

THE EVOLUTION OF RELIGIOSITY AND HUMAN COALITIONARY PSYCHOLOGY University of New Mexico, Fall 2013

Biology, BIOL 419, section 009 (3 credit hours), CRN # 45302
Biology, BIOL 519, section 009 (3 credit hours), CRN # 45303
Religious Studies, RELG 447, section 001 (3 credit hours) CRN # 42824

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Office Hours: Monday 10:00 to 12:30 and Friday 10:00 to 12:30, or by appointment.

Class Website:

http://biology.unm.edu/Biology/pwatson/public_html/RS%202011.html

1. Overview

“In the distant future I see open fields for far more important researches. Psychology will be based on a new foundation, that of the necessary acquirement of each mental power and capacity by gradation. Light will be thrown on the origin of man and his history.”
(Charles Darwin, *On the Origin of Species*, 1859, p.488)

“Is it not reasonable to anticipate that our understanding of the human mind would be aided greatly by knowing the purpose for which it was designed?”
(George C. Williams, *Adaptation and Natural Selection*, 1966, p.16)

The “Evolution of Religiosity” is an upper-division undergraduate and graduate-level course offered in a hybrid lecture and discussion format. Active student involvement during our meetings is important for the success of this course, to assure that everyone understands the material, and to generate new perspectives on the basis of which this field of inquiry into what it is to be human can develop and thrive.

The course’s goal is to address, as incisively as possible, the question of why humans have evolved intrapsychic design features leading them to create religions. Collaboratively, we shall analyze possible answers to this question from a purely materialistic modern Darwinian perspective. The aim of the course is to impart a rich blend of competing and complementary theoretical perspectives and empirical results, not available elsewhere, promoting the understanding and continuing study of religiosity, and its cross-cultural consequence, religion, as a *natural* phenomenon.

Conceptually, this course’s approach is rooted in modern evolutionary behavioral ecology, evolutionary psychology, and evolutionary neuroscience. These are scientific fields, based on strong theory and increasingly vivacious empirical activity, and which have undergone enormous revolutionary refinements beginning in the mid-1960’s with the so-called second Darwinian Revolution, wherein naturalists, not just a handful of quantitative geneticists, began to more fully understand Darwin’s theory. The rapidly maturing subfields of modern Darwinism relevant to understanding psychology and behavior now are capable of illuminating all aspects of the human experience and human cultural traditions with profound and unprecedented cogency and objectivity.



Although fundamentally this is a biology course, it is equally open to students in the Religious Studies Program and other humanities or social science disciplines that traditionally have produced secular academic descriptions and analyses of human religious behavior and experience. I look forward to a very mixed enrollment that will foster vigorous, thoughtful, and multi-angle questioning from students from many backgrounds.

Essential background in basic and mid-level Darwinian theories will be provided, mainly in context, that is, while dealing with the aspects of religious psychology and human social cognition and behavior that these theories may explain. Multiple, adaptationist (i.e. functionalist), by-product (epiphenomenally functional and non-functional), memetic, and hybrid hypotheses of religiosity will be covered. The role that human religious proclivities or instincts play in the dynamics of coalitions, social commitment, and within and between group processes of moral deliberation will be emphasized, as well as the potential significance of religiosity for everything from evading disease to the generation of the willpower necessary to undertake projects entailing short-term sacrifice, but expected long-term payoffs.

This is a course dedicated to opening and elucidating questions about our shared, species-typical, pancultural human nature. In line with modern thinking on human behavioral biology, such questions about ourselves assume that not only relatively “hardwired” instincts are biological, but so are the complex and varied cultures that such instincts promote as they interact with the ecological and cultural environments of each individual. Many of our inborn instincts are “learning instincts.” Very many have been designed by natural selection to be conditionally expressed; a person’s cultural milieu provides many of the most important conditions modulating expression and development of genetically-based instincts or cognitive capacities. Culture should be thought of as part of the human organism’s environment. As such, genetic and cultural evolution have been affecting one another for a long time. And like any other aspect of the environment, culture affects not only gene selection, but also gene expression (*sensu* “epigenetics”), including genetic control of neurodevelopment, and so development of the individual’s mind/brain and body phenotype.

Thus to understand any major panhuman facet of human culture you have to understand, ultimately, the cross-cultural reproductive problems it helped individuals to solve, including special problems largely confined to the unique context of human social life entailing, (1) complex multi-currency contractual reciprocity, (2) competitive biological markets for social and mating partners in a metagroup (nested-community) settings, (3) great reliance on “informivory,” and so, on the development and preservation of private information and intellectual property, and (4) related heavy demands for honest signaling of commitment and need. For those of you in Religious Studies or Humanities, this course will fundamentally transform your basic understanding of important religious phenomena you’ve learned about in your other courses. For all students, the course will offer radically new, assumption-assailing insights into how your mind works and how your conscious world functions, however cryptically, to help you thrive biologically.

The instructor is not an evangelical atheist. I’m certainly not a local mouthpiece for Richard Dawkins, Christopher Hitchens, Sam Harris, and their allies, as *deeply* as I admire much of their work. A skeptical agnosticism really is the furthest a scientist legitimately can distance himself from claims about the existence of supernatural forces, a core tenet of any religion, because their validity is not scientifically testable (at least currently, and perhaps by definition, forever). Moreover, this class is not out to offer Darwinism as some alternative religion. Darwinism is not designed to serve as a functional replacement for religion in the lives of the vast majority of people and societies. For example, in contrast to Darwinism, no religion commands its members to go out and do everything possible to falsify or find evidence against even its most basic teachings and assumptions, in the name of promoting a more thoroughly verified and objective view of reality. Although Darwinism is a science, and cannot replace religion on a functional sociobiological level, this is not to say that Darwinism will not change an individual’s view of religion, or even the Self. Darwinism, I believe, can even aid in a kind of “spiritual search” entailing efforts, sometimes facilitated by certain traditional religiously sanctioned introspective practices, to digest hard-core truths about severe human psychological limitations and, perhaps, extraordinary human psychological potentials.

