

Method & Theory in Physical Anthropology

ANTH 155 (Call No. 80417) Fall 2007

Syllabus

Lecture TR 1.30-2.45 PM
MND 4008

Instructor: Dr. Roger Sullivan
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Catalog Description

Survey of the development of method and theory in physical anthropology from its origins in zoology, anatomy, and medicine, to the various approaches currently used in the study of human biology and evolution. Concepts considered include the scientific method, modern genetics, evolutionary theory, the race concept and other approaches to explaining human variation, taxonomy and systematics, and macro-evolutionary models. Critical reading and analytical skills will be emphasized. Prerequisite: ANTH 001 and ANTH 001A. 3 units.

Required Texts

1. Boyd, R., and J. B. Silk. 2006. *How Humans Evolved* (Fourth Edition). New York: W. W. Norton.
2. Stocking, G. W. 1968. *Race, Culture, and Evolution: Essays in the History of Anthropology*. Chicago: The University of Chicago Press.
3. Weiner, J. 1995. *The Beak of the Finch: A Story of Evolution in Our Time*. New York: Vintage Books.
4. Additional required readings are available on LOCUS (<http://locus.csus.edu/locus2005/index.php>) and in the Library's Reserve Book Room.

Course Objectives and Requirements:

ANTH 155 is a reading and writing intensive survey of historical and contemporary method and theory in biological/physical anthropology. Assessment consists of one essay (25%), and three exams (75%). Course materials include substantial required reading and you are expected to read the assigned articles before class so that you can participate in class discussion. Class participation and attendance will be carefully considered when determining your final grade.

Essays (25%)

The essay will address a question about the history of physical anthropology and/or evolutionary thought discussed in the first section of lectures, or, a contemporary issue related to human evolution from the second and third sections of lectures, and is worth 25% of your final grade. A choice of essay questions/topics and further details will be provided on the class webpage (see address above). The essay is due in class on Tuesday November 27. NO LATE ESSAYS ACCEPTED.

The essay will be a minimum of five and maximum of seven double-spaced pages, 12-point font, 1" margins, excluding references and title page.

Exams (75%)

Exams one and three will be comprised of short answer/essay questions. Exam two will be multiple choice, true/false questions. Exam two will be answered on a SCANTRON form and you are responsible for purchasing a General Purpose NCS Answer Sheet Form # 4521 at the bookstore and bringing it to the exam. Exams one and two will be held in class, exam three will be held in Finals Week. The exams will be based on lecture content, textbook readings and additional required readings, and are non-cumulative.

Make-up Exam/assignment. If anyone misses the first or second exam, they may qualify for a make-up assignment only if the reason for their absence was a genuine and documented emergency.

Attendance and Class Conduct

Attendance is expected. Turn off cell phones. Be punctual. Inform me beforehand if you must arrive late because of work commitments. If your commitments require you to leave class early, let me know before class.

Academic Honesty: If a student is found cheating in any of the assignments/exams of this class, the student will receive an F for that assignment/exam. It is each student's responsibility to be aware of the university policy on cheating and plagiarism. See the CSUS Academic Honesty Policy and Procedures document at <http://www.csus.edu/admbus/manual/UMA00150.htm>

Class Schedule

Section 1: <i>History of Physical Anthropology and Evolutionary Thought</i>		Readings
T Sep 4	Introduction	Dr Sullivan's Essay Guide
R Sep 6	Historicism vs Presentism	Stocking Chap 1
T Sep 11	The Scientific Method/Philosophy of Science	Miller 1985 (Popper), Kuhn 1970
R Sep 13	French Evolutionists and Physical Anthropologists	de Waal Malefijt 1968, Haller 1970
T Sep 18	The British: Armchair Anthropologists	Stocking Chap 3
R Sep 20	The British: Darwin and Co	Stocking Chap 8, Weiner Chaps 1-3
T Sep 25	Evolution and Science in Germany	Stocking Chap 9, Allen 1989
R Sep 27	The Americans	Bean & Baker 1919, Washburn 1951
T Oct 2	Recent Scientific Dilemmas in Anthropology	D'Andrade 1995, Scheper-Hughes 1995, Gregor & Gross 2004
R Oct 4	Exam I	
Section 2: <i>Genetics and Microevolution</i>		
T Oct 9	Darwin's Adaptation by Natural Selection	Boyd & Silk 2-23, Weiner Chaps 4-7
R Oct 11	Mendelian Inheritance	B&S 24-50
T Oct 16	Natural Selection, Sexual Selection and Kin Selection	B&S 66-69, 177-182, 196-215 review Weiner Chap 6
R Oct 18	Population Genetics: Hardy and Weinberg	B&S 51-58
T Oct 23	Population Genetics: The New Synthesis	B&S 58-69
R Oct 25	Population Genetics: Forces of Evolution	B&S 69-82
T Oct 30	Human Variation: "Simple" Traits	B&S 402-417
R Nov 1	Human Variation: Complex Traits	B&S 417-430
T Nov 6	Human Variation: Contemporary Genetics and "Race"	AAPA 1996, AAA 1998
R Nov 8	Exam II	
Section 3: <i>Macroevolution and the Fossil Record</i>		
T Nov 13	Speciation	B&S 83-111, Weiner Chaps 8-14
R Nov 15	Early Hominid Evolution: The Bipedes	B&S 269-303, Galik et al. 2004 Brunet et al. 2002
T Nov 20	Hominid speciation – or not? <i>Australopithecus / habilis / rudolfensis</i>	Wood and Collard 1999, Ungar et al. 2006, B&S 304-326
R Nov 22	Thanksgiving	
T Nov 27	What to do with <i>Homo erectus / ergaster</i> ? Due date in class for essay	B&S 327-337, Spoor et al. 2007
R Nov 29	Archaic <i>Homo</i> and Neandertal	B&S 337-361
T Dec 4	The Emergence of Modern Humans I	B&S 362-376,
R Dec 6	The Emergence of Modern Humans II	B&S 376-399, Duarte et al. 1999
T Dec 11	The Emergence of Modern Humans III	Brown et al. 2004, White et al. 2003
R Dec 13	Summary and Review	
R Dec 20	Exam III 12.45 - 2.45 PM (MND 4008)	

