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Biology, Culture & Evolution

ANT 475 Section 001

Fall 2013, Lecture

Dr. Christopher Lynn

Tues/Thurs 11:00 AM -12:15 PM ten Hoor 348

Office Hours and Contact Information

Office: 12 ten Hoor

Phone: 348-4162

Email: cdlynn@ua.edu

Office hours: Tues/Thurs 2-4 PM

Prerequisites

UA Course Catalog Prerequisites

Prerequisite(s): ANT 270.

Course Description

UA Course Catalog Information

An introduction to the biocultural and evolutionary bases of human adaptability. Writing proficiency within this discipline is required for a passing grade in this course.

Core Designations:

Writing

This course provides a detailed introduction to the study of how humans bioculturally adapt to their physical, biological, and social environment, from the perspective of human evolutionary biology.

Each writing assignment (see below) requires carefully edited prose and will be graded for intellectual content, originality, comprehension of reading material, coherence, logic, organization, grammar, punctuation, spelling, and prose style. Writing proficiency is an absolute requirement for passing this course. Students with writing difficulties will be encouraged to take advantage of the services of the Writing Center. (While the "W" designation does not apply to the graduate level course, the same expectation for writing proficiency applies.)

Student Learning Outcomes

At the end of this course students should be able to:

- 1. Review, evaluate, and critique biocultural models of human health derived from human evolutionary biology, including those rooted in the study of ecology, demography, genetics/epigenetics, physiology, nutrition/energetics, and epidemiology.
- 2. Outline theoretical and methodological issues in the anthropological study of human adaptation through case studies in various populations.
- 3. Present and critique peer-reviewed primary source material related to human evolutionary biology in clear terminology for peers and an educated lay public via verbal discussions and online blogging.
- 4. Proficiently write a scientific research paper by searching for a topic, finding and critically reviewing source material, outlining the paper, and then writing and revising the manuscript.

Required Texts

UA Supply Store Textbook Information

- SAAD, GAD / THE CONSUMING INSTINCT:WHAT JUICY BURGERS, FERRARIS, PORNOGRAPHY, AND GIFT GIVIN (Required)
- STINSON / HUMAN BIOLOGY (Required)
- STINSON (RENTAL) / (RENTAL) HUMAN BIOLOGY (RENTAL)

Other Course Materials

 Saad, Gad (2011). The Consuming Instinct: What Juicy Burgers, Ferraris, Pornography, and Gift Giving Reveal About Human Nature. Amherst, NY: Prometheus Books.

Outline of Topics

Part I: Theory and Historical Roots in Human Evolutionary Biology

8/22 Review of evolutionary theory

8/27 Review of evolutionary theory, con't.

READ: Relethford (2008) chapters 1-4

[Note: This is review material; if you have taken ANT 270 and understand the basics of evolutionary theory, consider this an optional reading for reference. Additionally, you can read the evolution chapters (covering biological anthropology, human genetics, microevolution, and classification) of any recent introduction to physical anthropology to review this material. I have texts available that you may borrow or copy for this purpose.]

8/29 Human evolutionary biology – theoretical basis

READ: HB chapter 1 (Stinson et al.)

9/3 Human evolutionary biology – theoretical basis, cont.

READ: Saad chapters 1-3

9/5 History of the discipline

READ: HB chapter 2 (Johnson and Little)

PAPER TOPIC DUE

Part II: Heredity and Human Variation

9/10 Principles of Genetics

READ: HB chapter 3 (Weiss and Tackney)

9/12 Genetics, Genomics, and Human Variation

READ: HB chapter 4 (O'Rourke and Enk)

9/17 Quantitative Variation and Genetics

READ: HB chapter 5 (Konigsberg)

9/19 Extended Discussion: Genetics and Genomics

READ: Saad chaps 4-6

PAPER OUTLINE DUE

9/24 Principles of Epigenetics and Non-Genomic Inheritance

READ: Jablonka and Raz 2009 (Blackboard)

9/26 Epigenetics: Applications to Human Health

READ: Thayer and Kuzawa 2011 (Blackboard)

10/1 Extended Discussion: Epigenetics and Human Variation

READ: Saad chaps 7-9

Part III: Stress, Adaptation, and the Distribution of Health

10/3 Human Adaptation to Climate READ: HB chapter 6 (Beall et al.)