So, the materialist evolutionary focus of the course is not designed to dissuade students of their current religious views. Indirectly however, as implied above, much class material will cause any thinking student to ponder the source(s) of their religious or spiritual views and, indeed, the foundations of their very nature. It will cause many non-religious students to question innate and learned assumptions about how their thoughts and emotions operate and “who they really are” individually and in relationship. In actuality, our study of religiosity is a point of access for the larger study of the nature of mind and human consciousness itself.

I must emphasize that by providing cogent, rigorously materialist, bio-culturally reasoned analyses of religion, this course will open major and *potentially disquieting* questions for some students, both religious and non-religious, about, for example, the reasons and sources of their moral beliefs, altruistic behaviors, and perhaps their dearest most sacred or meaningful personal experiences. As the instructor, I hope the course does the same for me, again! I also hope that any disillusionments individuals experience will be compensated for by enriched self-understanding. We do not understand ourselves well at all. *I contend that this is our design.* We both over- and underestimate ourselves. Only humans can be dissatisfied with their heavy relentless subjectivity and intersubjectivity. Only humans can hope to notice it, and desire to correct it, when their minds veer from reality. The course has many complementary goals, but one is to give you a fresh and, I would say, more honest and truly Human appreciation of yourself.

Students will not take class time advocating or opposing untestable belief or faith-based supernatural views of reality, as these do not logically compete with scientific perspectives. The class will be a safe and stimulating place to share one’s experiences regarding religious thought patterns and emotions. Such experiences are real. Anyone who seeks to disrupt this educationally important sharing process and scientifically principled analyses of personal experiences or views will be dropped from the course.

The course will use two textbooks. Over the course of the semester we will read student- and instructor-selected chapters (perhaps 30) of one text: *The Evolution of Religion: Studies, Theories, & Critiques* (2008). The book contains 50 succinct chapters, which will be discussed under the supervision of one assigned student leader with the aid of “point lists” composed by all other students during their readings (see material on point lists, below). These chapter discussions begin on the Friday of the second week of class (i.e., our 4th class meeting).

All students must read every selected chapter and, before the chapter is discussed in class, must have written at least one point on their weekly point list having to do with each chapter to be discussed that Friday. In addition to covering our topic very broadly, the Bulbulia text provides a great source of references for your term papers (see below), along with other resources I’ll make available on reserve at Centennial Science Library. We also will read in its entirety evolutionary psychologist’s Matt Rossano’s recent multi-faceted, responsibly adaptationist attempt to explain religion, entitled, *Supernatural Selection* (2010).

We may also look at selected chapters from, *The Handbook of Evolutionary Psychology* (2005), edited by renowned evolutionary psychologist David M. Buss, as well as some recent empirical papers from the primary literature (obtained via instructor e-mail or the course web site). There will be some recommended readings from Buss and other sources for those with a hunger to reach a broader understanding of the field of human evolutionary psychology as it pertains to religiosity and consciousness.

Human coalitional psychology will permeate the course, sometimes explicitly, but always at least implicitly. One of the questions that the Darwinian perspective always encourages one to ask about living organisms and their behavior - get used to this - is what are the costs and benefits of any structure or activity? Everything has both costs and benefits. These are always interesting to identify, along with the contextual factors that typically make them higher or lower, leading to selection for contingent expression of many traits, including those of a cognitive and behavioral nature. To survive generations of natural selection, major features of organisms must have net benefits that, on average, over-compensate individuals for inevitable associated costs. Since humans are so completely dependent on coalition partners for their survival and reproduction, we always can ask a costs-and-benefits questions about how any aspect of religious psychology or behavior affects the building and maintenance of an individual’s relational or coalitional matrix, and its competitive power relative to other coalitions.

Between our discussion of the texts and the presentations given of the instructor's own explanations of human religiosity, students in the course will be exposed to the evolutionary perspective on the origins and possible functions of religious psychology and behavior in a very comprehensive way.

2. Course mechanics

Again, this course requires your active participation. Questions and observations during lectures and discussions are important for your understanding the ideas that we'll cover *and always are encouraged*. Your regular involvement in conversation will be facilitated by assigned chapter presentations and collegial prodding from fellow students and the instructor to respond to our reading material and to one another.

Your participation also will be facilitated by weekly preparation of written "point lists," which you must bring to every Friday class meeting; having these in front of you during Friday classes will help you be ready to offer questions and observations on the week's readings or other course content. Of course, spur-of-moment questions also are encouraged during all discussions.

Although I will check and possibly offer personal e-comments or in-class comments on your point lists, they mainly serve as notes to yourself, to help prepare you to contribute to class discussions, especially our Friday student-led sessions. But please, let the prose you write be good enough so that I can tell what you are thinking when I check your point lists.

Your point lists must be handed in, electronically, before each Friday's class (or earlier). Please hand in your weekly point list via email attachment to pwatson@unm.edu preferably in Microsoft Word (*.doc) format.) I may offer additional written or conversational (e.g., office hour) comments on point lists, as seems warranted and my time allows. Late point lists will not be accepted, except for medical or family emergency reasons. See below for more on point lists.

Students also will write a term paper or research proposal whose stepwise development is scheduled across the semester (see below) and which each student will explain to the class at various stages (see below).

