Psych 3420 3.0A EVOLUTIONARY PSYCHOLOGY – Fall 2014

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Text - Buss, D.M. (2012) Evolutionary *Psychology: The New Science of the Mind (4nd Ed.). Boston: Allyn & Bacon.*

Procedures - Class sessions will consist of lectures, followed by films or group tutorials. Tutorials will be conducted by the TA and will deal with students' questions about the text and lectures. Students are advised to read the chapters indicated in advance of the tutorials and prepare questions if any of the material is problematic.

Exams and grades - Two exams will be given, which will be non-overlapping in course material. Both will be multiple choice types, based on text and lectures. Exam scores will be weighted equally in the final grade.

Missed exams – A student missing an exam should contact the TA in timely manner, and must provide an acceptable reason and appropriate documentation to qualify for a make-up. The time and place for the make-up exam will be listed on both the course website and MOODLE and announced in class. Make-up exams may or may not be multiple-choice, depending on the number of students needing them.

Lecture schedule

Sep 8 - Introduction to the course. Definition and origins of evolutionary psychology.

Sep 15 - Overview of Darwinian theory. Evolutionary psychology compared to traditional psychological approaches. *(Video: Human Quest, Part I)*

Sep 22 - Mechanisms of natural selection: Sources of genetic variation; directional vs. stabilizing selection; punctuated equilibrium. *(Video: Human Quest, Part II)*

Sep 29 - Levels of selection: Individual, group, kin, gene. *(Tutorial - ch. 1, 2, 3)*

Oct 6 - Genetic variance in human individual differences: Behaviour genetics. *(Video: Twins)*

Oct 20 - The role of natural selection in complex social behaviours: Socio-ecology. *(Tutorial -ch. 4, 5, 6)*

Oct 27 - Midterm Exam – lectures Sep 15 to Oct 13; text chapters 1-6.

Nov 3 - Heredity and environment: An interactionist view. *(Exam review)*

Nov 10 - Filial attachment: Imprinting. *(Tutorial – ch. 7- 9)*

Nov 17 - Parent-offspring attachment: Bonding. *(Video: Why Sex?)*

Nov 24 - Mating behaviour: Why sex? Why two sexes? Reproductive strategies.
(Video: The Stossel Report)

Dec 1 - Cognitive processes: Theory of domain specificity. *(Tutorial - ch.10 -13)*

The final exam will be scheduled in the University exam period and will cover lectures from Sep 15 to Dec 1 and text chapters 7 to12.

Lecture Outlines

Sep 15

Introduction to the theory of evolution by natural selection: Darwin's voyage and the inception of the theory. Principles of the theory. The theory applied to psychology.

Proximate and ultimate levels of causation. Traditional psychology's exclusion of ultimate causation. Psychologists' rationales for the proximate approach and the evolutionists' counter-arguments.

Sep 22

Darwin's Dilemma: Could natural selection account for the diversity of life? Mendel's discovery and the synthesis of evolutionary and genetic theory.

Sources of variation in inheritance: Mutation, sex, and gene crossover.

How species evolve: The Red Queen theory; the theory of punctuated equilibrium. Evidence for a universal human nature

Sep 29

Why good theories require exceptions: Altruism as the major exception to the concept of individual selection.

Group selection: Contributions of V. Wynne Edwards. Kin selection and gene selection.

Oct 6

Selective breeding and inbreeding experiments with animals. Counterpart human studies: Co-twin methods.

The concept and measurement of heritability. Heritability estimates for cognitive and personality variables. Limitations of heritability measures.

Oct 27

Definitions: ecology, socio-ecology, ecological niche.

Crook's classic study of socio-ecology in weaverbirds: The role of food source and predation in determining solitary vs. gregarious life-styles.

The socio-ecology of mating and parenting styles: Origins of monogamy, polygyny, hypergamy, reproductive competition and sexual dimorphisms in animals and humans

Nov 3

The myth of the nature-nurture dichotomy. An interactionist model: Examples in animal and human behaviour.

Contrasting the interactionist and behaviouristic models: An interactionist approach to dog training.

Nov 10

Social imprinting described: Lorenz and Tinbergen's early research. Imprinting in primates: Harlow's studies. Imprinting in humans: Research on effects of non-imprinting.

Theories of the processes underlying imprinting: Moltz's “low fear” model.

Nov 17

Distinguishing imprinting from bonding: Evidence for bonding in separation and adoption studies with animals; hormones and bonding; adaptive function of bonding.

Bonding in the human case: clinical, descriptive and experimental studies. Possible implications of bonding for adoption procedures.

Nov 24 -

Why sex? Genetic diversity; elimination of pathogens. Incest taboos: Why and how they develop.

Why two sexes? Disruptive selection at the gamete level.

Evolution of human mating strategies: The role of loss of oestrus.

Dec 1

Domain specificity: Application to the Wason task.

Evolutionary theories of sex related differences in spatial behaviours: Gaulin and Fitzgerald's mating strategy model; Silverman and Eals' hunter-gatherer theory.