TAKE-HOME MIDTERM EXAM DISTRIBUTED

10/8 Human Nutritional Evolution READ: HB chapter 7 (Leonard)

10/10 Human Energetics

READ: HB chapter 8 (Snodgrass)

TAKE-HOME MIDTERM EXAM DUE

10/15 Extended Discussion: Energetics and Anthropometry

10/17 Evolutionary Psychology and Human Behavioral Ecology

READ: Saad chaps 10-11

10/22 Epidemiology of Human Disease

READ: HB chapter 9 (Sattenspiel and Slonim)

10/24 Stress and Human Biology

READ: HB chapter 10 (Ice and James)

10/29 Public Health Paradoxes

READ: Worthman and Kohrt 2005

TERM PAPER DUE

10/31 FALL BREAK

11/5 Extended Discussion: Stress, Adaptation and Health

Part IV: The Life Cycle and Population Dynamics

11/7 Evolution of the Human Life Cycle READ: HB chapter 11 (Bogin and Smith)

11/12 Growth Variation: Biological and Cultural Factors

READ: HB chapter 12 (Stinson)

PEER REVIEW DUE

11/14 Aging, Senescence, and Human Variation

READ: HB chapter 13 (Crews and Ice)

11/19 Extended Discussion: The Life Cycle

11/21 AAA--NO CLASS

11/26 Mortality and Migration

READ: HB chapter 14 (Gage et al.)

12/3 Population Growth and Fertility Regulation

READ: HB chapter 15 (Ellison et al.)

12/5 Extended Discussion: Population Dynamics

TERM PAPER REVISION DUE

Exams and Assignments

Advance Reading Summaries, Discussion Questions, and Blogging: For each class when a reading is due, 1-2 people will be assigned to summarize the reading as a blog post on the "Biology, Culture, and Evolution" course site no later than NOON the day before class. Summaries should be between 1-2 typewritten pages (compose in Word then cut and paste) and contain the following elements:

- A one-paragraph biography of the author or authors. Go to their faculty pages and check them out.
 The authors you will be reading are currently central figures in the study of human biology. This will help everyone put them in context.
- One-paragraph summarizing the author's research. What projects have they been involved in and what have been the major findings?
- Summarize the article or chapter you have been assigned (be efficient, as everyone will be reading it-don't waste your time essentially rewriting the whole thing).
- Link the material to a broader context (inside or outside the discipline), other things you've learned in anthropology or the UA department, or your own research or opinion. Provide hyperlinks to outside sources (but be sure to explain them).

Everyone else will provide commentary about the reading on that post <u>no later than 6 PM the day before the class</u>. Commentary should use about one paragraph to describe what you found most interesting about the reading and anything that you would like clarified or further explained. Then, propose for discussion at least one concrete, practical example of how the material in this reading might matter to a nonspecialist (think internet news site reader or cable news viewer – why should they care?). Commentaries need not further summarize the reading but should make it clear that you read and thought about the chapter.

Additionally, contingent on the availability of external funding, we may integrate personal genetic sampling into the course. You will be required to periodically blog about the experience of testing your own genes while learning about human genetic variation and evolution. Details will be posted on the

blog site and Blackboard.

Reading Presentations: Students assigned to post blog summaries will also present the reading to the class and lead the discussion on the assigned date. That means you must read the commentaries of your classmates, collect their discussion questions, and use these as a means of generating conversation. You may use Powerpoint presentations, handouts, or experiential activities (I really like experiential activities and give LOTS of latitude for students who take the initiative to get us all up out of our seats and get our blood circulating).