Our class meetings will serve as "nodes of dynamic convergence" for views concerning the religious human psyche from four main sources: (1) Matt Rossano's multifaceted yet coherently integrated evolutionary account of religiosity from our first textbook, "Supernatural Selection", (2) diverse and less integrated, but admirably succinct snippets of knowledge and wisdom about religiosity from our second text, the 50-plus-authored / 50-chapter Bulbulia et al., "The Evolution of Religion: Studies, Theories, & Critiques", (3) the instructor's own unique, slow-cooking, but IMHO already flavorsome blend of explanations for the religious human psyche and, *last but not least*, (4) the questions on the topic, hopefully burgeoning deepening across the semester, offered up by our own diverse cadre of students. As the semester progresses, our cumulative undertakings within this node will extend and, most likely, transform most *a priori* conceptions about the complimentary and interacting roles of religion in human life previously held by just about any serious student. I offer the course with sincere hopes that my own understandings of religion and human nature will be advanced as well.

How can you pass that up?

Active multi-way conversation is the best way to learn. Moreover, your verbal inputs help me know whether I'm reaching *you personally*, as well as the class in general. You get points toward your grade for thoughtfully amplifying or extending my points, critiquing them, totally gutting them, or just asking for clarifications. (Seldom will anything be clear the first time I say it.) It is important that disciplined active exchange amongst all of us is established early and remains consistent. If you get lost or start traveling down an incorrect conceptual path, and do not get corrected, you'll never fully understand the material. It will be less likely to gel in and transmogrify your cortical networks.

Mondays will predominantly entail lecture, with questions and discussion always welcome. All my lecturing is “open,” in that students can feel free to raise hands and offer questions or comments that focus on the current topic. I like to be challenged. A questioning atmosphere helps inspire me and makes me a more effective teacher. When I get into lecture mode sometimes it will be planned and sometimes it will be in response to textbook chapter contents or student remarks or questions. Sometimes it will be the muse. To some extent I’ll be prompted by the textbook chapters and your point lists in choosing the topic of “lectures.”

On Fridays, we will quickly get into **student-led** chapter discussions based on readings and that day’s point lists. I do my best to shut up and listen on Fridays; the quality of these meetings really is up to you. You must be active and prepared whether you are a leader that week or not.

The schedule of lectures is given, roughly, for each Monday class meeting in the “course schedule” section, below. I don’t overly plan the schedule of lectures since, as stated, a good deal of the flow and content will be influenced by student observations and questions. Nevertheless, over the course of our meetings, I’ll gradually explain my own current views on the origins and evolution of religiosity in full, especially, its critical roles in the potentiation of complex human contractual reciprocity relationships and other uniquely human coalitionary dynamics, such as our habit of living in nested communities (“metagroups”), and our need to switch readily from being creative and resourceful individualists to being willing to play our assigned collectivist role promoting the competitive ability of the superorganism-like metagroup in which we obligately reside. Reading the Rossano text also will provide you with his thoughtful multifaceted analysis of the evolution of human religiosity, which sometimes will compliment or inspire, and at other times may be at odds with my own.

Altogether, I hope the semester will provide a thorough survey of this fast growing sub-field of evolutionary psychology, as well as an introduction or review (depending on your background) of the basic and mid-level Darwinian theory applicable to understanding human mental and emotional life.

I take attendance seriously. If you have to miss a class for any reason, please let me know by email as soon as you know you’ll be absent. *Unexcused absences will reduce your grade.*

We meet twice a week for a full 1.5 hours per meeting. I expect punctuality and very regular attendance. This is an advanced course for committed adults. One reason: *Missing discussion of a key concept can handicap you for the rest of the semester.* Missing the beginning of a discussion can also leave you sitting in class clueless for a considerable time, not knowing the topic’s origin. If you only see yourself coming to something like two-thirds of the meetings or intend to just passively listen, *do not take this course.* But equally, please, do not let shyness deter you from signing up if you have a sincere interest.

I enjoy meeting with students. Whether you feel confused, angry, ecstatic, or even just mildly intellectually inspired, please feel free to schedule a meeting with me in my Castetter Hall office (room 110) or across the street at Satellite if you’d like to like to discuss something related to the course.

Students with Disabilities

In accordance with University Policy 2310 and the Americans with Disabilities Act, any student who, due to a disability, may require special arrangements in order to meet course requirements should contact the instructor as soon as possible to make necessary accommodations. **It is the responsibility of the student** to request accommodation for individual learning needs. For further information, contact the Accessibility Resource Center at 277-3506.

3. Readings

Course readings, mostly consisting of chapters from two textbooks, will require about 3 – 5 hours per week outside class. Additional reading may be suggested.

Two Required Textbooks (available at UNM bookstore or online. One or two copies also will be on 2-hour reserve at Centennial Science Library. Note the Rossano text is available for the Kindle):

Bulbulia, J., Sosis, R., Harris, E., Genet, R. Genet, C, and Wyman, K. 2008. The Evolution of Religion: Studies, Theories, & Critiques. Collins Foundation Press, Santa Margarita, CA. A collection of 50 succinct essays, by a wide diversity of authors, briefly covering most of the major issues in the evolutionary study of religion. Students will select about 30 of these to present and elicit discussion about in class.

Rossano, M.J. 2010. Supernatural Selection: How Religion Evolved. Oxford University Press. One of the only full-bodied attempts, by a well-trained evolutionary psychologist, to formulate at least a partially adaptationist account of human religious instinct and behavior. Instructor-assigned teams of 2-3 students will lead discussion of these chapters, in sequence, during the first weeks (Mondays) of the semester.

Several chapter handouts likely from:

Buss, David M. (Ed.). (2005). The handbook of evolutionary psychology. New York: Wiley. (furnished as PDF files via download from our class website, e-mail, or spending about \$100 to get the actual hardback from Amazon, etc).

Each week we will read and discuss material from the main Bulbulia et al. and the Rossano texts. I expect you'll need about three to five concentrated hours a week outside class to do the readings and formulate your weekly point lists (see below). You'll see that readings start heavy and lighten up as it comes time to complete your term paper.

Look at the "Course Schedule" (section 8, below). Readings that are listed just above a particular class meeting's date are to be *completed*, along with their associated point lists, **before that class meeting**. Those are the readings that you will be called upon to discuss during that Monday's meeting.

