Evolution of Religion and Morality Project: Wave I Dataset Materials

Harvard Dataverse Version 5.0

Last Updated: May 17, 2017

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CERC
Cultural Evolution of Religion Research Consortium

1. Notes, Updates, and Corrigenda

Last Updated May 17, 2017

Only updates to dataset will be archived in this document

Version 5.0: May 17, 2017

Note: All authors of the *Nature* and *Scientific Data* papers have been notified of these updates (see references below). There have been no detectable qualitative differences in any previously published results due to these changes.

10. **CORRECTED:** BGFREQW and LGFREQW values for Inland and Coastal Tanna participants. Data were entered incorrectly on a scale of 0 to 3 when it should have been 0 to 4.
9. **CORRECTED**: BGPERFHO and BGTHINK values for Lovu participants. Data were entered using a 1-5 scale, when it should have been on a 0-4 scale. All values were replaced with the correct values (-1 each value other than NA).
8. **CORRECTED**: CERC446 (Tyva Republic) had an OUTGREMO value of "0" when the scale was 1-5. The value originally entered was "1", but the audit caught that the original data sheet read "0" which is a null response (not a zero). This was replaced with "NA."
7. **MERGED** the datasets called "Main" and "Full Hadza Data" for easier management. We also **CODED** all responses for Hadza-specific variables (see codebook). As such, we will no longer maintain the Full Hadza Data set.

Version 4.0: March 22, 2017

Note: These updates have been approved by all authors of the *Nature* and *Scientific Data* papers (see references below). There have been no detectable qualitative differences in any previously published results due to these changes.

6. **CORRECTED** data entry errors in variables (POLEVAL and CORELSIM) for Lovu where data were entered on a scale between 1 and 4 rather than -2 to 2. **While these would affect the values in the correlation tables in [NATURE], Lovu were not included in any of the regressions including these variables. They were, however, included in "No Local Gods" models in the [RBBGROUP] paper.**

Version 3.0: February 6, 2017

Note: These updates have been approved by all authors of the *Nature* and *Scientific Data* papers (see references below). There have been no detectable qualitative differences in any previously published results due to these changes.

5. **CORRECTED** errors in variable (BGLG1ST) indicating whether or not participants answered "Moralistic God" or "Local God" questions first. Three participants in Pesqueiro had "2" which originally indicated the "Local God" questions were asked first. We converted these to "0" to be consistent with the rest of the data. We also added "1" to all cells for Mauritius as this sample answered the "Moralistic God" questions first.

4. **RECALCULATED** centered age (AGE.C). As we added an additional individual (see below), the values for sample centered-at-mean age has changed slightly.

3. **ADDED participant** (**UCRC592**)**.** Initially, one Mauritius participant was deleted from the data set as their original coin data were entered incorrectly. The hard-copy reads that in the *Local Community Game*, their coin allocations were 18 for the LOCAL cup and 12 for the DISTANT cup. However, this data was originally entered as 13 and 12, respectively. As these coins appeared to go missing, this individual was deleted from the sample. We have reintroduced this participant to the data set raising the total sample size to *n* = 592.

2. **REPLACED religiosity data for CERC2 with NA**. CERC2 and CERC25 (both from Coastal Tanna) had identical religiosity data. CERC2 should have had no religiosity data entered and the actual data in both should have been only in CERC25's row. This error was due in part to very similar original local IDs (the original error), and the subsequent correction did not replace the incorrect data with empty values. **Error included in: SCIDATA, NATURE, and RBBGROUP.**

1. FREE-LIST DATA: **RECODED free-list data about the moralistic god's (Shiva) for Lovu Fiji.** The Lovu Fiji free-list data for moralistic deities (Shiva) was coded in error. Research assistants coded the morality free-list data twice; once in the moralistic deity cells and once correctly for the morality data. The Shiva data were subsequently recoded correctly. **Error included in NATURE, updated and acknowledged in RBBGROUP. As of February 6, 2017, these data are not yet publicly available.**

Version 2.0: August 18, 2016

No data updates for previous versions.

2. Codebook and Notes

All protocol materials can be found at the project website here: http://www.hecc.ubc.ca/cerc/the-cultural-evolution-of-prosocial-religions/the-cultural-evolution-of-prosocial-religions-protocols/.

†Hadza data not included. See corresponding Hadza variables marked with ‡
©Lovu questions not asked

Note on religiosity variables: "Big God" variables (denoted with BG) are about locally salient moralistic gods whereas the "Local God" variables (denoted with LG) are locally salient supernatural beings who might care about other things (e.g., ritual, ecology, etc.).

