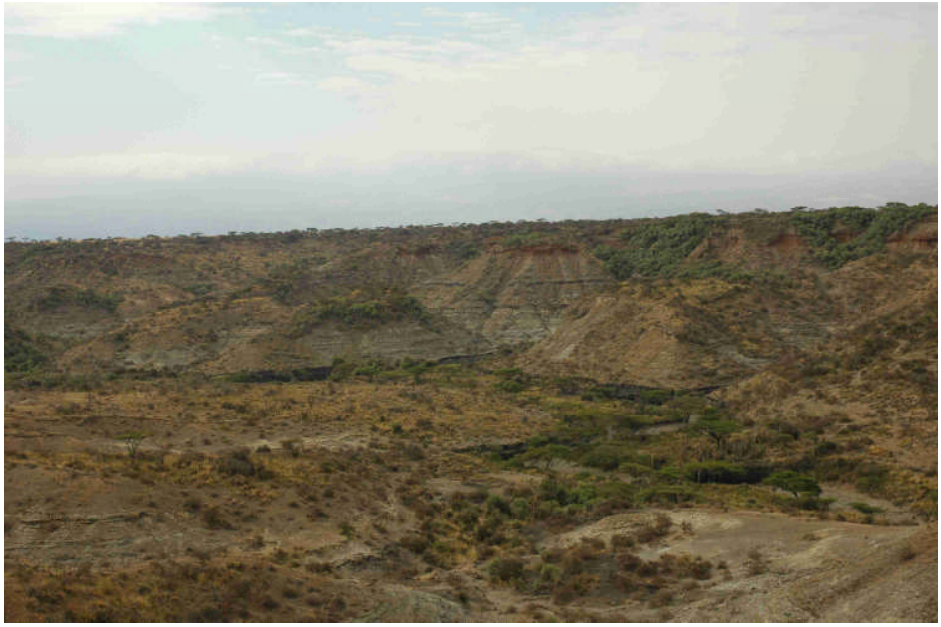
UCL - INSTITUTE OF ARCHAEOLOGY

ARCL-2025: EARLY HOMININ SOCIETIES IN AFRICA

2010-2011

(BA/BSc - Year 2/3 Option - 0.5 unit)

Co-ordinator: DR. IGNACIO DE LA TORRE
(room: 401 - email: i.torre@ucl.ac.uk - tel: 020-7679-4721)



Olduvai Gorge (Tanzania)

1- OVERVIEW

Short description

This course focuses on the archaeological side of the process of human evolution in Africa. An overview of the geological and palaeoecological characteristics of Africa will be presented, as well as the evolutionary background and the history of palaeoanthropological research.

Week-by-week summary

7 October

Lecture 1. Part I: Introduction to the study of early hominin societies in Africa and organization of the course. Part II: Geographical, ecological and geological context of human evolution in Africa.

14 October

Lecture 2. Part I. History of research on early hominins in Africa. Part II. Video on African palaeoanthropology.

21 October

Lecture 3. Primates and early hominins in Africa: evolutionary history and phylogenetic trees.

28 October

Lecture 4. The earliest archaeological sites and the dawn of technology

4 November

Lecture 5. The archaeology of the African Early Pleistocene and the early human behavioural models

11 November: Reading week

**** 15 November: Deadline for first essay**

18 November

Lecture 6. Part I. Hunting, scavenging and subsistence in the African Early Pleistocene. Part II. Video: Olduvai Gorge.

25 November

Lecture 7. *Practical: identification of stone tools versus natural geofacts and the Oldowan technology*

2 December

Lecture 8. The African Acheulean in the lower and middle Pleistocene

9 December

Lecture 9. The origins of anatomically modern humans and the Middle Stone Age in Africa

16 December

Lecture 10. *Practical: Acheulean and Middle Stone Age stone tools*

** **16 December: Deadline for second essay**

Basic texts

Klein, R. G. 2009. *The Human Career: Human Biological and Cultural Origins. 3rd edition*. Chicago University Press, Chicago. INST ARCH BB 1 KLE

Klein, R. 2000. Archeology and the Evolution of Human Behavior. *Evolutionary Anthropology* 9, 17-36. Available online