For example, for week two of class, "Reading: Bulbulia: Chapters 1-6. (pp. 23-72; 38 pp. of actual reading) and Recommended reading: Buss: Chapter 5: "Controversial Issues In Evolutionary Psychology," by Edward Hagen (pp. 145-171; 27 pp.)," all are to be read **before** the August 27th class meeting and the point list already written and submitted.

The average weekly reading assignment is about 40+ pages, but the pages are dense. They must be read carefully; they cannot productively be skimmed. *The course's educational benefits depend a lot on you completing the readings on time, so you can follow and participate in the class discussion.* If you don't read them, you won't learn nearly as much; if you do read them attentively, you'll learn and contribute a lot!

I would like all of each week's required readings to be completed **well before** class, so you have time to digest them, ponder them, relate them to your own experience, and prepare substantive comments and questions about them for use in class, including your written point lists.

4. Instructor

Paul J. Watson, Research Faculty, Dept. of Biology, UNM.

Ph.D. Cornell University, 1988, followed by NSF-funded postdoctoral fellowships at UNM Biology with Randy Thornhill (1988-1989) and Oxford University, Department of Zoology, with William D. Hamilton (1989-1991).

Department of Biology, Castetter Hall room 110, University of New Mexico, Albuquerque.

Web site: http://www.biology.edu/biology/pwatson/public_html/pjw_cv.htm

Phone: (505) 277-3505 (office)

e-mail: pwatson@unm.edu (I sometimes check email only every day or two; do not expect consistent immediate action on e-mails.)

Office hours: Monday 1030 - 1230 and Friday 1030 - 1230, or by e-mail or phone appointment, Castetter Hall, Room 110.

5. Grading

Seminars provide training in thinking actively about a topic, sharing insights and questions, and *collaborating* with colleagues to better understand and evaluate theoretical issues and empirical studies. A great seminar requires a great group. ***Participation - various forms of it - will count for 70% of your grade!***

The final course grade will depend on two parts:

- 1) 75% attendance and participation:
 - 25% attendance
 - 30% presentations, general verbal participation in class, and verbal responses when called upon to share items on your weekly point lists.
 - 20% quality and quantity of written point lists.
- 2) 25% term paper or research proposal.

There are no exams given in this course, but point lists (see below) are a form of weekly “quiz,” and your final paper should reflect a good understanding of our discussions and readings as well as additional references specific to your paper.

I expect very regular attendance, arrival on time, knowledge of assigned readings, active participation, intellectual engagement, and thoughtful points. If you miss classes regularly, you will be dropped from the course, after fair warning.

Conversing with me during office hours can help make up for missed point lists or other forms of light participation. I also advise you to talk with me about term paper topics if we do not cover your questions and ideas adequately in class.

6. Point Lists

Beginning August 30th, before every Friday’s meeting, every student should email an MS Word (.doc format) “point-list,” to pwatson@unm.edu.

A point list is a set of discussion points consisting of your thoughts, questions, and critical or favorable comments about, or inspired by, the assigned readings. Some points can also cover other course material. Each point list covers reading and thinking you do during the week immediately preceding the Monday due date. Make sure your point lists provide strong evidence that you are reading the textbook.

Keep a copy of each point list for yourself to refer to in class. I prefer spontaneous discussion, but if necessary I shall call on you in class at regular intervals to talk about a point from your lists to help propel the class discussions, and make sure everyone participates. Student discussion leaders should do the same.

I also expect students to push for class or office-hour discussion of the points on their list of most interest to themselves, even if I do not happen to call on you to cover such a point.

Important: point lists must NOT review the readings.

Instead, they should articulate your thoughts, reactions, and questions in response to the readings or, alternatively, some aspect of class discussion. Make four to five substantive, succinct, and reasonably independent points per list, each one offering some sort of critical analysis of or challenge to an idea from the week's readings, comparisons amongst readings, lectures, discussions, or a question that came to you while pondering course content, broadly construed. I'm big on *pondering*. I can tell if you're doing it or not. Although you hopefully will get verbal feedback in class on your point lists, *I often comment in writing too. Point lists provide a major way for you and I to interact even if a point does not get covered in class.*

Every point list should be electronically submitted via email attachment; I prefer the old MS Word *.doc format, and it must be a PC-compatible file.

Each point list should be 1 - 2 pages in length, with 1.5 line-spacing, and in 11 point Arial font. Please use one space after each period (sentence), not two or three, which (a) drives me nuts and (b) is wrong. At the top of each page should be your name, the date of submission, and the textbook chapter(s) covered by your points. You can, of course, have some points on each list having to do with lecture material, discussion, or your own special interests.

When you have completed a point list, I encourage you to highlight the one point on it that YOU most want to have covered in class! Point lists will be a major mechanism for facilitating discussion of text chapters and other course material. Although I will give lectures of varying length to supplement, critique, or amplify the ideas expressed in the textbook and other readings, especially on Friday meetings, I will do little straight lecturing on the texts. It is crucial for your grade and class content that everyone takes point lists seriously and preparation for Monday student-led text-based discussions seriously.

Your first point list is due before class on Friday August 30th, our 4th class meeting.

7. Term Paper or Research Proposal

All students will write one term paper or research proposal. Project development will entail three successive stages – each is required by a certain date (see below). I encourage you to come to office hours to help you develop your project ideas. Start this process early.

The final version of the paper should be concise, about 10 pages, 1.5 spaced (approximately 3,000-4000 words); please use one space to separate sentences to enhance readability, as in all your writing.

The term paper should critically explore an issue of special interest to you. In the process, it should illustrate vividly, even if sometimes implicitly, that you have digested many of the main concepts of the course!