Term Paper: You will write a paper on a pre-approved topic, using at least 8 reliable, appropriate academic references. You will be required to submit a proposed topic by 9/5, an outline of the paper by 9/19, and the completed paper by 10/29. The paper should be 8-12 pages long, double -spaced in 12-point Times New Roman font, with 1" margins. The page guidelines do not include the reference list, which must be appended to the end of the paper. The paper will be graded for intellectual content, originality, comprehension of reading material, coherence, logic, organization, grammar, punctuation, spelling, and prose style. You will receive a comprehensive style guide and an evaluation rubric in advance through Blackboard. Adherence to the style guide is required and will be reflected in your grade.

Peer Review and Term Paper Revision: You will complete a revision to the term paper based on feedback from Dr. Lynn and feedback from one other student in the class. The revision will be graded using the criteria listed above, with the added requirement that your revisions take the comments into account. A portion of your term paper revision grade will be based on providing constructive, thoughtful comments on another student's paper. The peer review is due on 11/7, and the term paper revision on 12/3.

Midterm Exam: You will have an open-book, open-notes, take-home midterm exam. All questions will be essay questions. This exam will be graded as a writing assignment. Therefore, the exam will be graded for intellectual content, originality, comprehension of reading material, coherence, logic, organization, grammar, punctuation, spelling, and prose style. The midterm will be distributed on 10/1 and is due on 10/10.

Final Exam: You will have an open-book, open-notes final exam at the regularly scheduled time during finals week. All questions will be essay questions. The exam is comprehensive, although it will focus more on the material covered after the midterm. Given the limited time allowed to complete the exam (2½ hours), the primary grading criteria will be comprehension of the reading material and intellectual content, rather than punctuation, grammar, etc. However, if your writing is poorly organized or difficult to understand, this will negatively affect your grade.

Except for the advance discussion questions, ALL take-home assignments are due by 11:59

PM on the date specified, and will be accepted only through the Blackboard dropbox

created for that assignment. The official timestamp used by Blackboard will be used to

determine whether an assignment is late or on time.

There are several additional expectations for students enrolled in this class as ANT 575:

- 1. Graduate students will be required to conduct one more presentation than undergraduates in 475.
- 2. The final paper will be 15-20 pages, rather than 8-12 pages.
- 3. The final exam will be a lengthier take-home final, treated as a writing assignment. Graduate students will not, however, take the in-class final.
- 4. Graduate students will be asked to select and read an additional article of their choice from current scientific literature, which is related to the topic of each day's class session, in advance of each class. Appropriate places to look for such material might be American Journal of Physical Anthropology, American Journal of Human Biology, and Annals of Human Biology (although there are other places to look as well). Articles selected for this assignment should be original research reports rather than review articles whenever possible, published within the last 5 years. Graduate students will post a summary of these articles each week in the manner outlined above on their personal blog sites. When time permits, graduate students may be asked to discuss their additional readings with the class, and should come prepared to do so.
- 5. Graduate student blog commentaries should be longer and more detailed, and should reference both readings (the one assigned for the entire class and the one individually selected).
- 6. All assignments will be evaluated according to a standard appropriate for graduate-level coursework.

Grading Policy

Blogging (summaries and commentary) 12.5% Class Discussion (including presentations) 12.5% Term Paper 10% Term Paper Revision 15% Midterm Exam 25% Final Exam 25%

IMPORTANT NOTE: Because this is a writing course, to pass you MUST receive at least a passing grade the final writing assignment, which is the term paper revision. To receive a passing grade, you will need to show (at minimum) that you write with the skill normally required of an upper division student in Anthropology. *This is true regardless of how well you do in other aspects of the course!*

Policy on Missed Exams & Coursework

Advance reading summaries posted after 6PM the night before but before midnight but before midnight will be accepted for half credit. After that, no credit will be awarded for late summaries that others do not have any time to comment upon. Advance discussion questions must be submitted on time even if you were excused from class. Additionally, comments/discussion questions must be posted before class for credit, though you are encouraged to continue dialogues on any and all blog posts.

