

Dr. Lee Cronk  
01:070:377 Evolution and Religion  
Spring 2021  
Time: Mondays from 9:15am to 12:15pm  
Location: Online, synchronous remote, via Zoom

**Email:** leecronk@rutgers.edu

**Office hours:** By appointment, via Zoom.

**Class website:** Sakai, not Canvas

**Required books:**

Edmonds, Ennis B. 2012. *Rastafari: A Very Short Introduction*. Oxford: Oxford University Press.

Keown, Damien. 2013. *Buddhism: A Very Short Introduction*. Oxford: Oxford University Press.

Knott, Kim. 2000. *Hinduism: A Very Short Introduction*: Oxford: Oxford University Press.

The books on Buddhism and Hinduism are available online via the Rutgers Libraries website. You will need to buy a copy of the book on Rastarianism.

**Requirements:**

**In-class discussions:** This class will be taught as a seminar. Each class will consist primarily of critical discussions led by class members of articles and book chapters selected from the list below. We will try to work through three or four articles or chapters each week. Everyone is required to read all of the assigned readings, but the discussion on each particular reading will be led by a specific member of the class. The exact number of discussions each class member will lead will depend upon the number of people in the class, and every effort will be made to ensure that everyone leads the same number of discussions. The primary job of the discussion leader will be to **teach** the article to the class, highlighting its strengths as well as its weaknesses, rather than to criticize the article. Your contributions as leaders of discussions will be worth 30% of your grade for the semester.

**In-class group projects:** Beginning in week 5, toward the end of each class period we will break up into small groups to discuss ways to apply the lessons learned from the day's readings to an artificial religious tradition. Toward the end of the semester, each group will give a presentation to the class on the religious tradition they have imagined. Remember that your goal in your presentation is to demonstrate an understanding of the various ideas about religion, cognition, and evolution that we have covered during the semester. Each group presentation will be graded, and your group's grade will be worth 10% of your grade for the semester.

**Class attendance and participation:** 10% of your grade for the semester will be based on your attendance record and your record of participation in class discussions.

**Research paper:** You are to write a ten-page research paper in which you apply the concepts and findings discussed in class to a specific religious tradition. Which specific religions you work on will be decided through an in-class discussion and negotiation with other students. Students are encouraged to choose religious traditions with which they are not already familiar. There are literally thousands of religious and spiritual traditions that would be appropriate for this

assignment, so you are encouraged to search broadly for one that you find particularly interesting. One place to start is Wikipedia's list of religions and spiritual traditions:

[https://en.wikipedia.org/wiki/List\\_of\\_religions\\_and\\_spiritual\\_traditions](https://en.wikipedia.org/wiki/List_of_religions_and_spiritual_traditions)

Your paper should begin with a brief (e.g., 2-3 page) summary of the main features of the religion. That should be followed by an analysis of the ways in which the ideas we have covered over the semester regarding religion, cognition, and evolution do or do not shed light on the religion you have chosen to focus on. The paper will be due on the last day of class. The ten page requirement is for the body of the paper only, which should be double-spaced, with a font size of 11 or 12 and margins no wider than one inch all around. A list of references cited should also be included. You can use any standard citation style (e.g., MLA, APA, Chicago). Up to ten percent will be taken off your grade for minor errors (e.g., spelling, grammar, punctuation, word usage, and incomplete citations). Your paper grade will be worth 30% of your grade for the semester.

**In-class presentations of research findings:** The last two meetings of the semester will be devoted to students' in-class presentations of the main findings from their research papers. Your presentation will be worth 20% of your grade for the semester.

**Evaluation:** Grades will be assigned according to the usual system of ten percentage points per passing grade (A=90-100%, B+=88-89%, B=82-87%, B-=80-81%, C=70-79%, D=60-69%, F=0-59%).

**Learning goals:**

The attentive, serious student will, by the end of the course, gain

1. An understanding of the breadth and diversity of human religious experience.
2. An appreciation of the range of phenomena that fall into or near the broad concept of "religion," as the term is used in this course.
3. An understanding of adaptationist arguments regarding the origins and current functions of some religious phenomena.
4. An understanding of cognitive byproduct arguments regarding the origins and current functions of some religious phenomena.
5. An appreciation of the observed relationship between religion and cooperation.

**Attendance:** Students are expected to attend all classes; if you expect to miss one or two classes, please use the University absence reporting website <https://sims.rutgers.edu/ssra/> <<https://sims.rutgers.edu/ssra/>> to indicate the date and reason for your absence. An email is automatically sent to me.