Foley, R. & Lahr, M. M. 2003. On Stony Ground: Lithic Technology, Human Evolution, and the Emergence of Culture. *Evolutionary Anthropology*, 12: 109-122. Teaching Collection Inst Arch 3275

Lewin R & Foley, R. 2004. *Principles of Human Evolution*. Oxford, Blackwell. INST ARCH LEW (ISSUE DESK)

Schick, K. D. and N. Toth 1993. *Making Silent Stones Speak. Human Evolution and the Dawn of technology*. London, Weindenfeld and Nicolson. IoA BC 120 SCH

Methods of Assessment

The course will be assessed by two 2,500 word essays each of which counts for 50% of the marks. If students are unclear about the nature of an assignment, they should discuss this with the Course Co-ordinator. Students are not permitted to re-write and re-submit essays in order to try to improve their marks. However, the Course Co-ordinator is willing to discuss an outline of the student's approach to the assignment, provided this is planned suitably in advance of the submission date.

Teaching methods

This is a 0.5 course-unit involving 8 double lectures and 2 two hour practical classes. It will be taught in the autumn term each Thursday between 11 am-1 pm **in room 410** at the Institute of Archaeology.

Workload

It is expected that students will spend an average of 10 hours per week undertaking background reading or in preparation of essays relating to this course. This adds up to a total workload of some 150 hours for this 0.5 course-unit.

Prerequisites

This course does not have prerequisites.

2- AIMS, OBJECTIVES AND ASSESSMENT

Aims & objectives

The course will focus on when and how the first archaeological sites appeared in the African continent, and will summarize first dispersals across the continent by early *Homo*, the earliest 'Out of Africa' and the behavioural characteristics of Lower Pleistocene humans. The last part of the course will cover the origins of modern humans in Africa, and the cultural characteristics of the Middle Stone Age.

Learning outcomes

On successful completion of the course, students should have developed observation and critical reflection on the reading of the Early and Middle Stone Age research literature. At the same time, students should be able to apply the acquired knowledge to the interpretation of African early assemblages, and their evolutionary implications for understanding the Palaeolithic archaeological record in other regions of the Old Word.

Coursework

Assessment

The course will be assessed by **two essays** of roughly **2,500 words** length. The **first** should be selected from **Option A** and the **second** from **Option B** on the accompanying list (see pages 16-20). Following each topic I have given a list of key references. Try and read as many of these as possible before writing the essay and you can obtain further references from their bibliographies. If you have problems finding the material let me know.

Each essay counts for 50% of the marks for the course. The criteria for assessment used in this course are those agreed by the Board of Examiners in Archaeology, and are included in the Undergraduate Handbook (available on the Institute website).

If students are unclear about the nature of an assignment, they should discuss this with the Course Coordinator. Students are not permitted to re-write and re-submit essays in order to try to improve their marks. However, students may be permitted, in advance of the deadline for a given assignment, to submit for comment a brief outline of the assignment. The Course Co-ordinator is willing to discuss an outline of the student's approach to the assignment, provided this is planned suitably in advance of the submission date.

Word-length

Strict new regulations with regard to word-length have been introduced UCL-wide with

effect from the 2010-11 session. If your work is found to be between 10% and 20% longer than the official limit you mark will be reduced by 10%, subject to a minimum mark of a minimum pass, assuming that the work merited a pass. If your work is more than 20% over-length, a mark of zero will be recorded.

The following should not be included in the word-count: bibliography, appendices, and tables, graphs and illustrations and their captions.

Submission procedures

Students are required to submit hard copy of all coursework to the course co-ordinators pigeon hole via the Red Essay Box at Reception by the appropriate deadline. The coursework must be stapled to a completed coversheet (available from the web, from outside Room 411A or from the library)

Please note that new, stringent penalties for late submission have been introduced UCL-wide from 2010-11. Late submission will be penalized in accordance with these regulations unless permission has been granted and an Extension Request Form (ERF) completed.

Date-stamping will be via 'Turnitin' (see below), so in addition to submitting hard copy, students must also submit their work to Turnitin by the midnight on the day of the deadline.