While the paper should include a critical review and assessment of the most relevant research literature, I would you to try to extend the discussion beyond what is currently published and / or indicate how you would choose to dig deeper into the subject empirically. "Term papers" differ from "Research Proposals" in that the former will emphasize more literature review, synthesis, and the detailing of new hypotheses or perspectives on the chosen topic/phenomenon. In contrast, Research Proposals include some of the same material, in abbreviated form, as conceptual "set-up," but devote more space to the details of empirical methods you would use to test a well focused hypothesis.

You can choose any topic related to the course content and readings. To make sure that you are thinking, researching, and writing the paper on a good schedule throughout the semester, the project is due in three stages. Late work will be penalized. After each stage is turned in, I will write comments and suggestions on it, which you should use in revising your term paper for the next stage.

A variety of references will be on 2-hour reserve at Centennial Science Library to help in developing term paper ideas; a list will be emailed to you early in the semester.

Due September 23rd: provisional title, abstract (one paragraph), and bibliography (about 8 references). This will determine 5% of your final course grade. The provisional abstract should just let me know what you think you'll probably write about. If you change your mind, no problem, just tell me in an email later. But I want you to have some topic in mind by this date. Pick a topic that you feel passionate about – you'll have to live with it for several months! The bibliography should list about 10 references in standard APA reference format (see *APA Publication Manual*). They should be things that you have actually read (and, not all just chapters from the textbook!), with brief notes about their relevance to your paper. (A good note for a reference would be "This meta-analysis reviews 38 papers showing generally small positive relationships between the regularity of attendance at church services and the ability to hold on to stock market investments for longer time periods." A bad note would be "Reviews facial attractiveness and religious behavior" (too vague).

Due October 28th: revised title, abstract, and bibliography, and a detailed outline. This will determine 5% of your final course grade. The title, abstract, and bibliography should take into account my feedback concerning your previous submission. The revised abstract should be clearer, better focused, and take stronger stands on your paper's key issues. The annotated bibliography should now list about 20 APA-format references that you have actually read, with good notes for each on their relevance to the paper. The detailed outline should be a couple of pages long, clearly showing the project's planned structure, major points, and flow of argument. Each outline entry should be a clear, detailed, specific statement (e.g. "Evidence from 5 studies showing short-term boosts in testosterone following male participation in painful religious rituals, whether or not they are observed by attractive female group members"), not just a short, vague phrase (e.g. "religious behavior affects testosterone").

Due December 11th: final paper. Note this is the Wednesday of finals week. This will determine 20% of your final course grade, however failure to hand in a final paper will result in a grade of "incomplete" for the course. It should be in standard APA research paper format. This means computer-printed, double-spaced, single-sided, in 11 point Arial, with a proper title page, abstract, references, and page numbering. The main text (excluding abstract and bibliography) should be concise – about 3,000 words long (10 pages double spaced). I care more about clarity, insight, research, and the flow of argument than about length. This should be a highly polished document in correct format with no spelling or grammatical errors. It should represent the culmination of three months of research, thinking, and writing about a topic that passionately interests you. I will try to grade final drafts by the last day of exams. Late papers may result in you receiving an Incomplete for your course grade, as a temporary measure.

The final paper MUST include these elements:

- Title page: a descriptive, memorable and informative title, and all other information required for APA format
- Abstract page: a concise, punchy abstract that interests the reader in your paper. The abstract should provide a clear statement of the main question investigated and the main conclusion.
- Introduction: Start with a bang. Pose the problem that interests you, and how you'll approach it. Say where you stand, and why the reader should care. Be specific and clear; mix the theoretical and methodological level of discourse with real-life examples and issues; know when to be funny and when to be serious.
- Body of a *term paper*: depending on what you're writing about, this could include a literature review, a series of arguments, an overview of relevant ideas and research from a related area or field, a series of methodological analyses, criticism, and suggestions, or anything that advances your points. If you include literature reviews, don't do generic overviews – review the literature with a clear and stated purpose, and review it critically, as it pertains to your topic. A term paper could also incorporate a brief outline of an experiment, an observational method, a meta-analysis or insightful re-analysis of existing data.

- If you are doing a *research proposal* instead of a term paper, then by the time you reach the middle of your paper, you should have begun detailing an empirical protocol designed to resolve one or more of the issues or hypotheses you've raised in the first part of the paper. In a research proposal, alternative hypotheses and their testable predictions have to be especially clear. The literature review is relatively brief, but you must *fully detail methods* as space allows. You do not have to include a full copy of questionnaires you would use in the study, but the kinds of information you plan to gather must be clear, and you must explain how that information will be used to test your hypotheses. I will provide a model or two of a proposal written for the UNM Human Subjects Committee in electronic format.
- Literature Cited: Only include items you've actually read. If you haven't read a paper directly, but have seen it cited and described by others, then use this citation format: "(Original author name, date; *as cited in*: citing author name, date, and full citation of the referring source)." If your bibliography includes good, relevant papers and books that I haven't seen before, I will be impressed.
- **A NOTE ON PLAGIARISM:** Make sure you know what plagiarism is. If you represent, even implicitly, that ideas or writings of others are your own, that is plagiarism. Re-wording something without citing the source of the idea is still plagiarism. I'm pretty good at detecting plagiarism. If you plagiarize, you will almost certainly get a zero on your term paper, and thus you could also easily fail the course.

8. Course Schedule

Keep up with the weekly readings and point lists! They must be completed before the Friday of the week they are scheduled to be discussed. Not doing so will ruin the participation portion of your grade. Note: I accept late point lists only in the case of medical or family emergencies.

At the time of this writing the textbook reading schedules are set. The additional readings are subject to change. See the course web site as the first source of updated additional assigned or suggested readings.

Week one

I try to start right in on the first day with introduction to key concepts and definitions. Please do not miss the first day of class.

There are seven items to be read for week one. I will try to e-mail them to you. They are also downloadable from the class web site. Three readings should be done **before** our first class meeting on Monday, August 19th. Outrageous, I know.

NOTE: No written point list is due in week one. The first point list should be submitted, via email attachment (see above), before the beginning of our fourth class on Friday, August 30th.

