

Dr. Lee Cronk  
01:070:377:01 Evolution and Religion  
Spring 2023  
Time: Thursdays from 12:10pm to 3:10pm  
Location: Biological Sciences Building room 302, Douglass Campus  
Index number: 03542

**Email:** leecronk@rutgers.edu

**Office hours:** Mondays, noon to 2pm, and by appointment.

**Class website:** 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.

**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.

**Reading summary:** To improve the quality of in-class presentations, discussion leaders are required to prepare 1-2 page summaries of their readings. Ideally, those should be printed out and distributed in class. If you do not have access to a printer, you can post your summaries in the discussion section of our Canvas site before class.

**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 the professor and 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. **You must cite the original sources of each of those ideas.** 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 recent brief descriptions of three 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 Canvas site):**

**Week One, 1/19: Introduction to the evolutionary study of behavior and culture and self-introductions of class members.**

**Week Two, 1/26: Readings: the Knott book**

**Week Three 2/2: Readings: the Keown book**

**Week Four, 2/9: Readings: the Edmonds book**

**Week 5, 2/16: Some overviews**

Lanman, J., 2016. The Evolutionary Anthropology of Religion: Surveying the Field. In *Mental*

*Religion: The Brain, Cognition, and Culture*. Clements, N. (ed.). Macmillan Publishers, p. 63-82 20 p. (Macmillan Interdisciplinary Handbooks: Religion).

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

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

Wilson, David Sloan, and William Scott Green. 2007. Evolutionary Religious Studies (ERS): A Beginner's Guide.

**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 6-8, we will explore cognitive byproduct theories of religious phenomena. During weeks 9-13, 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 6, 2/23: 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, J.M. and Bjorklund, D.F., 2004. The natural emergence of reasoning about the afterlife as a developmental regularity. *Developmental psychology*, 40(2), p.217.

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.A., Birch, S., Bloom, P. and Henrich, J., 2018. Do minds switch bodies? Dualist interpretations across ages and societies. *Religion, Brain & Behavior*, 8(4), pp.354-368.
- 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 7, 3/2: 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.
- Holbrook, C., Pollack, J., Zerbe, J.G. and Hahn-Holbrook, J., 2020. Perceived supernatural support heightens battle confidence: a knife combat field study. *Religion, Brain & Behavior*, 10(1), pp.6-17.
- Hong, Z., 2022. Ghosts, divination, and magic among the Nuosu: An ethnographic examination from cognitive and cultural evolutionary perspectives. *Human Nature*, pp.1-31.
- Hong, Z. and Henrich, J., 2021. The cultural evolution of epistemic practices. *Human Nature*, 32(3), pp.622-651.

- 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
- Lightner, A.D. and Hagen, E.H., 2022. All models are wrong, and some are religious: Supernatural explanations as abstract and useful falsehoods about complex realities. *Human Nature*, pp.1-38.
- Pollack, J., Holbrook, C., Fessler, D. M. T., Maxwell Sparks, A., and Zerbe, J. G. 2018. May God guide our guns: visualizing supernatural aid heightens team confidence in a paintball battle simulation. *Human Nature* 29:311-327.
- 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 8, 3/9: Counter-intuitive concepts and supernatural belief**

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 9, 3/23: Ritual**

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.

Boyer, P. and Liénard, P., 2020. Ingredients of “rituals” and their cognitive underpinnings. *Philos Trans R Soc B*. Vol. 375, No. 1805.

Lang, M., Krátký, J. and Xygalatas, D., 2020. The role of ritual behaviour in anxiety reduction: an investigation of Marathi religious practices in Mauritius. *Philosophical Transactions of the Royal Society B*, 375(1805), p.20190431.

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

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*.

Rossano, M.J., 2020. Ritual as resource management. *Philosophical Transactions of the Royal Society B*, 375(1805), p.20190429.

Singh, P., Tewari, S., Kesberg, R., Karl, J.A., Bulbulia, J. and Fischer, R., 2020. Time investments in rituals are associated with social bonding, affect and subjective health: a longitudinal study of Diwali in two Indian communities. *Philosophical Transactions of the Royal Society B*, 375(1805), p.20190430.