Students who encounter technical problems submitting their work to Turnitin should email the nature of the problem to ioa-turnitin@ucl.ac.uk in advance of the deadline in order that the Turnitin Advisers can notify the Course Co-ordinator that it may be appropriate to waive the late submission penalty.

If there is any other unexpected crisis on the submission day, students should telephone or (preferably) e-mail the Course Co-ordinator, and follow this up with a completed ERF

Please see the Coursework Guidelines on the IoA website (or your Degree Handbook) for further details of penalties.

The Turnitin 'Class ID' for this course is **200744** and the 'Class Enrolment Password' is **IoA1011** for all courses (note that the password is capital letter I, lower case letter o, upper case A, number 1, zero, number 1, number 1). Further information is given on the IoA website. Turnitin advisors will be available to help you via email: ioa-turnitin@ucl.ac.uk if needed.

Timescale for return of marked coursework to students

You can expect to receive your marked work within four calendar weeks of the official submission deadline. If you do not receive your work within this period, or a written explanation from the marker, you should notify the IoA's Academic Administrator, Judy Medrington.

Keeping copies

Please note that it is an Institute requirement that you retain a copy (this can be electronic) of all coursework submitted. When your marked essay is returned to you, you should return it to the marker within two weeks.

Citing of sources

Coursework should be expressed in a student's own words giving the exact source of any ideas, information, diagrams etc. that are taken from the work of others. Any direct quotations from the work of others must be indicated as such by being placed between inverted commas. **Plagiarism is regarded as a very serious irregularity which can carry very heavy penalties.** It is your responsibility to read and abide by the requirements for presentation, referencing and avoidance of plagiarism to be found in the IoA 'Coursework Guidelines' on the IoA website

SUBMISSION OF COURSEWORK

The **absolute deadlines** for submission will be:
Monday **15 November 2010** for first essay
Thursday **16 December 2010** for second essay

3- SCHEDULE AND SYLLABUS

Teaching schedule

Lectures and practicals will be held 11:00 am-1:00 pm on Thursdays in the autumn term, in room 410 at the Institute of Archaeology.

SYLLABUS

The following is an outline for the course as a whole, and identifies essential and supplementary readings relevant to each session. Information is provided as to where in the UCL library system individual readings are available; their location and Teaching Collection (TC) number, and status (whether out on loan) can also be accessed on the *eUCLid* computer catalogue system. Readings marked with an • are considered essential to keep up with the topics covered in the course. Copies of individual articles and chapters identified as essential reading are in the Teaching Collection in the Institute

Library (where permitted by copyright).

Please note that, from September 2006, in line with wider UCL Library Services policies, it is not possible to add paper copies of articles that are available in electronic format (from electronic journals) to the Institute of Archaeology Library teaching collection. This is in response to changes in the CLA licence terms for electronic material held by UCL Library Services and is non-negotiable. Instead, students should use the electronic versions of articles. Therefore, many of the most important articles for your reading lists will be only available in electronic format. Access to such articles is granted via UCL computers.

Shelf marks relate to Archaeology library unless otherwise indicated. Note that many of the books are available behind desk on short loan. Some books are available in both Archaeology and Science libraries (check catalogue). TC = Teaching collection, Anth = Anthropology, Per = Periodical.

LECTURE 1. GEOGRAPHICAL, ECOLOGICAL AND GEOLOGICAL CONTEXT OF HUMAN EVOLUTION IN AFRICA

In this session, an overview of the modern ecological and geographical traits of Africa is provided. Geological features and palaeocological constraints that condition the preservation and documentation of early archaeological remains are also discussed

Reading:

Behrensmeyer, A. K. 1982. The geological context of human evolution. *Annual Review of Earth Planetary Sciences*, 10: 39-60. Available via Jstor

Butzer, K. W. 1982. The Palaeo-ecology of the African Continent. The Physical Environment of African from Earliest Geological to Later Stone Age Times. In J.D. Clark (ed.): *Cambridge History of Africa. Volume 1. From the Earliest Times to c500 BC*. Cambridge: Cambridge University Press, 1-69. (INST ARCH DC 100 Series CAM 1)

Kingston, J. D. 2007. Shifting Adaptive Landscapes: Progress and Challenges in Reconstructing Early Hominid Environments. *Yearbook of Physical Anthropology* 50, 20-58. Available online

Kullmer, O. 2007. Geological Background of Early Hominid Sites in Africa. In (W. Henke & I. Tattersall, eds.) *Handbook of Paleoanthropology*. Berlin: Springer-Verlag, 339-356. Available online via Springer books.