Reading

(1) Read this recent introduction to the science of the animal behavior by Tom Seeley and Paul W. Sherman. This excellent paper will help orient you to the kind of reasoning and research "evolutionary behavioral ecology" entails; it provides the basis for our "evolutionary psychological" analyses of human mental life and behavior.

(2) Pascal Boyer's 2003 paper entitled, "Religious thought and behavior as by-products of brain function," from *TRENDS* in Cognitive Sciences v. 7(3), pp.119-124. The Boyer paper will briefly introduce you to the currently dominant epiphenomenalist or cognitive byproduct school of thought regarding religiosity, made famous by Boyer's important, humbly titled book, "Religion Explained" (2001).

(3) Three short introductory sections of our Bulbulia text (8 pp. total: “Note from the Publisher,” “Preface: Bringing the *Evolution of Religion* into Being,” and “Introduction: Religion in Eden.”)

Read the three above-listed items now!

Come to the first class meeting, August 19th, with comments and questions and let the discussion begin!

Before the 2nd class meeting (Friday, August 23rd), read the following four items [35 pp. total]: “The evolution of morality,” chapter from the Buss “Handbook of Evolutionary Psychology” is important as a basis for helping us all get on the same wavelength concerning the basic questions like, “If I’m purely a product of natural selection, and thus designed to maximize my (lifetime inclusive) fitness, then what makes me want to be a good person?”

Buss: Foreword, by Steven Pinker (pp. xi-xvi; 6 pp);
Introduction, by David Buss (pp. xxiii-xxv; 3 pp);
Afterword, by Richard Dawkins (pp. 975-979; 4 pp);
Chapter 26: “*The Evolution of Morality*,” by Dennis Krebs (pp. 747-768; 22 pp).

Aug. 19 Purpose, organization, and spirit of the course. Overview of syllabus. Introductions and a listing of YOUR biggest current questions about religiosity. Definitions of religion, religiosity, religiousness, and spirituality for purpose of this course. Scientific reductionism. Computationalism: a conceptual foundation of evolutionary psychology. Levels of analysis. Origins and functions of religion, religiousness, religiosity, and spirituality; *come prepared to offer ones you like or believe in.*

Aug. 23 Adaptation and the basic mechanism of natural selection. Darwin’s “Utilitarian Doctrine.” Individual vs. Group Selection as mechanisms for producing altruism. Does “True Altruism” (i.e., net cost altruism) exist? “Universal Love?” Introduction to “complex contractual reciprocity” and “honest signaling” of commitment and need. **Designate leader teams for Rossano discussions.**

Week two

Reading

Rossano: Chapters 1-3. (pp. 1-78; approx. 74 pages of actual reading).

Recommended reading

Buss: Chapter 5: “*Controversial Issues In Evolutionary Psychology*,” by Edward Hagen (pp. 145-171; 27 pp).

Aug. 26 Intro: Implications of having a naturally selected mind. Discuss paper: “Analytic Thinking Promotes Religious Disbelief.” “The Rationality Switch / The Mystery Instinct,” A basic religiosity adaptation? Understanding the placebo effect with reference to honest signaling theory. A *voluntary exercise in self-observation.*

Aug. 30 First point list due, via email attachment, before class today!

Student-led discussion: Rossano chapters 1-3.

Week three

Reading

Rossano: Chapters 4-6 (pp. 79-150; 72 pp)

Recommended reading

Buss: Chapter 1: “*Conceptual Foundations Of Evolutionary Psychology*,” by John Tooby and Leda Cosmides (pp. 5-63; 59 pp); this is a dense chapter and you may need to spread your reading of it across several weeks. Investing in a serious read of this chapter will advance your understanding of evolutionary psychology greatly. Tooby and Cosmides are two of the field’s principal founders. *Read it on Labor Day!*

Sept. 2 Labor Day – **NO CLASS.**

Sept. 6 Discuss Rossano chapters 4-6.

Week four

Reading

Rossano: Chapters 7-9 (pp. 151-210; 57 pp)

Sept. 9 Gerald Edelman’s model of brain development and organization: (a) “neuronal group selection theory,” (b) the “dynamic core” as the neural correlate of consciousness (c) the relationship between the dynamic core and limbic-based “value systems” - possible implications for consciousness, belief, subjectivity, and “The Switch” or “Mystery Instinct.”

Sept. 13 Discuss Rossano chapters 7-9. ***Assign Bulbulia chapters and leaders.***

Week five

Reading

Review passages from Rossano most intriguing to you. Produce a corresponding point list, as usual, for Friday the 20th.

Sept. 16 Discussion of self-observation class exercise. Questions on the Edelman model of brain organization and the functional role of subjectivity in human life.

Sept. 20 Complete and fill in Rossano text discussions. Synthesize and evaluate Rossano’s views.

Week six

Provisional Term Paper Abstract and Bibliography due, via email, Sept 23rd

Reading

Bulbulia: Three to four chapters determined according to student choices.

Sept. 23 Discuss R.D. Alexander paper, “Evolution and Religion”

Sept. 27 Discuss Bulbulia chapters.

Week seven

Reading

Bulbulia: Three to four chapters determined according to student choices.

Sept. 30 Lecture TBD

Oct. 4 Discuss Bulbulia chapters.

Week eight

Reading

Bulbulia: *No readings this week from the Bulbulia textbook.*

Buss: Chapter 22: “*Managing ingroup and outgroup relationships*,” by Rob Kurzban and Steve Neuberg (pp. 653-669; 17 pp).

Oct. 7 Discuss the Kurzban and Neuberg reading, led by Instructor.

Oct. 11 Fall Break – **No Class**

Week nine

Reading

Bulbulia: Three to four chapters determined according to student choices.

Oct. 14 Lecture TBD

Oct. 18 Discuss Bulbulia chapters.