Required Readings available on LOCUS and/or in the Reserve Book Room (subject to change)

Allen, J. S. 1989. Franz Boas's physical anthropology: "The Critique of Racial Formalism" revisited. *Current Anthropology* 30:79-84.

AAA. 1998. American Anthropological Association Statement on "Race" [on LOCUS]

AAPA.1996. AAPA Statement on Biological Aspects of Race. *American Journal of Physical Anthropology* 101:569-570. [on LOCUS]

Bean, R. B., and W. Baker. 1919. Some racial characteristics of the liver weight in Man. *American Journal of Physical Anthropology* 2:167-173.

Brown, P. et al. 2004. A new small-bodied hominin from the Late Pleistocene of Flores, Indonesia. *Nature* 431:1055-61. [on LOCUS]

Brunet, M., et al. 2002. A new hominid from the Upper Miocene of Chad, Central Africa. *Nature* 418: 145-151. [on LOCUS]

Brunet, M. et al. 2005. New material of the earliest hominid from the Upper Miocene of Chad. *Nature* 434:752-755. [on LOCUS]

Cameron, J. 1920. The Naso-Orbito-Alveolar Index. *American Journal of Physical Anthropology* 3: 63-76.

D'Andrade, R. 1995. Moral models in anthropology. *Current Anthropology* 36:399-408. [on LOCUS]

de Waal Malefijt, A. 1968. Homo monstrosus. *Scientific American* 219:112-118.

Duarte, C. et al. 1999. The early upper paleolithic human skeleton from the Abrigo do Lagar Velho (Portugal) and modern human emergence in Iberia. *Proceedings of the National Academy of Sciences* 96:7604-7609. [on LOCUS]

Galik, K. et al. 2004. External and Internal Morphology of the BAR 1002'00 *Orrorin tugenensis* femur. *Science* 305:1450-1453. [on LOCUS]

Gould, S. J., and R. C. Lewontin. 1979. The spandrels of San Marco and the panglossian paradigm: A critique of the adaptationist programme. *Proceedings of the Royal Society of London, Series B*, 205:581-598.

Gregor, T. A., and D. R. Gross. 2004. Guilt by association: The culture of accusation and the American Anthropological Association's investigation of *Darkness in El Dorado*. *American Anthropologist* 106:687-698. [on LOCUS]

Haller, J. S.1970. The species problem: Nineteenth-century concepts of racial inferiority in the origin of Man controversy. *American Anthropologist* 72: 1319-1329. [on LOCUS]

Kuhn, T. 1970. *The Structure of Scientific Revolutions*. Chicago: University of Chicago Press. Pp. 10-22, 160-173.

Mayr, E. 1983. How to carry out the adaptationist program? *American Naturalist* 121:324-334.

Miller, D. (ed). 1985. *Popper Selections*. New Jersey: Princeton University Press. Pp. 101-104, 127-130, 133-136, 183-186, 220-225.

Scheper-Hughes, N. 1995. The primacy of the ethical: Propositions for a militant anthropology. *Current Anthropology* 36:409-440. [on LOCUS]

- Spoor, F. et al. 2007. Implications of new early *Homo* fossils from Ileret, east of Lake Turkana, Kenya. *Nature* 448: 688-691.
- Stocking, G. W. 1968a. "On the Limits of "Presentism" and "Historicism" in the Historiography of the Behavioral Sciences," in *Race, Culture, and Evolution: Essays in the History of Anthropology*. Chicago: The University of Chicago Press. Pp. 1-12.
- Stocking, G. W. 1968b. "The Persistence of Polygenist Thought in Post-Darwinian Anthropology," in *Race, Culture, and Evolution: Essays in the History of Anthropology*. Chicago: The University of Chicago Press. Pp. 42-68.
- Stocking, G. W. 1968c. "The Critique of Racial Formalism," in *Race, Culture, and Evolution: Essays in the History of Anthropology*. Chicago: The University of Chicago Press. Pp. 161-194.
- Stocking, G. W. 1968d. "Franz Boas and the Culture Concept in Historical Perspective," in *Race, Culture, and Evolution: Essays in the History of Anthropology*. Chicago: The University of Chicago Press. Pp. 195-233.
- Ungar, P. S. et al. 2006. Diet in early *Homo*: A review of the evidence and a new model of adaptive versatility. *Annual Review of Anthropology* 35:209–28 [on LOCUS]
- Washburn, S. 1951. The New Physical Anthropology. *Transactions of the New York Academy of Science Series II* 13:298-304.
- White, T. D. et al. 2003. Pleistocene *Homo sapiens* from Middle Awash, Ethiopia. *Nature* 423:742-747. [on LOCUS]
- Williams, G. C. 1998. *The Pony Fish's Glow: And Other Clues to Plan and Purpose in Nature*. Basic Books.
- Wood, B. and M. Collard. 1999. The Human Genus. *Science* 284: 65-71. [on LOCUS]