O'Brien, E. M. & Peters, C. R. 1999. Landforms, Climate, Ecogeographic Mosaics, and the Potential for Hominid Diversity in Pliocene Africa. In T. G. Bromage & F. Schrenk (ed.): *African Biogeography, Climate Change, and Early Hominid Evolution*. Oxford: Oxford University Press, 115-137. (TC 3471, and Anthropology, Q12 Bro) •

LECTURE 2. HISTORY OF RESEARCH ON EARLY HOMININS IN AFRICA

Archaeological investigations have been carried out in Africa for more than one hundred years. In this lecture we will review who the pioneers of early human research in Africa were, and the progress of the palaeoanthropological thought and discoveries in the African continent.

Reading:

Berger, L. R. & Hilton-Barber, B. 2000. *In the footsteps of Eve: exploring the mystery of human origins*. National Geographic Society, Washington, D.C. (ANTHROPOLOGY B 34 BER)

Dennell, R. W. 2001. From Sangiran to Olduvai, 1937-1960: The quest for 'centres' of hominid origins in Asia and Africa. In Raymond Corbey & Wil Roebroeks (ed.): *Studying human origins: Disciplinary history and epistemology*. Amsterdam: Amsterdam University Press, 45-66. (Inst Arch BB1 Qto COR)

Kalb, J. E. 2001. *Adventures in the Bone Trade*. Copernicus books, New York. (INST ARCH BB 1 KAL)

Lewin, R. 1987. *Bones of Contention*. University of Chicago Press, Chicago. (INST ARCH BB 1 LEW, there are at least 7 copies in the IoA Library) •

Walker, A. & Shipman, P. 1996. *The Wisdom of Bones*. Weidenfeld & Nicolson, London. INST ARCH BB 1 WAL •

LECTURE 3. PRIMATES AND EARLY HOMININS IN AFRICA: EVOLUTIONARY HISTORY AND PHYLOGENETIC TREES

In this lecture the origins of primates and the evolution of our lineage until the emergence of first bipedal creatures are discussed. General anatomical features of early hominins and their phylogenetic implications are also summarized.

Reading:

Boyd, R. & Silk, J. B. 2003. *How Humans Evolved*. Norton, 3rd Edition. New York. (Science short loan collection BOY)

Cachel, S. 2006. *Primate and Human Evolution*. Cambridge University Press, Cambridge. INST ARCH BB 1 CAC

Kimbel, W. H. 2007. The Species and Diversity of Australopiths. In (W. Henke & I. Tattersall, Ed.) *Handbook of Paleoanthropology*. Berlin: Springer-Verlag, 1539-1573. Available online via Springer books

Lewin, R. & Foley, R. 2004. *Principles of Human Evolution*. Blackwell, Oxford. (BB 1LEW). •

Stringer, C. & Andrews, P. 2005. *The Complete World of Human Evolution*. Thames & Hudson, London (pages 82-124). INST ARCH BB1 STR •

LECTURE 4. THE EARLIEST ARCHAEOLOGICAL SITES AND THE DAWN OF TECHNOLOGY

When, how and where the earliest archaeological assemblages in Africa appeared, are the main questions to address in this session. Oldest sites in Eastern Africa and artefacts associated led to discuss about the nature of early human behaviour during the onset of the Oldowan, the earliest stone tool technology.