**Academic integrity:** Cheating lowers the value of a Rutgers degree and the learning experience for all students. No form of cheating, including plagiarism, will be tolerated. One commits plagiarism when one represents the text or ideas of others as one's own creation. Please visit the website of the Rutgers Office of Academic Integrity (<http://academicintegrity.rutgers.edu>) for a fuller explanation of plagiarism and of the penalties for it. Convicted plagiarists may receive a disciplinary F in the course and possibly face expulsion from the University.

**Inclusion:** This is an inclusive classroom that is welcoming of all people and perspectives, including those of diverse races, religions, ethnicities, ages, gender identities and sexual orientations. If you go by a name or gender that is different from the one on official Rutgers documents, please let us know so that we can use the proper name and pronouns.

**Class structure:** The first week will be devoted to introductions and a general discussion. During the next three class sessions we will provide ourselves with a common empirical foundation by reading and discussing three recent ethnographies of very different religious traditions. During subsequent weeks, we will work our way through the relevant literature, organized by topic as you see below. The semester will end with student presentations based on the research they have done for their papers.

**Schedule and readings (subject to change; unless otherwise noted, the articles listed are available through the library's web site or the class's Sakai site; also please note that we will not be reading everything listed here, but we will be selecting our readings from this list):**

**Week One, 1/25: Introduction to the evolutionary study of behavior and culture and self-introductions of class members**

**Week Two, 2/1: Readings: the Cunliffe book, plus:**

Wilson, David Sloan, and William Scott Green. 2007. Evolutionary Religious Studies (ERS): A Beginner's Guide.  
<https://pdfs.semanticscholar.org/9420/abd2874d10746d86c1e7a8c285e50c02dfc3.pdf>

**Week Three 2/8: Readings: the Keown book, plus:**

Rossano, M. 2006. The religious mind and the evolution of religion. *Review of General Psychology* 10: 346-364.

**Week Four, 2/15: Readings: the Olupona book, plus:**

Sosis, R., and C. Alcorta. 2003. Signaling, solidarity, and the sacred: The evolution of religious behavior. *Evolutionary Anthropology* 12:264-274

**This course explores two main ideas regarding evolution and religion: (1) Cognitive byproduct theories: Our minds are predisposed toward certain kinds of religious ideas. These predispositions exist due to evolutionary forces experienced by our ancestors, but the results are not necessarily adaptive. (2) Adaptationist theories: Religious phenomenon may be adaptive either for individuals, groups, societal strata, or, through processes of cultural evolution, for the beliefs themselves. During weeks 5-7, we will explore cognitive byproduct theories of religious phenomena. During weeks 8-10, we will explore adaptationist theories of religious phenomena.**

**Note: We will not read all of the articles listed here. Rather, each week we will select three articles to be presented and discussed during the next week's class from the lists provided here.**

**Week 5, 2/22: HADD, god concepts, and soul beliefs**

Barrett, J. & Keil, F. 1996. Conceptualizing a non-natural entity. *Cognitive Psychology* 31:219-247.

Barrett, J. 1998. Cognitive constraints on Hindu concepts of the divine. *Journal for the Scientific Study of Religion* 37:608-619.

Barrett, J. L. 2000. Exploring the natural foundations of religion. *Trends in Cognitive Sciences* 4:29-34.

Bering, J. 2006. The folk psychology of souls. *Behavioral and Brain Sciences* 29:453-493.

