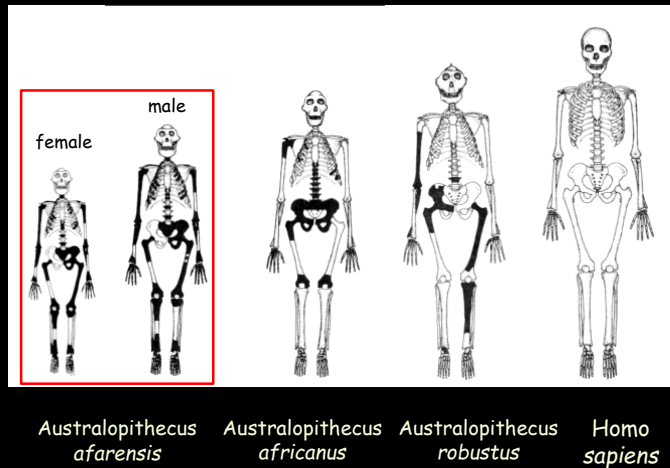


## HUMAN ORIGINS (ANTH 05a)

Comparison of early and contemporary hominid skeletons



Summer 2024

**Instructor:** Javier Urcid

**Class meetings:**

M, T, and Th 11:10- 1:40 pm  
Brown 224  
G

**Contact:**

email: [urcid@brandeis.edu](mailto:urcid@brandeis.edu)

**Office hours:**

W 12 – 2 pm

Want to have a [Virtual conversation](#) ?

To set up a day/time for the virtual office conversation make sure to email me with at least 24 hours advance notice, to make sure there is an open slot for you.

### ***Course description***

This course covers the transformation of human biological and cultural endowments through a span of some 7 million years, from a hominoid stage to the appearance of anatomically modern humans. A consideration of the human genome, of our place in nature--including our relationship with non-human primates--, and a review of evolutionary principles, leads to a broad coverage of the archaeological findings of hominids in a diachronic framework. Further consideration is placed on the selective processes that led to the human reliance on symbolic adaptations. The journey through the bio-cultural transformations of humanity highlights the emergence of bipedal locomotion, the increased levels of encephalization, changes in subsistence practices, the control of fire, the appearance of language, and the anthropogenic impacts of the global dispersal of modern humans.

### ***Learning goals***

The aim of the course is for the student to have a basic and general understanding of the evolutionary paradigm as it applies to the biological and cultural makeup of humans. The major contributions from naturalists (Darwin and Wallace) as well as contributions from molecular biology help contextualize major biological transformations of the human clade and to understand the polytypic nature of contemporary human populations. Applied to the cultural domain, a critical

evaluation of the evolutionary paradigm stresses the need to decouple the notion of “progress” from that of learned symbolic adaptations, and to construe the evolutionary process as non-teleological and multidirectional. Students will have the opportunity to develop their critical thinking and their writing skills by engaging in class discussions and submitting short documentary reviews and written tasks.

### *Course plan*

<b>Sessions</b>	<b>Topics</b>	<b>Readings</b>
July M 8	Introduction to the Course and to Latte	None
July T 9	Framing Paradigms Science and Anthropology <b>Documentary: Judgment Day</b>	Cartmill 2000; Scott 2014; Marks 2002; Lewis et al. 2011
July Th 11	From Molecules to Human Genomics The Synthetic Theory of Evolution <b>Documentary: What Darwin Never Knew</b> <b>Documentary: Why Sex</b>	Whitlock 2014; Stearns 2014 Baer 2014
July M 15	The Place of Humans in Nature Primates and Human Evolution <b>Documentary: Your Inner Monkey</b> <b>Review of What Darwin Never Knew due</b>	Ayala 2010; Rodman 1999; Strier 2003
July T 16	Ethology of Apes Paleoanthropology, Time Scale and Chronology <b>Documentary: The Gorilla King</b>	Wundram 1979; Wilson et al. 2014; Sarich-Wilson 1967; Johanson and Edey 1981
July Th 18	The evolution of Primates Basal Hominans	Delson-Tattersall 2002; Benefit-McCrossin 1995; White et al. 2009
July M 22	Australopithecines <b>Documentaries: The Story of Lucy and Surviving Africa</b>	Berger et al. 2010; Gurche 2013a; Shipman 1986
July T 23	Trade-offs of Bipedal Locomotion From Quadruped to Biped: How?	Krogman 1959; Lovejoy 1981; Falk 1997
July Th 25	Habilines and Ancestral Homo Homo floresiensis? <b>Documentary: Alien from Earth</b>	Berger et al 2015; Gurche 2013b and 2013c; Brown et al. 2004; Jacob et al. 2006
July M 29	Archaic Homo sapiens and Neanderthals <b>Documentary: Neanderthals on Trial</b>	Wood 2011; Gurche 2013d