Reading:

Davidson, I. & McGrew, W. C. 2005. Stone tools and the uniqueness of human culture. *Journal of the Royal Anthropological Institute*, 11: 793-817. (Available online)

Panger, M. A.; Brooks, A. S.; Richmond, B. G. & Wood, B. 2002. Older Than the Oldowan? Rethinking the Emergence of Hominin Tool Use. *Evolutionary Anthropology*, 11: 235-245. Inst Arch. TC 3306 •

Schick, K. D. and N. Toth 1993. *Making Silent Stones Speak. Human Evolution and the Dawn of technology*. London, Weindenfeld and Nicolson. IoA BC 120 SCH. Chapters 3-6 •

Semaw, S. 2000. The World´s Oldest Stone Artefacts from Gona, Ethiopia: Their Implications for Understanding Stone Technology and Patterns of Human Evolution Between 2.6-1.5 Million Years Ago. *Journal of Archaeological Science*, 27: 1197-1214. Inst Arch Pers and available online

Whiten, A.; Goodall, J.; McGrew, W. C.; Nishida, T.; Reynolds, V.; Sugiyama, Y.; Tutin, C. E. G.; Wrangham, R. W. & Boesch, C. 1999. Cultures in chimpanzees. *Nature*, 399: 682-685. (TC 2247, also Available online)

LECTURE 5. THE ARCHAEOLOGY OF THE AFRICAN EARLY PLEISTOCENE AND THE EARLY HUMAN BEHAVIOURAL MODELS

The 1.8-1.6 million year old archaeological sequence provides a large sample of assemblages produced by early knappers. In this lecture we will discuss the meaning of early sites in Olduvai, Koobi Fora and others, and reflect on the kind of behaviour that could have generated such archaeological assemblages.

Reading:

Binford, L. R. 1982. *In Pursuit of the Past*. London: Thames & Hudson. Inst Arch AH BIN. Chapter 3. •

Isaac, G. L. 1978. The Food-sharing Behavior of Protohuman Hominids. *Scientific American*, 238 (4): 90-108. Inst Arch TC44 •

Plummer, T. 2004. Flaked Stones and Old Bones: Biological and Cultural Evolution at the Dawn of Technology. *Yearbook of Physical Anthropology*, 47: 118-164. Inst Arch. TC 3283 •

Rose, L. and F. Marshall 1996. "Meat Eating, Hominid Sociality, and Home Bases Revisited." *Current Anthropology* 37(2): 307-338. Inst Arch TC975

Schick, K. D. and N. Toth 1993. *Making Silent Stones Speak. Human Evolution and the Dawn of technology*. London, Weindenfeld and Nicolson. IoA BC 120 SCH. Chapters 3-6 •

LECTURE 6. HUNTING, SCAVENGING AND SUBSISTENCE IN THE AFRICAN LOWER PLEISTOCENE

Did early humans eat meat? If so, how did they obtain it? Were early humans hunters or scavengers? In this lecture we will discuss alternative models to understand the early human niche, and if they have the cognitive and technological abilities to obtain meat regularly through hunting or through a variety of scavenging strategies.

Reading:

Aiello, L. & Wheeler, P. (1995). The expensive-tissue hypothesis. The brain and the digestive system in human and primate evolution. *Current Anthropology* 36, 199-221. Available online & Inst Arch TC 982 •

Blumenschine RJ (1987) Characteristics of an Early Hominid Scavenging Niche. Current Anthropology 28(4):383-407. Available online •

Blumenschine RJ (1995) Percussion marks, tooth marks, and experimental determinations of the timing of hominid and carnivore access to long bones at FLK *Zinjanthropus*, Olduvai Gorge, Tanzania. Journal of Human Evolution 29:21-51. Available online

Bunn HT, Kroll EM (1986) Systematic Butchery by Plio/Pleistocene Hominids at Olduvai Gorge, Tanzania. Current Anthropology 27(5):431-452. Available online

Domínguez-Rodrigo, M. & Pickering, T. R. (2003). Early Hominid Hunting and Scavenging: A Zooarcheological Review. *Evolutionary Anthropology* 12, 275–282. Available online

LECTURE 7. *PRACTICAL: IDENTIFICATION OF STONE TOOLS VERSUS NATURAL GEOFACTS, AND THE OLDOWAN TECHNOLOGY*

This practical will focus on understanding the principles of knapping mechanisms, how to distinguish human-made lithics from naturally-flaked stones, and will have a look at some archaeological examples from the Oldowan technology stored at the IoA collections.