Week ten

Reading

Bulbulia: *No readings this week from the textbook.*

Oct. 21 Students explain their intended term paper topics to class and receive feedback part 1.

Oct. 25 Students explain their intended term paper topics to class and receive feedback part 2.

Week eleven

Revised term paper abstract, outline, and bibliography due, before class, October 28th

Reading

Bulbulia: Three to Four Chapters determined according to student choices.

Oct. 28 Lecture TBD

Nov. 1 Discuss Bulbulia chapters.

Week twelve

Reading [17+ pp total]

George Ainslie's article from the journal, Behavioral and Brain Sciences: "*Precis: Breakdown of Will.*" (Article will be e-mailed to class.) Everyone also should read two of the follow-up commentaries and be ready to review and comment on them in class.

Nov. 4 Religion and Willpower I: Lecture

Nov. 8 Religion and Willpower II: Discussion led by Instructor.

Week thirteen

Reading

Bulbulia: Three to Four Chapters determined according to student choices.

Nov. 11 Lecture TBD.

Nov. 15 Discuss Bulbulia chapters.

Week fourteen

Reading:

Bulbulia: Three to Four Chapters determined according to student choices.

Nov. 18 Discuss Bulbulia chapters.

Nov. 22 Thanksgiving Break – **No Class**

Week fifteen

Reading

Bulbulia: Three to Four Chapters determined according to student choices.

Nov. 25 Course synthesis and hanging student questions.

Nov. 29 Synthesis and hanging student questions.

Week sixteen

Reading:

Maximize readings for your term paper. No assigned readings.

Dec. 2 Student oral summaries of term papers or proposals I. Discuss student questions still open.

Dec. 6 Student oral summaries of term papers or proposals II. Discuss student questions still open .

Finals week

Office hours available all week by prior appointment!

Dec. 10 - 14. No final exam or class meetings.

Final paper due by December 11th, 5:00 pm, via email to pwatson@unm.edu, in PC-compatible doc, or pdf format.

9. Recommended Further Reading

Religion / Religiosity References, *ON RESERVE*, some evolutionary, some not. Obviously, religious behaviors and cognitions described and explained by authors from outside the evolutionary field are often worth analyzing from an evolutionary perspective. All available for YOU at the Centennial Library Reserve Desk; these should help you with your final paper along with a few papers from the primary (journal) literature. These are my personal books, please take care of them and do not remove them from the library; they should be on 2-hour within-library reserve.

Atran, S. 2002. *In Gods We Trust: The Evolutionary Landscape of Religion*. Oxford University Press, Evolution and Cognition Series. A former text for this course.

Voland, Eckart, and Schiefenhövel, Wulf. 2009. *The Biological Evolution Of Religious Mind And Behavior*. Berlin: Springer-Verlag. A former text for this course.

Steadman, L.B. & Palmer, C.T. 2008. *The Supernatural and Natural Selection: The Evolution of Religion*. Paradigm Publishers, Studies in Comparative Social Science Series. A former text for this course.

Bulbulia, J. et al. 2008. *The Evolution of Religion: Studies, Theories, & Critiques*. Collins Foundation Press. Text for current Fall 2011 version of the course.

Rossano, M.J. 2010. *Supernatural Selection: How Religion Evolved*. Oxford University Press. An insightful well-written functionalist analysis of religiosity.

Hill, P.C. & Hood, R.W. 1999. *Measures of Religiosity*. Religious Education Press. A collection of instruments for measuring people's religiosity.

Spilka, B. et al. *The Psychology of Religion (3rd edition)*. 2003. A wide ranging reference; provides knowledge and ideas for research questions which the social sciences have provided unsatisfactory or incomplete answers.

Paloutzian, R.F. & Park, C.L. *Handbook of the Psychology of Religion and Spirituality*. 2005. A wide ranging reference book; provides knowledge and ideas for research questions which the social sciences have provided unsatisfactory or incomplete answers.

Wulff, D.M. *Psychology of Religion: Classic and Contemporary (2nd edition)*. 1997. John Wiley & Sons. A wide ranging text; provides knowledge and ideas for research questions which the social sciences have provided unsatisfactory or incomplete answers.

Evolution of Religion:

Boyer, Pascal. 2001. *Religion Explained*. A former text for this course; mostly covers the cognitive, epiphenomenalist (non-adaptive) perspective extremely well.

Kirkpatrick, Lee, A. 2005. *Attachment, Evolution, and the Psychology of Religion*. Uses attachment theory, which have some good grounding in evolutionary reasoning, to explain religious instincts.

Dennett, Daniel C. 2006. *Breaking the Spell: Religion as a Natural Phenomenon*. A plea to the religious community to get behind the scientific analysis of religion. Well written. Dennett himself is largely a proponent of the memetic view of the cultural evolution of religion.

Dawkins, Richard. 2006. *The God Delusion*. A well written but quite ideological rant against religion, largely from a memetic point of view. Although Dawkins knows and has admitted that skeptical agnosticism is the only scientifically defensible position concerning the supernatural, this book probably represents a good example of “evangelical atheism.” See also two interesting books by Christopher Hitchens: *god is not Great: How Religion Poisons Everything*, & *the Portable Atheist*, both published in 2007.

Wilson, David Sloan. 2002. *Darwin’s Cathedral: Evolution, Religion, and the Nature of Society*. Primarily a group selectionist view of the evolution of religion, by group selection’s single most articulate and indefatigable proponent.