- Bering, Jesse M., Katrina McLeod, Todd K. Shackelford. 2005. Reasoning about dead agents reveals possible adaptive trends. *Human Nature* 16(4):360-381.
- Bloom, Paul. 2007. Religion is natural. *Developmental Science* 10(1):147-151.
- Chudek, M., McNamara, R., Burch, S., Bloom, P. and Henrich, J., 2013. Developmental and cross-cultural evidence for intuitive dualism. Unpublished working paper.  
[http://www2.psych.ubc.ca/~henrich/pdfs/ChudekEtAl\\_IntuitiveDualism\\_WorkingPaper\\_June2014.pdf](http://www2.psych.ubc.ca/~henrich/pdfs/ChudekEtAl_IntuitiveDualism_WorkingPaper_June2014.pdf)
- Cohen, E., 2008. What is spirit possession? Defining, comparing, and explaining two possession forms. *Ethnos*, 73(1), pp.101-126.
- Forstmann, M. and Burgmer, P., 2015. Adults are intuitive mind-body dualists. *Journal of Experimental Psychology: General*, 144(1), p.222.
- Guthrie, S. 1980. A cognitive theory of religion. *Current Anthropology* 21:181–203.
- Norenzayan, A. & I. Hansen 2006. Belief in supernatural agents in the face of death. *Personality and Social Psychology Bulletin* 32:174-187.
- Purzycki, B. 2013. The minds of gods: A comparative study of supernatural agency. *Cognition* 129:163–179.
- Week 6, 3/1: Superstition and magical thinking**
- Abbott, Kevin R., and Thomas N. Sherratt. 2011. The evolution of superstition through optimal use of incomplete information. *Animal Behaviour* 82(1):85–92.
- Beck, J. and Forstmeier, W. 2007. Superstition and belief as inevitable by-products of an adaptive learning strategy. *Human Nature* 18:35-46.
- Blancke, S. and De Smedt, J., 2013. Evolved to Be Irrational? Evolutionary and Cognitive Foundations. In *Philosophy of Pseudoscience: Reconsidering the Demarcation Problem*, eds. M. Pigliucci and M. Boudry, p.361. Chicago: University of Chicago Press.  
<https://biblio.ugent.be/publication/3157283/file/6787435.pdf>
- Foster, K.R. & Kokko, H. 2009. The evolution of superstitious and superstition-like behaviour. *Proceedings of the Royal Society of London B* 276:31-37.
- Kelemen, Deborah. 2004. Are children ‘‘intuitive theists’’? Reasoning about purpose and design in nature. *Psychological Science* 15(5):295-301.
- Kelemen, Deborah. 2003. British and American children’s preferences for teleo-functional explanations of the natural world. *Cognition* 88:201–221.
- Kelemen, Deborah. 1999. Why are rocks pointy? Children’s preferences for teleological explanations of the natural world. *Developmental Psychology* 35(6):1440-1452.

- Legare, C. H., Evans, E. M., Rosengren, K. S., & Harris, P. L. (2012) The coexistence of natural and supernatural explanations across cultures and development. *Child Development* 83:779–793. doi:10.1111/j.1467-8624.2012.01743.x
- Legare, C. H., & Gelman, S. (2008) Bewitchment, biology, or both: the co-existence of natural and supernatural explanatory frameworks across development. *Cognitive Science* 32:607–642. doi:10.1080/03640210802066766
- Legare, C. H., & Souza, A. L. (2012) Evaluating ritual efficacy: Evidence from the supernatural. *Cognition* 124:1–15. doi:10.1016/j.cognition.2012.03.004
- Legare, C. H., & Souza, A. L. (2014) Searching for control: Randomness increases the evaluation of ritual efficacy. *Cognitive Science* 38:152–161. doi:10.1111/cogs.12077
- Pronin, Emily, Daniel M. Wegner, Kimberly McCarthy, and Sylvia Rodriguez. 2006. Everyday magical powers: The role of apparent mental causation in the overestimation of personal influence. *Journal of Personality and Social Psychology* 91(2):218-231.
- Rice, William R. 2012. The evolution of an enigmatic human trait: False beliefs due to pseudo-solution traps. *American Naturalist* 179(5):557-566.
- Risen, Jane L., and Thomas Gilovich. 2008. Why people are reluctant to tempt fate. *Journal of Personality and Social Psychology* 95(2):293-307.
- Sosis, Richard. 2007. Psalms for safety: magico-religious responses to threats of terror. *Current Anthropology* 48(6): 903-911.
- Sosis, Richard, and W. Penn Handwerker. 2011. Psalms and coping with uncertainty: religious Israeli women's responses to the 2006 Lebanon War. *American Anthropologist* 113(1):40-55.
- Stavrova, Olga, and Andrea Meckel. 2016. The role of magical thinking in forecasting the future. *British Journal of Psychology* 108(1):148-168.
- Yarritu, I., Matute, H. and Luque, D., 2015. The dark side of cognitive illusions: When an illusory belief interferes with the acquisition of evidence-based knowledge. *British Journal of Psychology*, 106(4), pp.597-608.

### **Week 7, 3/8: Counter-intuitive concepts and supernatural belief**

**Please note that there will be no class on Thursday, 10/18 because Dr. Cronk will be at a conference. You should use the time to work on your papers.**

- Atran, S., & Norenzayan, A. 2004. Religion's evolutionary landscape: counterintuition, commitment, compassion, communion. *Behavioral and Brain Sciences* 27:713-770.
- Baumard, Nicolas, and Pascal Boyer. 2013. Religious beliefs as reflective elaborations on intuitions: A modified dual-process model. *Current Directions in Psychological Science*. Available from Boyer's web site: <http://artsci.wustl.edu/~pboyer/PBoyerHomeSite/articles/BaumardBoyer2013CurrentDirections.pdf>

Boyer, P. 2000. Functional origins of religious concepts. *Journal of the Royal Anthropological Institute* 6:195-214.