However, two missed reading commentaries will be dropped from your grade (or, if none are missed, you

will receive a course bonus point). Save these "free misses" to take care of emergencies that might arise.

Your topic, outline, term paper, peer review, and term paper revision must be submitted electronically, using the appropriate Blackboard dropbox, by 11:59 pm on the day they are due for full credit. After that, except by prior arrangement and with a very good reason, assignments will lose 10% credit off of the maximum of 100% for each day (or part of a day) they are late. Many assignments being due at the same time is never a good reason, and extensions will not be authorized on that basis. If your topic or outline is late, the 10% reduction will come off your maximum grade for the term paper. (Note: Instead of a 10% reduction, if the peer review is not submitted on time you will receive no credit for that portion of your term paper revision grade. Your fellow students depend on receiving this feedback on time so they can complete their own revisions, so no extensions will be approved for any reason.).

Your take-home midterm exam must be submitted electronically, using the appropriate Blackboard dropbox, by 11:59 pm on the day it is due. The midterm will not be accepted late except by prior arrangement and with a very good reason. Given that you have over a week to complete the midterm, there are very few emergencies that should prevent you from submitting the midterm on time. Multiple midterms being due during the same week is not a good reason – you need to plan in advance for this. Unauthorized late midterm exams receive zero credit.

The final exam date and time are set by the university. You must appear at the correct date and time.

Attendance Policy

This is a discussion-oriented class and attendance is required. Attendance will be monitored; unexcused absences will lower your grade. Classroom participation is an important requirement of the course, and it will figure in the final grade.

Social Media

"Like" the UA Department of Anthropology (www.facebook.com/ALLELEseries) on Facebook so that we can keep in touch with you and you can stay informed about our events and activities.

I also use Twitter as a way to share information during and between classes. We use hashtag #ant475. You can follow me @Chris_Ly and the department @BamaAnthro.

HOWEVER, it is extremely rude to be constantly texting or using your smartphone if you are not doing it for class. Therefore, if I see you on your device during class, I will be looking for course-relevant tweets. If you need to use your devices for anything but course work, take it into the hallway or I will ask you to do so.

Extra Credit

You can receive extra credit by attending ALLELE events. I will award 2 points per event. Stay tuned for dates and instructions for receiving this credit.

Anthropology Major and Evolutionary Studies

This course fulfills an elective requirement in both the Anthropology major and Evolutionary Studies (EvoS) minor (http://www.as.ua.edu/evolutionarystudies/). If you are not an Anthropology major or minor and have not already decided to declare as such, we hope this course leads you to consider doing so. EvoS is an interdisciplinary minor, housed in the Department of Anthropology and is designed to introduce students to the fundamental importance of evolutionary theory as an explanatory model for life and behavior. This course fulfills an elective requirement in the EvoS minor. Other requirements of the minor include two capstone courses (including ANT 150 and ANT 450, offered every Spring), a 200-level course in the biological principles of evolution, and a foundational course in one of three disciplines. Minors are required to complete six elective hours in two separate disciplines.

This program is integrated with UA's Evolution Working Group (EVOWOG) and its Alabama Lectures on Life's Evolution (ALLELE) speaker series ("Like" us on Facebook [www.facebook.com/ALLELEseries] to stay informed!). You are strongly encouraged to attend the ALLELE lectures presented this semester. This minor is part of a larger EvoS Consortium, which includes approximately 42 other institutions worldwide, though we are only one of four full-fledged minors. We take pride in this fact, given that Alabama recently scored at the very bottom of the 50 states in teaching evolution at the k-12 levels (even worse than Mississippi!).

As part of the EvoS program, the students have started an <u>EvoS club</u> that hosts an annual <u>Darwin Day</u> <u>Colloquium</u>. You are welcome to become part of this club whether you declare yourself an EvoS minor or simply maintain an abiding interest in evolutionary theory and its myriad applications and implications.