### Review of Documentary Surviving Africa due

July T 30	Neanderthals and Ancient DNA <b>Documentary: Decoding Neanderthals</b>	Tattersall 2012; Gurche 2013e
Aug Th 1	Anatomically Modern Humans Origins of Language / other Symbolic Adaptations <b>Documentary: The Mind's Big Bang</b>	Lewin 1987; Willoughby 2007; Templeton 2002; Burling 1993; White 1992
Aug M 5	Ancient Human Dispersals <b>Documentary: First Peoples-The Americas</b> <b>Final task posted</b>	Grayson-Meltzer 2004; Fiedel-Haynes 2004; Waters-` Stafford 2013; Fagan 2001
Aug T 7	The Iconography of Human Evolution The Future of Human Evolution	Moser 1996; Connif-Giller 2014; Marks 2015; Templeton 2014.
Aug F 9	<b>Final task due</b>	

### **Important dates**

- July 15 (11am) - Review of documentary "What Darwin Never Knew" due via Latte
- July 29 (11am) – Review of documentary "Surviving Africa" due via Latte
- Aug 9 (midnight) - Final task due via Latte

### **LATTE**

LATTE is the Brandeis on-line course website and the course will be managed through it. All the reading materials and all the documentaries required for the class are available there. Assignment submissions, course related announcements, and any and all syllabus changes will be also communicated via LATTE. Login using your UNET ID and password at <http://latte.brandeis.edu>.

### **Library**

The Brandeis Library collections and staff offer resources and services to support Brandeis students, faculty and staff. These include workshops, consultations, collaboration, materials and instruction on emerging trends in technologies such as machine learning, emerging trends in research such as data visualization, and emerging trends in scholarship such as open access. Librarians at the Circulation Desk, Research Help Desk, Archives & Special Collections, Sound & Image Media Studios, MakerLab, AutomationLab, and Digital Scholarship Lab are available to help you. <https://www.brandeis.edu/library/about/index.html>

### **Accommodations**

Brandeis faculty seeks to welcome and include all students. If you need accommodations as outlined in an accommodations letter issued by the Office of Student Accessibility Support, please get in touch with me and submit your letter within the first week of class. If you have questions about documenting diverse capacities or requesting particular accommodations, please contact Student Accessibility Support (SAS <https://www.brandeis.edu/accessibility/>) at 781.736.3470 or [access@brandeis.edu](mailto:access@brandeis.edu)."

### ***Student Support***

Brandeis University is committed to supporting all our students so they can thrive. The following resources are available to help with the many academic and non-academic factors that contribute to student success (finances, health, food supply, housing, mental health counseling, academic advising, physical and social activities, etc.). Please explore the many links on this [Support at Brandeis](https://www.brandeis.edu/support/undergraduate-students/browse.html) page (<https://www.brandeis.edu/support/undergraduate-students/browse.html>) to find out more about the resources that Brandeis provides to help you and your classmates to achieve success.

### ***Four-Credit Course (with three hours of class-time per week)***

Success in this 4-credit hour course is based on the expectation that students will spend a minimum of 9 hours of study time per week in preparation for class (readings, response to questions, viewing of documentaries, preparation for discussions, writing of reviews, and crafting of the tasks).

### ***Class attendance***

Attendance to class is highly recommended because there are some assignments that are meant to be done during our in-person sessions, either individually or in groups. If you cannot attend a class, please notify me by email prior to the intended absence. Post-class notifications will not be honored and those absences will be considered when assessing your overall performance in the course. If you miss a class, you will be able to access the class notes and the readings posted on Latte for reviewing and studying purposes.

### ***Reading assignments***

Reading assignments should be completed by the dates indicated above. Reading of these materials is essential for your participation in class. Throughout the course, you will reflect critically on the readings and generate a brief synthesis of the core idea or argument in each reading, as well as at least one thoughtful question about the material. You should prepare and write down the synthesis from each assigned reading to both reflect your comprehension of them and to highlight salient points that you think will contribute to the discussion of the readings. The syntheses and questions are for your records only and are not to be submitted.

### ***Viewing of documentaries***

The viewing of the following 14 documentaries is part of the class assignments: 1) [Judgment Day](#); 2) [Why Sex?](#); 3) [What Darwin Never Knew](#); 4) [Your Inner Monkey](#); 5) [The Gorilla King](#); 6) [The Story of Lucy](#); 7) [Surviving Africa](#); 8) [Alien from Earth](#); 9) [Neandertals on Trial](#); 10) [Decoding Neandertals](#); 11) [The Mind's Big Bang](#); and 12) [First Peoples-The Americas](#). On Latte you will find guiding questions for viewing these documentaries, except for the two that are meant to be reviewed by you (2) [What Darwin Never Knew](#) and (7) [Surviving Africa](#).