Variable	Description	Code/Scale and Notes
CERCID	Unique ID for each individual	ID
LOCALID	Unique ID for each individual by SITE (corresponds to hard-copies of data)	ID
RESEARCHER	Researcher leading site study	Atkinson; Apicella; Cohen; McNamara; Purzycki; Willard; Xygalatas
SITE	Name of field site	Coastal Tanna; Hadza; Inland Tanna; Lovu; Mauritius; Pesqueiro; Tyva Republic; Yasawa
TREATMENT	Condition	0 = no prime; 1 = Moralistic God prime
ORDER	Order of randomly assigned game	12 = Local Co-Religionist Game first; 21; Self Game First; 321; Tyva Republic variant (SELF vs. INGROUP)
INGFIRST	Played Local Community Game first	0 = *Self Game* first; 1 = *Local Community Game* first
COREL.L	Amount in distant co-ethnic, co-religionist cup for Local Community Game	0 to 30
INGROUP	Amount in local co-ethnic, co-religionist cup for Local Community Game	0 to 30
SUM1	Sum of COREL.L and INGROUP cups	30
COREL.S	Amount in distant co-ethnic, co-religionist cup for Self Game	0 to 30
SELF	Amount in distant co-ethnic, co-religionist cup for Self Game	0 to 30
SUM2	Sum of COREL.S and SELF cups	30

HONEST	Whether or not participants mentioned honesty, dishonesty, cheating, rule-following in post-game interview	0 = did not mention; 1 = mentioned
SEX	Sex of participant	0 = female; 1 = male
AGE	Age of participant	numeric
AGE.C	Age of participant centered at entire sample mean	numeric
FAMILY	Family status	1=single; 2=married; 3=engaged; 4=divorced; 5=widowed[1]
CHILDREN	Number of children fathered/given birth to	numeric
FORMALED	Total years of formal education	numeric
HOUSEHOLD	Total number of people in household	numeric
NATLANG	How well do you speak [NATIVE LANGUAGE]?	(0) I don't speak [NATIVE LANGUAGE]; (1) not well; (2) well; (3) very good; (4) fluent
MAT1	Do you worry that in the next month your household will have a time when it is not able to buy or produce enough food to eat?	0=no; 1=yes
MAT1C	How certain are you that you will be able to buy or produce enough food to eat in the next month?	(-2) very uncertain; (-1) a little uncertain; (0) I don't know; (1) a little certain; (2) very certain
MAT2	Do you worry that in the next six months your household will have a time when it is not able to buy or produce enough food to eat?	0=no; 1=yes
MAT2C	How certain are you that you will be able to buy or produce enough food to eat in the next six months?	(-2) very uncertain; (-1) a little uncertain; (0) I don't know; (1) a little certain; (2) very certain
MAT3	Do you worry that in the next year your household will have a time when it is not able to buy or produce enough food to eat?	0=no; 1=yes
MAT3C	How certain are you that you will be able to buy or produce enough food to eat in the next year?	(-2) very uncertain; (-1) a little uncertain; (0) I don't know; (1) a little certain; (2) very certain
MAT4	Do you worry that in the next five years your household will have a time when it is not able to buy or produce enough food to eat?	0=no; 1=yes
MAT4C	How certain are you that you will be able to buy or produce enough food to eat in the next five years?	(-2) very uncertain; (-1) a little uncertain; (0) I don't know; (1) a little certain; (2) very certain
MMAT	Mean material insecurity	-2 to 2
MMATc	Mean material confidence	0 to 1
HIGHGOD.BG	Composite knowledge and punishment score for moralistic god	0 to 1

[1] Some cells in Pesqueiro contain “amaziado” which means “living together.” Perhaps recode as 1 for “single” or 3 for “engaged.”