Reading:

Inizan, M. L.; Roche, H. & Tixier, J. 1992. *Technology of knapped stone*. CREP, Meudon. KA INI

Schick, K. D. and N. Toth 1993. *Making Silent Stones Speak. Human Evolution and the Dawn of technology*. London, Weindenfeld and Nicolson. IoA BC 120 SCH. Chapters 4-5.

Toth, N. 1985. The Oldowan Reassessed: a Close Look at Early Stone Artifacts. *Journal of Archaeological Science*, 12: 101-120. (TC 557)

LECTURE 8. THE AFRICAN ACHEULEAN IN THE LOWER AND MIDDLE PLEISTOCENE

The disappearance of the Oldowan culture and its substitution by a newly emerged technology, the Acheulean, is the main subject of discussion in this session. New behavioural adaptations, probably linked to the emergence of a new biological species, *Homo erectus*, led to the appearance of the Acheulean culture in Africa.

Reading:

Antón, S. C. 2003. Natural History of *Homo erectus*. *Yearbook of Physical Anthropology*, 46: 126-170. Anthro Pers and Available online

Cachel, S. & Harris, J. W. K. 1999. The Adaptative Zone of *Homo erectus* from an African Perspective. In H. Ullrich (ed.): *Hominid Evolution. Lifestyles and Survival Strategies*. Gelsenkirchen/Schwelm: Archaea, 129-137. INST ARCH BB 1 ULL

Isaac, G. L. 1977. *Olorgesailie. Archeological Studies of a Middle Pleistocene Lake Basin in Kenya*. University of Chicago Press, Chicago. Inst Arch DCD ISA

Klein, R. G. 1988. The archaeological significance of animal bones from Acheulean sites in southern Africa. *The African Archaeological Review*, 6: 3-25. TC INST ARCH 3534.

Schick, K. D. and N. Toth 1993. *Making Silent Stones Speak. Human Evolution and the Dawn of technology*. London, Weindenfeld and Nicolson. IoA BC 120 SCH. Chapter 7 •

LECTURE 9. THE ORIGINS OF ANATOMICALLY MODERN HUMANS AND THE MIDDLE STONE AGE IN AFRICA

The emergence of anatomically modern humans some 200.000 years ago is another milestone in human evolution, and it is again linked to the African continent. In this session we will discuss the alternative models for explaining the appearance of *Homo sapiens sapiens*, and the behaviour displayed by these early modern humans.

Reading:

Ambrose, S. 1998. Late Pleistocene human population bottlenecks, volcanic winter, and differentiation of modern humans. *Journal of Human Evolution* 24, 623-651. Available online

d´Errico, F. 2003. The Invisible Frontier. A Multiple Species Model for the Origin of Behavioral Modernity. *Evolutionary Anthropology*, 12: 188-202. (Inst Arch TC 3298)

Henshilwood, C. S. & Marean, C. W. 2003. The Origin of Modern Human Behavior. Critique of the Models and Their Test Implications. *Current Anthropology*, 44 (5): 627-651. (Anthro Pers and available online) •

Klein, R. G. 2008. Out of Africa and the Evolution of Human Behavior. *Evolutionary Anthropology* 17, 267-281. Available online

McBrearty, S. & Brooks, A. S. 2000. The revolution that wasn´t: a new interpretation of the origin of modern human behavior. *Journal of Human Evolution*, 39: 453-563. (Available online) •

LECTURE 10. *PRACTICAL: ACHEULEAN AND MIDDLE STONE AGE STONE TOOLS*

Knowledge acquired in previous lectures will be applied to the identification and analysis of stone tools from several African Acheulean and Middle Stone Age assemblages. In completion of this practical, students will be able to differentiate technological variability and general traits of the main Early and Middle Stone Age cultures in Africa.