Journal Papers, see these journals:

Behavioral and Brain Sciences

Evolution and Human Behavior

Evolutionary Anthropology

Evolutionary Psychology

Human Nature

Intelligence

Proceedings of the Royal Society of London Series B: Biological Sciences

Trends in Ecology and Evolution

Key Popular Books by Prominent Authors

David Buss: *The Evolution of Desire. The Dangerous Passion. The Murderer Next Door.*

Richard Dawkins: *The Selfish gene. The Extended Phenotype. The Blind Watchmaker. Climbing Mount Improbable. A Devil’s Chaplain. The Ancestor’s Tale. Unweaving the Rainbow.*

Daniel Dennett: *The Intentional Stance. Consciousness Explained. Darwin’s Dangerous Idea. Freedom Evolves. Breaking the Spell.*

Richard Wright: *The Moral Animal.*

Steven Pinker: *The Language Instinct. How the Mind Works. The Blank Slate. Words and Rules. The Stuff of Thought.*

Matt Ridley: *The Red Queen. The Origins of Virtue. Genome. The Agile Gene.*

David Sloan Wilson: *Unto Others. Darwin’s Cathedral. Evolution for Everyone.*

Evolution

Boyd, R., & Silk, J. (2005) *How humans evolved* (4th Ed.). New York: Norton.

Cronin, H. (1991). *The ant and the peacock: Altruism and sexual selection from Darwin to today*. Cambridge U. Press.

Lewin, B. (2005). *Essential Genes*. New York: Prentice-Hall.

Ridley, Mark (2001). *The cooperative gene: How Mendel’s demon explains the evolution of complex beings*. New York: Free Press.

Ridley, Mark (2003). *Evolution* (3rd Ed.). London: Blackwell.

Animal Behavior

Alcock, A. (2005). *Animal behavior: An evolutionary approach*. (9th Ed.). Sunderland, MA: Sinauer.

Strier, K. B. (2002). *Primate behavioral ecology* (2nd Ed.). New York: Allyn & Bacon.

Evolutionary Psychology and Human Nature

Alexander, R.D. (1987). *The Biology of Moral Systems*. NY: Gruyter. A classic.

- Trivers, Robert. *Social Evolution*. 1985. A classic.
- Buss, D. *Evolutionary Psychology: The New Science of the Mind* (3rd Edition). 2008. Pearson, Allyn, and Bacon.
- Betzig, L. (Ed.). (1997). *Human nature: A critical reader*. Oxford U. Press.
- Dunbar, R., & Barrett, L. (Eds.). (2007). *Oxford handbook of evolutionary psychology*. NY: Oxford U. Press.
- Gangestad, S. W., & Simpson, J. R. (Eds.). (2007). *The evolution of mind*. NY: Guilford Press.
- Gaulin, S.J.C. 2001. *Psychology: An Evolutionary Approach*. Prentice Hall.
- Nesse, R.M. (Ed.) (2001) *Evolution and the capacity for commitment*. Vol. 3 in the Russell Sage Foundation Series On Trust. NY: Russell Sage Foundation.
- Platek, S. M., Keenan, J. P., & Shackelford, T. K. (Eds.). (2006). *Evolutionary cognitive neuroscience*. Cambridge, MA: MIT Press.
- Campbell, A. (2002). *A mind of her own: The evolutionary psychology of women*. NY: Oxford U. Press.

Sexual Selection and Mating

- Dixson, A. F. (1998). *Primate sexuality: Comparative studies of the prosimians, monkeys, apes, and human beings*. Oxford U. Press.
- Geher, G., & Miller, G. F. (Eds.). (2007). *Mating intelligence: Sex, relationships, and the mind's reproductive system*. Mahwah, NJ: Erlbaum.
- Judson, O. (2002). *Dr. Tatiana's sex advice to all creation*. NY: Owl Books.
- Miller, G. F. (2000). *The mating mind: How sexual choice shaped the evolution of human nature*. New York: Doubleday.

Emotion, Aesthetics

- Evans, D., & Cruse, P. (2004). *Emotion, evolution, and rationality*. Oxford, UK: Oxford U. Press.
- Lewis, M. & Haviland-Jones, J. M. (Eds.). *Handbook of emotions* (2nd Ed.). (2000). New York: Guilford Press.
- Voland, E., & Grammer, K. (Eds.). (2003). *Evolutionary aesthetics*. Berlin: Springer.
- Ramachandran, V.S. (2005) *A Brief tour of human consciousness*. NY: PI Press.

Individual Differences

- Deary, I. J. (2001). *Intelligence: A very short introduction*. Oxford, UK: Oxford U. Press.
- Hare, R. D. (1993). *Without conscience: The disturbing world of the psychopaths among us*. NY: Guilford Press.
- Matthews, G., Deary, I. J., & Whiteman, M. C. (2004). *Personality traits* (2nd Ed.). Cambridge U. Press.
- Plomin, R., DeFries, J. C., McClearn, G. E., & McGuffin, P. (2003). *Behavior genetics* (4th Ed.). New York: Worth Publishers.

Selfhood

- Metzinger, T. (2003). *Being No One: The self-model theory of subjectivity*. Cambridge: A Bradford Book, The MIT Press.
- Suzuki, Suhnryu. (1970). *Zen Mind, Beginner's Mind*. NY & Tokyo: Weatherhill.
- Wegner, D.M. (2002). *The Illusion of Conscious Will*. Cambridge: Balford Book, The MIT Press.

Mental Illness

- Baron-Cohen, S. (Ed.), (1997). *The maladapted mind: Classic readings in evolutionary psychopathology*. Hove, UK: Psychology Press.
- Evans, D. (2003). *Placebo: The belief effect*. New York: HarperCollins.
- McGuire, M. T., & Troisi, A. (1998). *Darwinian psychiatry*.
- Keedwell, P. (2008). *How sadness survived: The evolutionary basis of depression*. Radcliff Publishing LTD, Abingdon. UK.
- Nesse, R., & Williams, G. (1996). *Why we get sick: The new science of Darwinian medicine*. New York: Vintage.
- Nettle, D. (2001). *Strong imagination: Madness, creativity and human nature*. Oxford, UK: Oxford U. Press.

For evolutionary perspectives on depression, visit my web site at
http://biology.unm.edu/Biology/pwatson/public_html/dp1.htm.