		9710	66	29.7	0.95	44.5	22.3	8.8	14.1
Kuwait	S				21.19	2.743	1	86.5	20	2	0.8026	0.9481	32.2	53430	78	28.9	1.00	54.5	7.7	2.2	42.1
Kyrgyzstan					22.59	5.604	7		35	3	0.5520	0.4922		2150	67	25.7	0.96	32.0	28.7	20.1	2.5
Lebanon	S				21.25	5.883	3	82.0	40	3	1.3401	−1.2486	31.9	11740	72	29.3	0.98	85.5	14.8	2.2	15.8
Libya	S				18.8	6.244	1	85.0	10	2	2.6311	0.2779	37.6		74	27.5	1.06	85.5	12.3	2.9	11.3
Mexico		31	51.96	−58	21.74	120.287	5	88.0	15	2	−0.7159	0.6491	1.0	14340	75	27.3	0.94		16.3	23.7	15.6
Morocco	S		34	−92	21.02	32.987	1	84.0	1		−0.5255	0.1987	19.9	4180	71	28.1	1.00	85.5	25.5	1.4	5.5
Netherlands	C	18.5	42.72	−32	22	16.877	42	100.0	14	2	−0.5156	−1.1549	0.2	40620	80	42.1	1.02	64.5	3.7	1.1	41.4
New Zealand	C		43.03	−25	21.9	4.402	22	99.0	26	2	−1.3021	−0.4965		25200	80	37.6	1.00	54.5	4.7	0.9	30.4
Nigeria	A			−176	20	177.156	1	71.0	36	4	0.0081	−0.2495	51.2	1980	48	18.2	1.40		73.0	12.2	2.8
Pakistan	S				21.19	196.174	1	84.0	55	4	−0.1627	1.5090	48.8	2590	67	22.6	1.05	44.5	59.4	7.8	3.1
Peru				−73	22.5	30.148	1	85.0	54	3	−0.8793	0.2246	2.4	7940	73	27	1.01	15.0	20.9	10.3	11.1
Phillipines	E				22.6	107.668	1	90.0	36	3	−0.2113	1.3394	0.4	3900	72	23.5	1.00	2.0	18.2	5.4	4.7
Poland	C			−38	22.35	38.346	3	92.0	3		−1.0706	0.7582		16710	76	39.5	0.99	64.5	6.3	1.1	21.1
Qatar	S				18.8	2.123		83.0	60	3			44.5	80900	76	32.6	1.00	54.5	6.6	0.9	102.1
Romania	C				22.2	21.730	4	91.0	10	2	0.1678	−0.0145		13380	73	39.8	0.99	64.5	10.4	2.0	13.2
Russia	C	7	43.91	24	22.35	142.470	27	96.5	20	3	0.3828	−1.1101		15440	68	38.9	0.92	54.5	7.2	9.7	18.1
Rwanda	A				20	12.337	1	76.0	16	3	−1.4787	1.1286		1110	50	18.7	1.00	2.0	61.0	17.1	1.5
Singapore	E			143	23.02	5.567	13	108.5	23	2	0.2007	−0.0997	5.0	47940	81	33.8	0.95	2.0	2.5	0.3	62.4
Slovenia	C				22.2	1.988	35	96.0	17		−0.6018	−0.2909	0.6	27160	79	43.5	1.02	85.5	4.1	0.7	27.4
South Africa	A	30	27.79	−180	20	48.376	1	72.0	21	3	0.5880	−0.6948	6.1	9780	51	25.7	1.02	32.0	42.1	31.8	11.5
South Korea	E	0	79.45	184	23.35	49.040	30	106.0	1		1.3569	−0.1915		27840	80	40.2	1.04	15.0	4.0	2.6	33.2
Spain	C	19	76.45	−27	21.85	47.738	15	97.0	26	2	−1.1682	−1.4977	6.4	30830	81	41.6	1.01	85.5	3.4	0.8	30.1
Sweden	C	20	46.73	−35	22	9.724	64	99.0	12	1	−1.1771	0.0670		37780	81	41.2	1.03	85.5	2.7	1.0	40.9
Taiwan	E	0	70.57	154	23.2	23.360	24	105.0	16	2	−0.3424	−1.6799	23.4	30100	78	39.2	1.02	2.0	4.5	3.2	39.6
Thailand	E	0	70.12	149	23.1	67.741	1	88.0	25	3	1.9773	1.2955		7760	69	36.2	0.98	2.0	15.4	4.8	9.9
Trinidad & Tobago	A				20	1.224	9	87.0	60	3	−1.3748	0.8956		9192	69	34.4	1.05		24.8	35.2	20.3
Tunisia	S				21.02	10.938	1	84.0	2		−0.1542	0.2644	26.9	7450	74	31.4	1.01	85.5	24.1	1.1	9.9
Turkey	C	10	54.29	51	22.59	81.619		88.5	25	3	0.8965	0.9597		13420	72	29.6	1.02	85.5	22.2	3.3	15.3
Ukraine	C	7	44	13	22.35	44.291	20	95.0	22	3	0.0215	−2.3235		72190	68	40.6	0.92	64.5	8.2	5.2	7.4
United States	C	21.6	44.53	−54	21.5	318.892	11	98.0	40	2	−0.8503	−0.0689	0.3	48430	78	37.6	1.07	44.5	5.9	4.7	52.8
Uruguay	C			−36	22.5	3.333	12	96.0	96		−1.4795	−0.2303	2.6	12540		34.3	0.99	64.5	9.0	5.9	16.6
Uzbekistan					22.59	28.930	4		20	2	−0.6547	1.6497		2660		27.1	0.99	44.5	20.5	3.1	3.8
Yemen	S	5	44	−80	18.8	26.053	1	83.0	4	1	0.4877	1.4629	39.3	2220	63	18.6	1.03	64.5	51.9	4.2	2.5
Zimbabwe	A			−187	20	13.772	4	71.5	9	2	−0.8257	0.0428		200	44	20.2	0.81	15.0	27.3	14.3	0.6

Note.
A = Sub–Saharan African, C = Caucasian (European), E = East Asia, S = South Asian.

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