

Psychology Neuroscience and Behaviour 4R03 – Special Topics in Animal Behaviour

Instructor: David Feinberg

Location: Hamilton Hall 305

Time: 11:30-2:20

January 6, 2008- April 7, 2008

Extension 28664

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TA's

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All or any information on this document is subject to change. All changes will be noted on the course website.

Course description and objectives: This term's 4th year 4R03 seminar course will focus on the adaptive design of mate preferences. In this course we will discuss how evolutionary-based hypotheses explored in non-human animal species have been used to generate hypotheses about human mate preferences, and *vice versa*. We will examine theoretical papers and research reports that integrate evolutionary psychology, evolutionary biology, behavioural ecology, psychology, and anthropology, in order to gain an in-depth perspective on not only why certain signals and cues to mate quality are preferred, but how preferences can be highly dynamic in response to fluctuating environments.

Registrants are expected to be familiar with the basic principals underlying sexual selection. For the first half of the course, each week we will discuss set of papers that explores a facet of mate preferences among non-humans and humans alike. During the second half of the course, students will present a grant proposal that proposes to examine a novel hypothesis about one of the topics covered in the first half of the course.

This course is designed to help develop effective, transferable techniques among many facets of scientific research such as finding and evaluating relevant literature on adaptive mate preferences, identifying gaps in our current understanding of mate preferences, developing new ways to fill these gaps, and formulating them in such a way as to share them with a group of scientific peers.

Grades:

Final grades are based upon the written grant proposal (40%), in-class oral presentation of the grant proposal (30%), class participation (10%), critique of presentation (10%), and reports on reading (10%). As this is a seminar course, attendance is mandatory. All coursework will be submitted electronically at least 1 hour before class begins. No late submissions will be accepted.

Papers

The foundation of the course is reading and discussing papers. You will be given full citations for each paper to read. You are expected to find each paper at McMaster's libraries, read it, and be prepared to discuss it in class. To do so, you will submit a 1-page report comparing and contrasting or summarizing the two papers.

Grant Proposals

The class will break down into teams to investigate one of the prior reading topics in more depth. Depending on class size, in-class grant proposal presentations will be either by individual, or by group. Each student will be randomly assigned to critique another student's presentation. Each member of the team will produce their own written grant proposal. Briefly, grant proposals will consist of a summary, a literature review, the goals of the proposed project, the methods that will be used to address the goals, and the potential impact of the goals. Further details will follow early in the term.

Office Hours

By appointment only

Reading List

Week 1: Evolution of mate preferences & Fluctuating Asymmetry

Title: Evolution of human mate choice
Author(s): Geary DC, Vigil J, Byrd-Craven J
Source: JOURNAL OF SEX RESEARCH 41 (1): 27-42 FEB 2004

Title: Chimpanzee facial symmetry: A biometric measure of chimpanzee health
Author(s): Sefcek JA, King JE
Source: AMERICAN JOURNAL OF PRIMATOLOGY 69 (11): 1257-1263 NOV 2007

Title: The relationship between shape symmetry and perceived skin condition in male facial attractiveness
Author(s): Jones BC, Little AC, Feinberg DR, Penton-Voak IS, Tiddeman BP, Perrett DI
Source: EVOLUTION AND HUMAN BEHAVIOR 25 (1): 24-30 JAN 2004

Week 2: Sexual Dimorphism in Faces

Title: Selective attention toward female secondary sexual color in male rhesus macaques

Author(s): Waite C, Gerald MS, Little AC, Kraebel E
Source: AMERICAN JOURNAL OF PRIMATOLOGY 68 (7): 738-744 JUL 2006

Perrett DI, Lee KJ, Penton-Voak I, et al.
Effects of sexual dimorphism on facial attractiveness
NATURE 394 (6696): 884-887 AUG 27 1998

Week 3: Hormone-mediated preferences

Jones BC, Little AC, Boothroyd L, et al.
Commitment to relationships and preferences for femininity and apparent health in faces are strongest on days of the menstrual cycle when progesterone level is high
HORMONES AND BEHAVIOR 48 (3): 283-290 SEP 2005

Title: Parenting and potency: alternative routes to reproductive success in male Mongolian gerbils

Author(s): Clark MM, Desousa D, Vonk J, Galef BG
Source: ANIMAL BEHAVIOUR 54: 635-642 Part 3, SEP 1997

Week 4: Condition dependent preferences

Bakker TCM, Kunzler R, Mazzi D
Sexual selection - Condition-related mate choice in sticklebacks
NATURE 401 (6750): 234-234 SEP 16 1999

Penton-Voak IS, Little AC, Jones BC, et al.
Female condition influences preferences for sexual dimorphism in faces of male humans (Homo sapiens)
JOURNAL OF COMPARATIVE PSYCHOLOGY 117 (3): 264-271 SEP 2003

Week 5: Learning and mate preferences

Title: Learning affects mate choice in female fruit flies
Author(s): Dukas R
Source: BEHAVIORAL ECOLOGY 16 (4): 800-804 JUL-AUG 2005

Little AC, Mannion H
Viewing attractive or unattractive same-sex individuals changes self-rated attractiveness and face preferences in women
ANIMAL BEHAVIOUR 72: 981-987 Part 5 NOV 2006

Week 6: Social transmission of mate preferences

Title: Female Japanese quail affiliate with live males that they have seen mate on video
Author(s): Ophir AG, Galef BG
Source: ANIMAL BEHAVIOUR 66: 369-375 Part 2, AUG 2003

Jones BC, DeBruine LM, Little AC, et al.
Social transmission of face preferences among humans
PROCEEDINGS OF THE ROYAL SOCIETY B-BIOLOGICAL SCIENCES 274 (1611):
899-903 MAR 22 2007