Boyer, P., & Ramble, C. 2001. Cognitive templates for religious concepts. *Cognitive Science* 25:535-564.

Norenzayan, A., Atran, S., Faulkner, J., & Schaller, M. 2006. Memory and mystery: The cultural selection of minimally counterintuitive narratives. *Cognitive Science*, 30, 531-553.

### **Week 8, 3/22: Ritual**

**Note special issue of Phil Trans B on ritual:**

*Philosophical Transactions of the Royal Society B*  
**Theme issue 'Ritual renaissance: new insights into the most human of behaviours' compiled and edited by Cristine H. Legare and Mark G. Nielsen**

**Vol. 375, No. 1805, (August 2020) The above issue is now available online at:**

Atkinson, Quentin D., and Harvey Whitehouse. The cultural morphospace of ritual form: Examining modes of religiosity cross-culturally. *Evolution & Human Behavior* 32(1):50-62.

Barrett, J. and T. Lawson 2001. Ritual intuitions: cognitive contributions to judgments of ritual efficacy. *Journal of Culture and Cognition* 1:183-201.

Boyer, P. and P. Leinard 2006. Why ritualized behavior in humans? *Behavioral and Brain Sciences* 29:1-56.

Leinard, P. and P. Boyer 2006. Whence collective rituals? A cultural selection model of ritualized behavior. *American Anthropologist* 108:814-827.

Power, E.A., 2018. Collective ritual and social support networks in rural South India. *Proc. R. Soc. B*, 285(1879), p.20180023.

Purzycki, Benjamin Grant & Richard Sosis. 2014. The extended religious phenotype and the adaptive coupling of ritual and belief. *Israel Journal of Ecology & Evolution*.

Sosis, Richard. 2009. The adaptive value of religious ritual. *American Scientist* 92:166-172. Available here: <http://evolution-of-religion.com/wp-content/uploads/2009/03/sosis-2004-american-scientist.pdf>

### **Week 9, 3/29: Supernatural beliefs, prosociality, and group selectionist perspectives**

Atkinson, Quentin D. 2017. Religion and expanding the cooperative sphere in Kastom and Christian villages on Tanna, Vanuatu. *Religion, Brain & Behavior*. DOI: 10.1080/2153599X.2016.1267028

Johnson, Dominic. 2016. *God is Watching You: How the Fear of God Makes Us Human*. Oxford: Oxford University Press.

- Mace, Ruth, Matthew G Thomas, Jiajia Wu, QiaoQiao He, Ting Ji, and Yi Tao. In press. Population structured by witchcraft beliefs. *Nature Human Behaviour*.
- McNamara, Rita Anne, & Joseph Henrich. 2017. Jesus vs. the ancestors: how specific religious beliefs shape prosociality on Yasawa Island, Fiji. *Religion, Brain & Behavior*. DOI: 10.1080/2153599X.2016.1267030
- Purzycki, B.G., Henrich, J., Apicella, C., Atkinson, Q.D., Baimel, A., Cohen, E., McNamara, R.A., Willard, A.K., Xygalatas, D. and Norenzayan, A., 2018. The evolution of religion and morality: a synthesis of ethnographic and experimental evidence from eight societies. *Religion, Brain & Behavior*, 8(2), pp.101-132.
- Rossano, M. 2007. Supernaturalizing social life. *Human Nature* 18(3):272-294.
- Sanderson, S. & W. Roberts 2008. The evolutionary forms of religious life: a cross-cultural, quantitative analysis. *American Anthropologist* 110:454-466.
- Shariff, A. & A. Norenzayan. 2007. God is watching you: supernatural agent concepts increase prosocial behavior in an anonymous economic game. *Psychological Science* 18(9):803-809. Available here: [http://www2.psych.ubc.ca/~ara/Manuscripts/Shariff\\_Norenzayan.pdf](http://www2.psych.ubc.ca/~ara/Manuscripts/Shariff_Norenzayan.pdf)
- Sibley, Chris G., and Joseph Bulbulia. 2014. Charity explains differences in life satisfaction between religious and secular New Zealanders. *Religion, Brain & Behavior*.
- Wilson, DS. 2005. Testing major theories about the evolution of religion with a random sample. *Human Nature* 16:382-409.
- Weingarten, Carol Popp and James S. Chisholm. 2009. Attachment and Cooperation in Religious Groups: An Example of a Mechanism for Cultural Group Selection. *Current Anthropology* 50(6): 759-785.
- Week 10, 4/5 week 11, 4/12: Religious signaling**
- Bulbulia, J. 2004. Religious costs as adaptations that signal altruistic intention. *Evolution and Cognition* 10:19-42.
- Cronk, Lee. 1994. Evolutionary theories of morality and the manipulative use of signals. *Zygon: Journal of Religion and Science* 29(1):81-101.
- Dickson, D. B., J. Olson, P. F. Dahm, and M. S. Wachtel. 2005. Where do you go when you die? A cross cultural test of the hypothesis that infrastructure predicts individual eschatology. *Journal of Anthropological Research* 61(1):53-80.
- Hall, Deborah L., Adam B. Cohen, Kaitlin K. Meyer, Allison H. Varley, and Gene A. Brewer. 2015. Costly signaling increases trust, even across religious affiliations. *Psychological Science* 26(9):1368-1376.
- Irons, William. 2001. Religion as a hard-to-fake sign of commitment. In *Evolution and the Capacity for Commitment*. R. M. Nesse (ed.), pp. 292-309. New York: Russell Sage Foundation.

