

**Human Evolutionary Ecology (ANHB3315)
Second Semester 2008**

Unit website: <http://www.lab.anhb.uwa.edu.au/hb315/>

Coordinator: Professor James Chisholm (JC)
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Guest lecturers: Dr Debra Judge (DJ) and Dr Nicole Koehler (NK)

Lectures: Arts LR6
Tuesday 12-1
Wednesday 12-1

Tutorials: AHB G.39
Tuesday 3-4
Wednesday 1-2

Consultation: Jim's office
Best by appointment

| Week | Day | Lecture | Tutorial Reading/Discussion Topic |
|--------------------------|------------|--|---|
| 1 | 29/7 | Evolutionary epistemology (JC) | <ul style="list-style-type: none"> • EO Wilson "The natural sciences." (recommended reading) |
| | 30/7 | Principles of human evolutionary ecology and life history theory (JC) | |
| 2 | 5/8 | Evo-devo: Developmental systems theory (JC) | <ul style="list-style-type: none"> • P Bateson "Behavioral development and Darwinian evolution." • E Young "Rewriting Darwin: The new non-genetic inheritance" |
| | 6/8 | Issues in human evolutionary ecology, I (JC) | |
| 3 | 12/8 | Issues in human evolutionary ecology, II (JC) | <ul style="list-style-type: none"> • E Smith, M Borgerhoff Mulder and K Hill "Controversies in the evolutionary social sciences: A guide for the perplexed." • G Jasienska "Why energy expenditure causes reproductive suppression in women." |
| | 13/8 | Energy and fertility (DJ) | |
| 4 | 19/8 | The evolution of human infancy (JC) | <ul style="list-style-type: none"> • B Bogin and BH Smith "Evolution of the human life cycle." |
| | 20/8 | The evolution of attachment (JC) | |
| 5 | 26/8 | The human stress response (JC) | <ul style="list-style-type: none"> • J Simpson "Attachment theory in modern evolutionary perspective." |
| | 27/8 | Attachment and alternative reproductive strategies (JC) | |
| 6 | 2/9 | Loose ends, discussion, review | <ul style="list-style-type: none"> • R Sapolsky "Hormonal correlates of personality and social contexts: From non-human to human primates." |
| | 3/9 | IN-CLASS MIDTERM EXAM | |
| 7 | 9/9 | The evolutionary ecology and psychology of theory of mind (JC) | <ul style="list-style-type: none"> • J Chisholm "Uncertainty, contingency and attachment: A life history theory of theory of mind." • S Hrdy "Cooperative breeders with an ace in the hole." |
| | 10/9 | Cooperative breeding and reproductive suppression (DJ) | |
| Non-Teaching Study Break | | | |
| 8 | 23/9 | Facultative adjustment of age at menarche, I: Genes, health and nutrition (JC) | <ul style="list-style-type: none"> • J Chisholm, J Quinlivan, R Peterson and D Coall "Early stress predicts age at menarche and first birth, adult attachment and expected lifespan." |
| | 24/9 | Facultative adjustment of age at menarche, II: Psychosocial stress (JC) | |

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|---|----------------|--|---|
| 9 | 30/9 1/10 | Evolution of the prolonged human lifespan (DJ) Selection for “beauty appreciation modules in human evolution” (DJ, NK and JC) | <ul style="list-style-type: none"> • M Gurven and H Kaplan "Longevity among hunter-gatherers: A cross-cultural examination." |
| Final essay topic must have been arranged with Jim by end of this week | | | |
| 10 | 7/10 8/10 | Parent-offspring conflict and adaptation in utero (JC) Evolutionary public health: Early stress, early reproduction and low birth weight (JC) | <ul style="list-style-type: none"> • P Bateson et al. "Developmental plasticity and human health." |
| 11 | 14/10 15/10 | Presentations Presentations | Presentations |
| 12 | 21/10 22/10 | Presentations Presentations | Presentations |
| 13 | 28/10 29/10 | Presentations Presentations | Presentations |

FINAL ESSAY DUE NO LATER THAN FRIDAY OCTOBER 31. To be handed in at the AHB Office by 5:00 PM.

ALL READINGS AVAILABLE AT: <http://cmo.library.uwa.edu.au/rlms/>

ASSESSMENT: This includes tutorial participation (20 per cent), a mid-term theory examination with essays and/or short-answer questions (35 per cent), and a final theory paper (45 per cent).