OMNI.BG	Composite knowledge score for moralistic god	0 to 1
DIEPUN	Composite punishment score for moralistic god	0 to 1
DKDIEPUN	Answered "I don't know" for both DIEPUN items	1 = said “I don't know”; 0 = answered questions
MBG	Composite (mean) moral concern score for moralistic god	0 to 4
BGR1†	Transformed reward score for moralistic god (with Coastal Tannese)	0 to 1 (BGREWARD / maximum possible)
BGR2†	Transformed reward score for moralistic god (without Coastal Tannese)	0 to 1 (BGREWARD / maximum possible)
BGLG1ST	Big god or local god questions first?	0=Local God first; 1=Big God First
BGTHINK†	How often do you think about BIG GOD?	(0) very rarely/never; (1) a few times per year; (2) a few times per month; (3) a few times per week; (4) every day or multiple times per day
BGPERF	Do you perform activities or practices to talk to, or appease BIG GOD?	0=no; 1=yes
BGPERFHO†	If yes, how often? ((a) Daily, (b) weekly, (c) month, (d) annually, (e) other_____)	(0) very rarely/never; (1) a few times per year; (2) a few times per month; (3) a few times per week; (4) every day or multiple times per day
BGFREQW†	How frequently do you worry about what BIG GOD thinks about you?	NOTE[2]
BGPUNISH	Does BIG GOD ever punish people for their behavior?	0=no; 1=yes
BGSTEAL†	How often does BIG GOD punish people for stealing?	NOTE[3]
BGSTLIMP†	How important is punishing thieves to BIG GOD?	(0) not important at all; (1) a little important; (2) important; (3) very important; (4) the most important thing
BGLYING†	How often does BIG GOD punish people for lying?	NOTE[3]
BGLIEIMP†	How important is punishing liars to BIG GOD?	(0) not important at all; (1) a little important; (2) important; (3) very important; (4) the most important thing
BGMURDER†	How often does BIG GOD punish people for murder?	NOTE[3]

[2] For Pesqueiro, Tyva Republic, Inland Tanna, and Coastal Tanna: (0) very rarely/never; (1) a few times per year; (2) a few times per month; (3) a few times per week; (4) every day or multiple times per day. For Lovu, Mauritius, Yasawa: (0) never; (1) sometimes; (2) frequently or often; (3) always or all the time. One way to normalize the data is to divide values by the maximum possible values in each site.

[3] For Pesqueiro and Tyva Republic: (0) very rarely/never; (1) a few times per year; (2) a few times per month; (3) a few times per week; (4) every day or multiple times per day. For Mauritius, Coastal and Inland Tanna: (0) never; (1) sometimes; (2) frequently or often; (3) always or all the time. Note that the Coastal Tannese words (in Bislama) for (2) and (3) were virtually indistinguishable and therefore might be collapsed. One way to normalize the data is to divide values by the maximum possible values in each site.

BGMURDIMP†	How important is punishing murderers to BIG GOD?	(0) not important at all; (1) a little important; (2) important; (3) very important; (4) the most important thing
BGFEEL	Can BIG GOD see into people's hearts or know their thoughts and feelings?	0=no; 1=yes
BGSEE	Can BIG GOD see what people are doing if they are far away, in -_____[in distance town or city familiar to locals; further is better)	0=no; 1=yes
BGREWARD†	How often does BIG GOD assist people in their lives or reward them for proper behavior?	NOTE[3]
BGDIE	Can BIG GOD influence what happens to people after they die?	0=no; 1=yes
BGSTRANGER	Does BIG GOD care about how people treat strangers?	0=no; 1=yes
BGOTHERRIT	Does BIG GOD care about how people treat other people who perform rituals for BIG GOD	0=no; 1=yes
BGPERFC	Does BIG GOD care about whether people perform certain rituals?	0=no; 1=yes
HIGHGOD.LG	Composite knowledge and punishment score for nonmoralistic god	0 to 1
OMNI.LG	Composite knowledge score for nonmoralistic god	0 to 1
LGDIEPUN	Composite punishment score for nonmoralistic god	0 to 1
MLG	Composite (mean) moral concern score for nonmoralistic god	0 to 4
LGR1†©	Transformed reward score for nonmoralistic god (with Coastal Tannese)	0 to 1
LGR2†©	Transformed reward score for nonmoralistic god (without Coastal Tannese)	0 to 1
LGTHINK†©	How often do you think about LOCAL GOD?	(0) very rarely/never; (1) a few times per year; (2) a few times per month; (3) a few times per week; (4) every day or multiple times per day
LGPERF©	Do you perform activities or practices to talk to, or appease LOCAL GOD?	0=no; 1=yes
LGPERFHO†©	If yes, how often? ((a) Daily, (b) weekly, (c) month, (d) annually, (e) other_____)	(0) very rarely/never; (1) a few times per year; (2) a few times per month; (3) a few times per week; (4) every day or multiple times per day
LGFREQW†©	How frequently do you worry about what LOCAL GOD thinks about you?	NOTE[2]
LGPUNISH©	Does LOCAL GOD ever punish people for their behavior?	0=no; 1=yes