Reading:

Inizan, M. L.; Roche, H. & Tixier, J. 1992. *Technology of knapped stone*. CREP, Meudon. KA INI

McBrearty, S. & Brooks, A. S. 2000. The revolution that wasn´t: a new interpretation of the origin of modern human behavior. *Journal of Human Evolution*, 39: 453-563. (Available online) •

4- ONLINE RESOURCES

The full UCL Institute of Archaeology coursework guidelines are given here: http://www.ucl.ac.uk/archaeology/handbook/common/marking.htm.
The full text of this handbook is available here (includes clickable links to Moodle and online reading lists if applicable) http://www.ucl.ac.uk/silva/archaeology/course-info/.

Moodle

There is a Moddle site for this course, please register to get access to online resources

5- ADDITIONAL INFORMATION

Libraries

In addition to the Library of the Institute of Archaeology, other libraries in UCL with holdings of particular relevance to this degree are Anthropology and Sciences. Nowadays many of the relevant resources for this course are available in the internet. Please devote some time to navigate into e-resources such as Jstor and several international journals (The African Archaeological Review, Current Anthropology, Journal of Human Evolution, Journal of Archaeological Science, etc.) whose access is granted via UCL computers.

Attendance

A register will be taken at each class. If you are unable to attend a class, please notify the lecturer by email. Departments are required to report each student's attendance to UCL Registry at frequent intervals throughout each term.

Information for intercollegiate and interdepartmental students

Students enrolled in Departments outside the Institute should collect hard copy of the Institute's coursework guidelines from Judy Medrington's office.

Dyslexia

If you have dyslexia or any other disability, please make your lecturers aware of this. Please discuss with your lecturers whether there is any way in which they can help you. Students with dyslexia are reminded to indicate this on each piece of coursework.

Feedback

In trying to make this course as effective as possible, we welcome feedback from students during the course of the year. All students are asked to give their views on the course in an anonymous questionnaire which will be circulated at one of the last sessions of the course. These questionnaires are taken seriously and help the Course Co-ordinator to develop the course. The summarised responses are considered by the Institute's Staff-Student Consultative Committee, Teaching Committee, and by the Faculty Teaching Committee.

If students are concerned about any aspect of this course we hope they will feel able to talk to the Course Co-ordinator, but if they feel this is not appropriate, they should consult their Personal Tutor, the Academic Administrator (Judy Medrington), or the Chair of Teaching Committee (Dr. Mark Lake).

COURSEWORK OPTIONS

OPTION A

TOPICS FOR FIRST ESSAY (DEADLINE 15 NOVEMBER). Choose one

1. Following the papers listed below, reconstruct how could have been the life of the *Australopithecus* and *Paranthropus*, discussing these topics: social organization, technology (if any), and diet. Comment similarities and differences between chimpanzees' and *Australopithecus' – Paranthropus*' ways of life.

Aiello L.C. & Dunbar R.I.M. (1993) Neocortex size, group size and the evolution of language. *Current Anthropology* 34 (2): 184-193.(TC 580, available also online)

Aiello, L. & Wheeler, P. 1995. The expensive-tissue hypothesis. The brain and the digestive system in human and primate evolution. *Current Anthropology*, 36 (2): 199-221. (Inst Arch TC 982 and online)

Dunbar R.I.M. (1998) The social brain hypothesis. *Evolutionary Anthropology* 6 (5): 178-190. (TC 1422, also available online)

Backwell, L. R. & d´Errico, F. 2001. Evidence of termite foraging by Swartkrans early hominids. *Proceedings of the National Academy of Science*, 98 (4): 1358-1363. Available online and TC 3304

Heinzelin, J. et al E. 1999. Environment and Behavior of 2.5-million-year-Old Bouri Hominids. *Science*, 284: 625-629. Available online and TC 3305.

Lewin, R. & Foley, R. 2004. *Principles of Human Evolution*. Blackwell, Oxford. (BB 1LEW & INST ARCH LEW (ISSUE DESK). Mainly Chapter 7.