### ***Documentary Reviews***

There are two written reviews of documentaries. One is of **What Darwin Never Knew**, and the other of **Surviving Africa**. Specific guidelines for the reviews are available on Latte (under the module labeled "Review of What Darwin Never Knew"). Each should have a maximum of three double-spaced typed and numbered pages. The reviews need to address two points: 1) A synthetic summary of the core ideas (half a page), and a **critical** evaluation of the main points (two

and a half pages). If you cite from any source, you should include an extra page listing your bibliography. The file format to be submitted should be in Word (**NO pdf files**). When submitting the reviews, the files must be named with “Last name-Review 1” and “Last name-Review 2.”

### **Tasks**

The Final tasks involve a response, selected from five questions, that will give you the opportunity to synthesize class notes, readings, documentaries, and your own research to demonstrate your knowledge of the subject. Each task should have a maximum of four double-spaced typed and numbered pages. If you cite from any source, you should include an extra page listing your bibliography. The file format to be submitted should be in Word (**NO pdf files**). When submitting the tasks, the files must be named with “Last name-Midterm task” and “Last name-Final task”.

### **Summary of assessment weighting**

Class Element	Grade Percentage	Learning Goals
Class participation	10%	Reflect on the main arguments in the readings
First video review	20%	Develop critical insights as well as clear and succinct writing skills
Second video review	25%	Develop critical insights as well as clear and succinct writing skills
Final task	45%	Demonstrate good command of the paleo-anthropological record

### **Academic Integrity**

Every member of the University community is expected to maintain the highest standards of academic integrity. A student shall not submit work that is falsified or is not the result of the student's own effort. Infringement of academic honesty by a student subjects that student to serious penalties, which may include failure on the assignment, failure in the course, suspension from the University or other sanctions (see section 20 of R&R). Please consult Brandeis University Rights and Responsibilities for all policies and procedures related to academic integrity. A student who is in doubt regarding standards of academic honesty as they apply to a specific course or assignment should consult the faculty member responsible for that course or assignment before submitting the work. Allegations of alleged academic dishonesty will be forwarded to the Department of Student Rights and Community Standards. Citation and research assistance can be found at [Brandeis Library Guides - Citing Sources \(https://guides.library.brandeis.edu/c.php?g=301723\)](https://guides.library.brandeis.edu/c.php?g=301723).

### **Readings (on LATTE)**

Ayala, Francisco J.

2010 The difference of being human: Morality. *Papers of the National Academy of Science*, vol. 107, suppl. 2: 9015-9022.

Baer, Charles F.

- 2014 Mutation. In *The Princeton Guide to Evolution*, edited by Jonathan B. Losos et al., pp. 315-320. Princeton University Press, New Jersey.

Benefit, Brenda R., and Monte L. McCrossin

- 1995 Miocene Hominoids and Hominid Origins. *Annual Review of Anthropology* 24: 237-256.

Berger, Lee, R. et al.

- 2010 *Australopithecus sediba*: a New Species of Homo-like Australopith from South Africa. *Science*, vol. 328: 195-204.

Berger, Lee R. et al.

- 2015 *Homo naledi*, a new species of the genus *Homo* from the Dinaledi Chamber, South Africa. *eLife Research article* DOI: 10.7554/eLife.09560

Brown, P. et al.

- 2004 A new small-bodied hominin from the Late Pleistocene of Flores, Indonesia. *Nature*, Vol. 431: 1055-1061.

Burling, Robbins

- 1993 Primate Calls, Human Language, and Nonverbal Communication. *Current Anthropology*, Vol. 34, No. 1., pp. 25-53.

Cartmill, Matt

- 2000 Oppressed by Evolution. In *Contemporary Readings in Physical Anthropology*, edited by Alan J. Almquist, pp. 4-11. Prentice Hall, New Jersey.

Conniff, Richard and Geoffrey Giller

- 2014 Iconic. Almost by accident. *Yale Alumni Magazine*, Nov/Dec 2014. Pp. 48-53.

Delson, Eric, and Ian Tattersall

- 2002 *Fossil Primates*. The McGraw-Hill Encyclopedia of Science and Technology, 9<sup>th</sup> Edition, pp. 1-7. The McGraw-Hill Companies, Inc.

Fagan, Brian

- 2001 How did the Polynesians Find Their Homeland? In *The Seventy Great Mysteries of the Ancient World*, edited by Brian M. Fagan, pp. 208-210. Thames and Hudson, London.

Falk, Dean

- 1997 Brain Evolution in Females: an answer to Mr. Lovejoy. In *Women in Human Evolution*, edited by Lori D. Hager, pp. 114-136. Routledge, London.