LGSTEAL†©	How often does LOCAL GOD punish people for stealing?	NOTE[3]
LGSTEALIMP†©	How important is punishing thieves to LOCAL GOD?	(0) not important at all; (1) a little important; (2) important; (3) very important; (4) the most important thing
LGLYING†©	How often does LOCAL GOD punish people for lying?	NOTE[3]
LGLIEIMP†©	How important is punishing liars to LOCAL GOD?	(0) not important at all; (1) a little important; (2) important; (3) very important; (4) the most important thing
LGMURDER†©	How often does LOCAL GOD punish people for murder?	NOTE[3]
LGMURDIMP†©	How important is punishing murderers to LOCAL GOD?	(0) not important at all; (1) a little important; (2) important; (3) very important; (4) the most important thing
LGFEEL©	Can LOCAL GOD see into people's hearts or know their thoughts and feelings?	0=no; 1=yes
LGSEE©	Can LOCAL GOD see what people are doing if they are far away, in _____[in distance town or city familiar to locals; further is better)	0=no; 1=yes
LGREWARD†©	How often does LOCAL GOD assist people in their lives or reward them for proper behavior?	NOTE[3]
LGDIE©	Can LOCAL GOD influence what happens to people after they die?	0=no; 1=yes
LGSTRANGER©	Does LOCAL GOD care about how people treat strangers?	0=no; 1=yes
LGOTHERRIT©	Does LOCAL GOD care about how people treat other people who perform rituals for LOCAL GOD	0=no; 1=yes
LGPERFC©	Does LOCAL GOD care about whether people perform certain rituals?	0=no; 1=yes
COREL EMO†	Using these pictures, how emotionally close do you feel to a COREL?	1 = completely separate to 5 = completely part of
INGREMO†	Using these pictures, how emotionally close do you feel toward an INGROUP	1 = completely separate to 5 = completely part of
CORELSIM†	How similar are COREL's traditions/religious beliefs and practices with the INGROUP?	(-2) very different; (-1) different; (0) same; (1) similar; (2) very similar
OUTGREMO†	Using these pictures, how emotionally close do you feel toward an OUTGROUP?	1 = completely separate to 5 = completely part of
POLEVAL†	Most members of the police are…	(-2) extremely bad; (1) bad; (0) neither good nor bad; (1) good; (2) extremely good

BGTHINKH‡	Do you think about BIG GOD?	(-1) no; (0) don't know; (1) yes[4]
BGFREQWH‡	Does BIG GOD think about you?	(-1) no; (0) don't know; (1) yes
BGSTEALH‡	Does BIG GOD punish people for stealing?	(-1) no; (0) don't know; (1) yes
BGLYINGH‡	Does BIG GOD punish people for lying?	(-1) no; (0) don't know; (1) yes
BGMURDERH‡	Does BIG GOD punish people for murder?	(-1) no; (0) don't know; (1) yes
BGREWARDH‡	Does BIG GOD help people or give them gifts for being good?	(-1) no; (0) don't know; (1) yes
LGTHINKH‡	Do you think about LOCAL GOD?	(-1) no; (0) don't know; (1) yes
LGFREQWH‡	Does LOCAL GOD think about you?	(-1) no; (0) don't know; (1) yes
LGSTEALH‡	Does LOCAL GOD punish people for stealing?	(-1) no; (0) don't know; (1) yes
LGLYINGH‡	Does LOCAL GOD punish people for lying?	(-1) no; (0) don't know; (1) yes
LGMURDERH‡	Does LOCAL GOD punish people for murder?	(-1) no; (0) don't know; (1) yes
LGREWARDH‡	Does LOCAL GOD help people or give them gifts for being good?	(-1) no; (0) don't know; (1) yes
POLEVALH‡	Do you think the POLICE are good, bad, or don't know?	(-1) bad; (0) don't know; (1) good
CORELEMOH‡	Using these pictures, how emotionally close do you feel to a COREL?	0 (completely separate to) to 4 (completely part of)
INGREMOH‡	Using these pictures, how emotionally close do you feel toward an INGROUP	0 (completely separate to) to 4 (completely part of)
OUTGREMOH‡	Using these pictures, how emotionally close do you feel toward an OUTGROUP?	0 (completely separate to) to 4 (completely part of)

[4] The remaining variables are only for the Hadza (variable names denoted with the "H" in the data set). As they had difficulty with scales, many questions were reformulated. Those questions that used scales used a different scale should be treated with caution.