McGrew, W. C. 1992. *Chimpanzee Material Culture: Implications for Human Evolution*. Cambridge University Press, Cambridge. (Inst Arch BB 3 MCG)

McPherron, S. P., Alemseged, Z., Marean, C. W., Wynn, J. G., Reed, D., Geraads, D., Bobe, R. & Béarat, H. A. 2010. Evidence for stone-tool-assisted consumption of animal tissues before 3.39 million years ago at Dikika, Ethiopia. *Nature* 466, 857-860. Available online

Panger, M. A.; Brooks, A. S.; Richmond, B. G. & Wood, B. 2002. Older Than the Oldowan? Rethinking the Emergence of Hominin Tool Use. *Evolutionary Anthropology*, 11: 235-245. Available online and Inst Arch TC 3306.

Peters, C. R. 1987. Nut-Like Oil Seeds: Food for Monkeys, Chimpanzees, Humans, and Probably Ape-men. *American Journal of Physical Anthropology*, 73: 333-363. Available online

Whiten, A. et al (1999). Cultures in chimpanzees. *Nature* 399, 682-685. TC 2247, also Available online.

Wood, B. & Strait, D. S. 2004. Patterns of resource use in early *Homo* and *Paranthropus*. *Journal of Human Evolution*, 46: 119-162. (Anthro-Pers and also available on line)

2. Discuss the behavioural models for the early archaeological sites, explaining strengths and weaknesses of each hypothesis. Choose one of them (home-base model, central-foraging place, stone cache, etc), and support it against the other hypotheses.

Binford, L. R. 1982. *In Pursuit of the Past*. Thames & Hudson, London. (Inst Arch AH BIN)

Blumenschine, R. J. (1987), "Characteristics of an Early Hominid Scavenging Niche", *Current Anthropology* 28:. 383-407. Available online.

Blumenschine, R. J. & Masao, F. T. 1991. Living sites at Olduvai Gorge, Tanzania? Preliminary landscape archaeology results in the basal Bed II lake margin zone. *Journal of Human Evolution*, 21: 451-462. Available online

Blumenschine, R. J. & Peters, C. R. 1998. Archaeological predictions for hominid land use in the paleo-Olduvai Basin, Tanzania, during lowermost Bed II times. *Journal of Human Evolution*, 34: 565-607. Anthro Pers and available online

Bunn, H. T. 1994. Early Pleistocene hominid foraging strategies along the ancestral Omo River at Koobi Fora, Kenya. *Journal of Human Evolution*, 27: 247-266. Available online

Plummer, T. 2004. Flaked Stones and Old Bones: Biological and Cultural Evolution at the Dawn of Technology. *Yearbook of Physical Anthropology*, 47: 118-164. Inst Arch TC 3283 and available online

Isaac, G. L. 1978. The Food-sharing Behavior of Protohuman Hominids. *Scientific American*, 238 (4): 90-108. Inst Arch TC 44

Potts, R. 1984. Home Bases and Early Hominids. *American Scientist*, 72: 338-347. (Inst Arch TC 707)

Potts, R. 1988. *Early Hominid Activities at Olduvai*. Aldine and Gruyter, New York. (Inst Arch DCD POT)

Rogers, M. J.; Harris, J. W. K. & Feibel, C. S. 1994. Changing patterns of land use by Plio-Pleistocene hominids in the Lake Turkana Basin. *Journal of Human Evolution*, 27: 139-158. Available online

Rose, L. & Marshall, F. 1996. Meat Eating, Hominid Sociality, and Home Bases Revisited. *Current Anthropology*, 37 (2): 307-338. (Inst Arch TC 975 and available online)

Stern, N. 1993. The Structure of the Lower Pleistocene Archaeological Record. *Current Anthropology*, 34 (3): 201-225. (Inst Arch TC 1449 and available online)

OPTION B

TOPICS FOR SECOND ESSAY (DEADLINE 16 DECEMBER). Choose one

3- Lifeways in the African Acheulean. Discuss these topics: when did the Acheulean originate? What technological differences do you see between the Oldowan and the Acheulean? Could the Acheulean be related to the emergence of a new *Homo* species? What are the behavioural implications? How did Acheulean toolmakers obtain foodstuff?

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4- <u>Human behaviour in the African Middle Stone Age</u>. Reflect on the following topics: when and where did the MSA appear? Do you see ruptures between the MSA and earlier periods? How modern or archaic is human behaviour in the MSA? Are there any behavioural differences between the MSA and the Later Stone Age?

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