If you are interested in the EvoS minor (either to declare or for more information), contact either Dr. Lynn (cdlynn@ua.edu) or Dr. Rissler (rissler@as.ua.edu), who are co-directors of the program.

Severe Weather Guidelines

The guiding principle at The University of Alabama is to promote the personal safety of our students, faculty and staff during severe weather events. It is impossible to develop policies which anticipate every weather-related emergency. These guidelines are intended to provide additional assistance for responding to severe weather on campus.

UA is a residential campus with many students living on or near campus. In general classes will remain in session until the National Weather Service issues safety warnings for the city of Tuscaloosa. Clearly, some students and faculty commute from adjacent counties. These counties may experience weather related problems not encountered in Tuscaloosa. Individuals should follow the advice of the National Weather Service for that area taking the necessary precautions to ensure personal safety. Whenever the National Weather Service and the Emergency Management Agency issue a warning, people in the path of the storm (tornado or severe thunderstorm) should take immediate life saving actions.

When West Alabama is under a severe weather advisory, conditions can change rapidly. It is imperative to get to where you can receive information from the <u>National Weather Service</u> and to follow the instructions provided. Personal safety should dictate the actions that faculty, staff and students take.

The Office of University Relations will disseminate the latest information regarding conditions on campus in the following ways:

- Weather advisory posted on the UA homepage
- Weather advisory sent out through UA Alerts to faculty, staff and students
- Weather advisory broadcast over WVUA at 90.7 FM
- Weather advisory broadcast over Alabama Public Radio (WUAL) at 91.5 FM
- Weather advisory broadcast over WVUA-TV/WUOA-TV, and on the website
 at http://wvuatv.com/content/weather. WVUA-TV Home Team Weather provides a free service you can subscribe to which allows you to receive weather warnings for Tuscaloosa via e-mail or cell phone.
 Check http://wvuatv.com/content/free-email-weather-alerts for more details and to sign up for weather alerts.

In the case of a tornado warning (tornado has been sighted or detected by radar; sirens activated), all university activities are automatically suspended, including all classes and laboratories. If you are in a building, please move immediately to the lowest level and toward the center of the building away from windows (interior classrooms, offices, or corridors) and remain there until the tornado warning has expired. Classes in session when the tornado warning is issued can resume immediately after the warning has expired at the discretion of the instructor. Classes that have not yet begun will resume 30 minutes after the tornado warning has expired provided at least half of the class period remains.

Disability Statement

If you are registered with the Office of Disability Services, please make an appointment with me as soon as possible to discuss any course accommodations that may be necessary.

If you have a disability, but have not contacted the Office of Disability Services, please call (205) 348-4285 (Voice) or (205) 348-3081 (TTY) or visit 133-B Martha Parham Hall East to register for services. Students who may need course adaptations because of a disability are welcome to make an appointment to see me during office hours. Students with disabilities must be registered with the Office of Disability Services, 133-B Martha Parham Hall East, before receiving academic adjustments.

Policy on Academic Misconduct

All students in attendance at The University of Alabama are expected to be honorable and to observe standards of conduct appropriate to a community of scholars. The University of Alabama expects from its students a higher standard of conduct than the minimum required to avoid discipline. At the beginning of each semester and on examinations and projects, the professor, department, or division may require that each student sign the following Academic Honor Pledge: "I promise or affirm that I will not at any time be involved with cheating, plagiarism, fabrication, or misrepresentation while enrolled

as a student at The University of Alabama. I have read the Academic Honor Code, which explains disciplinary procedure resulting from the aforementioned. I understand that violation of this code will result in penalties as severe as indefinite suspension from the University."

See the Code of Student Conduct for more information.

Emergency Contact Information

UA's primary communication tool for sending out information is through its web site at www.ua.edu. In the event of an emergency, students should consult this site for further directions. Additional course information will be posted using Blackboard Learn.