3. Images of Treatment Conditions in Field Sites

Note. The following images were taken in those field sites that used religious prime conditions in the experiments outlined in Purzycki, et al. (2016c), with accompanying data available online (Purzycki, et al. 2016a, b). The variable for condition therein is TREATMENT (0 = control condition; 1 = treatment condition). The following sites used prime conditions: Lovu, Mauritius, Pesqueiro, Tyva Republic, and Yasawa. Note that no images were taken of the prime condition for the Pesqueiro, Brazil site. The prime was an open Holy Bible (Bíblia Sagrada) overlaid with a cord-necklace with a wooden cross pendant. These were placed on the corner of the table on which the games were played, approximately half a meter from the seated participant and sufficiently distant that the print could not be read from the participant's game-playing position. All other project images and protocol materials can be found at the project website here: http://www.hecc.ubc.ca/cerc/the-cultural-evolution-of-prosocial-religions/the-cultural-evolution-of-prosocial-religions-protocols/.

Figure 1. Game conditions for Yasawa, Fiji | In Yasawa, participants played on a table with printed cloths (*sulus*). The treatment condition (A) primed Christianity, and the cloth in the control condition (B) reads “Hello” or “Life Fiji”. Photo credit: Rita A. McNamara.

Figure 2. Game setup on location with luck charm (*kamgalal*) prime in Tyva Republic | From top are: three cup dyads on a tray, luck charm, two-colored die, and thirty 10-ruble coins. The *kamgalal* is typically found above doorways or hanging from rear-view mirrors to ward of bad spirits or bring luck and wealth to people. In the control condition, participants played without the *kamgalal*. Photo credit: Benjamin Purzycki.

Figure 3. Prime for Indo-Fiji treatment condition | Among Indo-Fijians, the prime condition included a small Siva Lingam with an orange garland and small trident on a short covered table. These items were chosen because they are well-recognized abstract symbols of the god Shiva. Unlike most representations of deities in Fiji-Hinduism, they are not human-like and do not have eyes. Photo credit: Aiyana Willard.

Figure 4. Control (top) and treatment (bottom) locations for Mauritius | The control (a restaurant) and treatment (a Hindu temple) were empty at the time of the experiment, which took place inside each location. Photo credit: Dimitris Xygalatas.

4. Publications Using This Data

Last Updated May 5, 2017

A. Synthetic Articles and Volumes

SCIDATA Purzycki, B. G., Apicella, C., Atkinson, Q. D., Cohen, E., McNamara, R. A., Willard, A. K., … Henrich, J. (2016a). Cross-cultural dataset for the evolution of religion and morality project. *Scientific Data*, 3, 160099.

NATURE Purzycki, B. G., Apicella, C., Atkinson, Q. D., Cohen, E., McNamara, R. A., Willard, A. K., … Henrich, J. (2016b). Moralistic gods, supernatural punishment and the expansion of human sociality. *Nature*, 530(7590), 327–330.

RBBGROUP Purzycki, B. G., Norenzayan, A., Apicella, C., Atkinson, Q., Baimel, A., Cohen, E., McNamara, R. A., Willard, A. K., and Henrich, J. (in press). The evolution of religion and morality: A synthesis of ethnographic and experimental evidence from eight societies. *Religion, Brain and Behavior*, X(X): XXX-XXX.

Purzycki, B. G., Henrich, J. and Norenzayan, A., eds. (in press). The Evolution of Religion and Morality [special issue]. *Religion, Brain and Behavior.*

B. Case Studies

Apicella, C. (in press). High levels of rule-bending in a minimally religious and largely egalitarian forager population. *Religion, Brain and Behavior.*

Atkinson, Q. (in press). Religion and expanding the cooperative sphere in Kastom and Christian villages on Tanna, Vanuatu. *Religion, Brain and Behavior.*

Cohen, E., Baimel, A., and Purzycki, B. G. (in press). Religiosity and resource allocation in Marajó, Brazil. *Religion, Brain and Behavior.*

McNamara, R. A. and Henrich, J. (in press). Jesus vs. the ancestors: How specific religious beliefs shape prosociality on Yasawa Island, Fiji. *Religion, Brain and Behavior.*

Purzycki, B. G., and Kulundary, V. (in press). Buddhism, identity, and class: Fairness and favoritism in the Tyva Republic. *Religion, Brain and Behavior.*

Willard, A. K. (in press). Religion and prosocial behavior among the Indo-Fijians. *Religion, Brain and Behavior.*

Xygalatas, et al. (in press). Big gods in small places: The Random Allocation Game in Mauritius. *Religion, Brain and Behavior.*