Sosis, R., 2020. The last Talmudic demon? The role of ritual in cultural transmission. *Philosophical Transactions of the Royal Society B*, 375(1805), p.20190425.

Xygalatas, D., Khan, S., Lang, M., Kundt, R., Kundtová-Klocová, E., Krátký, J. and Shaver, J., 2019. Effects of extreme ritual practices on psychophysiological well-being. *Current Anthropology*, 60(5), pp.699-707.

### **Week 10, 3/30: 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

Baumard, N., & Chevallier, C. (2012). What goes around comes around: The evolutionary roots of the belief in immanent justice. *Journal of Cognition and Culture*, 12, 67–80.

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:



- Preston, J.L. and Ritter, R.S., 2013. Different effects of religion and God on prosociality with the ingroup and outgroup. *Personality and Social Psychology Bulletin*, 39(11), pp.1471-1483.
- 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.
- Purzycki, B.G., Apicella, C., Atkinson, Q.D., Cohen, E., McNamara, R.A., Willard, A.K., Xygalatas, D., Norenzayan, A. and Henrich, J., 2016. Moralistic gods, supernatural punishment and the expansion of human sociality. *Nature*, 530(7590), pp.327-330.
- 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)
- Shaver, J.H., Sibley, C.G., Sosis, R., Galbraith, D. and Bulbulia, J., 2019. Alloparenting and religious fertility: A test of the religious alloparenting hypothesis. *Evolution and Human Behavior*, 40(3), pp.315-324.
- Sibley, Chris G., and Joseph Bulbulia. 2014. Charity explains differences in life satisfaction between religious and secular New Zealanders. *Religion, Brain & Behavior*.
- Wilson, D.S. 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 11, 4/6: Religion and power**

- Bentzen, J.S. and Gokmen, G., 2022. The power of religion. *Journal of Economic Growth*, pp.1-34.
- 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.
- 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.
- Lightner, A.D., Bendixen, T. and Purzycki, B.G., 2022. Moralistic supernatural punishment is probably not associated with social complexity. *Evolution and Human Behavior*.
- 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.
- Sheehan, O., Watts, J., Gray, R.D., Bulbulia, J., Claessens, S., Ringen, E.J. and Atkinson, Q.D., 2022. Coevolution of religious and political authority in Austronesian societies. *Nature Human Behaviour*, pp.1-8.
- Turchin, Peter, Harvey Whitehouse, Jennifer Larson, Enrico Cioni, Jenny Reddish, Daniel Hoyer, Patrick E. Savage, R. Alan Covey, John Baines, Mark Altaweel, Eugene Anderson, Peter Bol, Eva Brandl, David M. Carballo, Gary Feinman, Andrey Korotayev, Nikolay Kradin, Jill D. Levine, Selin E. Nugent, Andrea Squitieri, Vesna Wallace & Pieter François (2022) Explaining the rise of moralizing religions: a test of competing hypotheses using the Seshat Databank, *Religion, Brain & Behavior*, DOI: 10.1080/2153599X.2022.2065345

### **Week 12, 4/13: Religious signaling**

- Bulbulia, J. 2004. Religious costs as adaptations that signal altruistic intention. *Evolution and Cognition* 10:19-42.
- 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.
- Matthews, Luke J. 2012. The recognition signal hypothesis for adaptive evolution of religion: A phylogenetic test with Christian denominations. *Human Nature* 23:218-249.
- Purzycki, B.G. and Arakchaa, T., 2013. Ritual behavior and trust in the Tyva Republic. *Current Anthropology*, 54(3), pp.381-388.
- 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.
- Shaver, J.H., Lang, M., Krátký, J., Klocová, E.K., Kundt, R. and Xygalatas, D., 2018. The boundaries of trust: Cross-religious and cross-ethnic field experiments in Mauritius. *Evolutionary Psychology*, 16(4), p.1474704918817644.
- Singh, Manvir, and Joseph Henrich. 2020. Why do religious leaders observe costly prohibitions? Examining taboos on Mentawai shamans. *Evolutionary Human Sciences* 2:e32.
- 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.
- Sosis, Richard. 2004. The adaptive value of religious ritual. *American Scientist* 92:166-172.

**Week 13, 4/20: Group presentations**

**Week 14, 4/27: In-class presentations based on research papers; final papers due**