1. **Tutorial participation.** Come prepared to discuss the assigned reading(s) in terms of three perspectives: (1) the data, theory and logic of human evolutionary ecology, (2) evolutionary epistemology and (3) the assumption that the adaptive function of our evolved capability for knowledge was to solve fitness problems. These perspectives are not mutually exclusive, of course. Indeed, you should focus on their integration.
 - a. Evolutionary ecology
 - i. What are the author’s central arguments or main point?
 - ii. What data, theory or logic (including formal logic – ie, math) have been advanced to support these arguments/points?
 - iii. Critically evaluate these arguments/points in light of data, theory and logic covered in previous lectures, tutorials or readings.
 - iv. How might these arguments/points be extended, developed, or applied?
 - v. Can you generate a testable hypothesis derived from these arguments/points?
 - b. Evolutionary epistemology
 - i. What generated the author’s central arguments/main points?
 - ii. Have these arguments/points been adequately tested?
 - iii. Should these arguments/points be replicated? Why? How?
 - c. Solving fitness problems
 - i. How are the author’s central arguments/points related to fitness? Whose fitness?
 - ii. Do the author’s central arguments/points suggest any solutions to these fitness problems?
2. **Leading tutorial discussion.** Discussion leaders should be prepared to present at least two 5-10 minute accounts of how they have approached the questions above (focusing on their integration). They will

then lead discussion by responding to comments, questions, etc. from other students regarding their presentations. It is permissible for discussion leaders to work with any number of other students in preparing their accounts. It is also often useful to relate discussion material to current events in the news.

3. **Midterm.** On **Tuesday 2/9** you will be given at least one essay question to prepare for an in-class exam to be held on **Wednesday 3/9**. Any student who cannot attend class on Tuesday 2/9 should notify Jim well in advance. Only well founded reasons for a change in schedule will be accepted.
4. **Final presentation.** Lecture and tutorial times during the last three weeks of term will be devoted to student presentations of their final essays (see below). Presentations must be limited to 15 minutes, with 5 minutes discussion. Powerpoint or overhead projector presentations are encouraged but not required. Presenters are encouraged to incorporate feedback in their final essays.
5. **Final essay.** All students must submit an essay of $\approx 2,000$ words (≈ 8 pages) by 5PM, Friday, 31 October. Several potential topics will be identified in lectures and tutorials but you are free to choose your own (in consultation with Jim). You must have chosen a topic before the non-teaching study break (i.e., end of week 9). Include concepts, criticisms, data, etc. from class discussion in your essay
 - **ESSAYS MUST:**
 - **HAVE ANHB COVER SHEET**
 - **BE IN 12 POINT WELL-INKED PRINT, DOUBLE SPACED AND HAVE NUMBERED PAGES. I MAY REFUSE TO MARK ANY ESSAY NOT PRESENTED IN THIS FORMAT.**
 - **Include concepts, criticisms, data, etc. from class in your essay**
 - **Accidents happen: be sure to save a copy of your paper**
 - **LATE ESSAYS ARE PENALISED** with the following deductions:
 - Less than one week late: 10% of total mark
 - One to two weeks late: 20% of total mark
 - **No essay will be accepted after two weeks beyond the due date.** Extensions are rarely granted, and then only in exceptional circumstances (e.g. severe illness or personal trauma). However, should you wish to apply for an extension it must be made in writing and attached, along with supporting documentation (e.g. medical certificate), to the essay. Your essay and documents must be handed in to the AHB Office. I will consider the request, but there is no guarantee that an extension will be granted. **IT IS NOT POLICY TO GRANT EXTENSIONS FOR COMPUTER FAILURE OR THE PRESSURE OF OTHER ASSIGNMENTS.**

Some useful links:

Human Behavior and Evolution Society Website: <http://www.hbes.com/>

Evolution and Human Behavior:

http://www.sciencedirect.com/science?_ob=JournalURL&_cdi=5031&_auth=y&_acct=C000028118&_version=1&_urlVersion=0&_userid=554529&md5=f5e456a880c65cf53050ab156ad28c01

Evolutionary Anthropology: <http://www3.interscience.wiley.com/cgi-bin/jhome/38641?CRETRY=1&SRETRY=0>

Human Nature: <http://www.springer.com/east/home?SGWID=5-102-70-173732517-0&changeHeader=true&SHORTCUT=www.springer.com/12110>

Trends in Ecology and Evolution: <http://www.sciencedirect.com/science//journal/01695347>