- Johnson, A. and Densley, J., 2018. Rio's New Social Order: How Religion Signals Disengagement from Prison Gangs. *Qualitative Sociology*, 41(2), pp.243-262.
- Johnson, D. & J. Bering. 2006. Hand of God, Mind of Man: Punishment and Cognition in the Evolution of Cooperation. *Evolutionary Psychology* 4:219-233.
- Johnson, Dominic D. P. 2005. God's punishment and public goods: A test of the Supernatural Punishment Hypothesis in 186 world cultures. *Human Nature* 16(4): 410-446.
- Matthews, Luke J. 2012. The recognition signal hypothesis for adaptive evolution of religion: A phylogenetic test with Christian denominations. *Human Nature* 23:218-249.
- Peoples, Hervey C., and Frank W. Marlowe. 2012. Subsistence and the evolution of religion. *Human Nature* 23(3):253-269.
- Purzycki, Benjamin G., and Tayana Arakchaa. in press. Ritual behavior and trust in the Tyva Republic. *Current Anthropology*.
- Qirko, Hector N. 2013. Induced Altruism in Religious, Military, and Terrorist Organizations. *Cross-Cultural Research* 47: 131-161. doi:10.1177/1069397112471804
- Roes, F. and Raymond, M. 2003. Belief in moralizing gods. *Evolution and Human Behavior* 24: 126-135.
- Schloss, J. 2008. He who laughs best: involuntary religious affect as a solution to recursive cooperative defection. In *The Evolution of Religion*, ed. Bulbulia et al., pp. 197-206.
- Soler, Montserrat. 2012. Costly signaling, ritual and cooperation: evidence from Candomblé, an Afro-Brazilian religion. *Evolution and Human Behavior* 33(4): 346-356.
- Sosis, R. 2000. Religion and intra-group cooperation: Preliminary results of a comparative analysis of utopian communities. *Cross-Cultural Research* 34: 70-87.
- Sosis, R. 2003. Why aren't we all Hutterites? Costly signaling theory and religious behavior. *Human Nature* 14: 91-127.
- Sosis, R., and B. Ruffle. 2003. Religious ritual and cooperation: Testing for a relationship on Israeli religious and secular kibbutzim. *Current Anthropology* 44(5): 713-722.
- Sosis, R., and E. Bressler. 2003. Cooperation and commune longevity: A test of the costly signaling theory of religion. *Cross-Cultural Research* 37:211-239.
- Sosis, Richard, and Bradley J. Ruffle. 2004. Ideology, religion, and the evolution of cooperation: field experiments on Israeli kibbutzim. *Research in Economic Anthropology* 23: 89-117.

### **Week 12, 4/19: Group presentations**

**Note that the order in which the presentations are given will be determined randomly, on each day of the presentations, so each group needs to be ready to present on the first day. Please also note that attendance is required even if your group has already given its presentation.**

**Week 13, 4/26: In-class presentations based on research papers**

**Note that the order in which the presentations are given will be determined randomly, on each day of the presentations, so each student needs to be ready to present on the first day. Please also note that attendance is required even if you have already given your presentation.**

**Week 14, 5/3: In-class presentations based on research papers; final papers due**

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