Fiedel, Stuart, and Gary Haynes

- 2004 A premature burial: comments on Grayson and Meltzer's "Requiem for overkill." *Journal of Archaeological Science* 31: 121-131.

Grayson, Donald K., and David J. Meltzer

- 2004 North American overkill continued? *Journal of Archaeological Science*, Volume 31 (5): 135-136

Gurche, John

- 2013a Walkers and Climbers: *Australopithecus afarensis*. In *Shaping Humanity: How Science, Art, and Imagination Help Us Understand Our Origins*, pp. 30-66. Yale University Press, New Haven.
- 2013b Transitional Hominins and the Origin of Homo. In *Shaping Humanity: How Science, Art, and Imagination Help Us Understand Our Origins*, pp. 114-144. Yale University Press, New Haven.
- 2013c The Traveler: *Homo erectus*. In *Shaping Humanity: How Science, Art, and Imagination Help Us Understand Our Origins*, pp. 145-190. Yale University Press, New Haven.
- 2013d A Symbolic Animal: *Homo heidelbergensis*. In *Shaping Humanity: How Science, Art, and Imagination Help Us Understand Our Origins*, pp. 192-217. Yale University Press, New Haven.
- 2013e The Other: *Homo neanderthalensis*. In *Shaping Humanity: How Science, Art, and Imagination Help Us Understand Our Origins*, pp. 145-190. Yale University Press, New Haven.

Jacob, T. et al.

- 2006 Pygmoid Australomelanesian *Homo sapiens* Skeletal Remains from Liang Bua, Flores: Population Affinities and Pathological Abnormalities. *Proceedings of the National Academy of Sciences*, Vol. 103 (36): 13421-13426.

Johanson, Donald, and Maitland A. Edey

- 1981 How Old is Lucy? In *Lucy, The Beginnings of Humankind*. Simon and Schuster, New York, pp. 187-207.

Krogman, Wilton, M.

- 1959 The Scars of Human Evolution. In *Human Evolution: Readings in Physical Anthropology*, edited by Noel Korn and Harry Reece Smith, pp. 185-191. Henry Holt and Co., New York.

Lewin, Roger

- 1987 The Unmasking of Mitochondrial Eve. *Science*, Vol. 238 (4823): 24-26

Lewis, Jason E., et al.

- 2011 The Mismeasure of Science: Stephen Jay Gould versus Samuel George Morton on Skulls and Bias. *Plos Biology*, vol. 9 (6): 1-6.

Lovejoy, C. Owen

- 1981 The Origin of Man. *Science* 211: 341-50.

Marks, Jonathan

- 2002 Science, Religion and Worldview. In *What It Means to Be 98% Chimpanzee: Apes, People, and Their Genes*, pp. 266-288. University of California Press, Berkeley.
- 2015 How to think about Evolution non-reductively. In *Tales of the Ex-Apes*, pp. 80-106. University of California Press.

Moser, Stephanie

- 1996 Depicting the Missing-Link in Human Origins. In *Picturing Knowledge*, edited by Brian S. Baigrie, pp. 184-214. University of Toronto Press.

Rodman, P. S.

- 1999 Whither Primatology? The Place of Primates in Contemporary Anthropology. *Annual Review of Anthropology*, Vol. 28: 311-339.

Sarich, Vincent, M., and Allan C. Wilson

- 1967 Immunological Time Scale for Hominid Evolution. *Science*, vol. 158 (3805): 1200-1203.

Scott, Eugenie, C.

- 2014 Creationism and Intelligent Design. In *The Princeton Guide to Evolution*, edited by Jonathan B. Losos et al, pp. 825-831. Princeton University Press, New Jersey.

Shipman, Pat

- 1986 Scavenging or Hunting in Early Hominids: Theoretical Framework and Tests. *American Anthropologist*, New Series, Vol. 88, No. 1. (Mar., 1986), pp. 27-43.

Stearns, Stephen C.

- 2014 Natural Selection, Adaptation, and Fitness: Overview. In *The Princeton Guide to Evolution*, edited by Jonathan B. Losos et al., pp. 193-199. Princeton University Press, New Jersey.

Strier, Karen B.

- 2003 Primate Behavioral Ecology: From Ethnography to Ethology and Back. *American Anthropologist*, Vol. 105 (1): 16-27

Tattersall, Ian

- 2012 Who were the Neanderthals? In *Masters of the Planet: in search for our human origins*, pp. 159-177. Palgrave, MacMillan, New York

Templeton, Alan R.

- 2002 Out of Africa again and again. *Nature*, vol. 416: 45-51.
- 2014 The Future of Human Evolution. In *The Princeton Guide to Evolution*, edited by Jonathan B. Losos et al, pp. 809-816. Princeton University Press, Princeton.



Waters, Michael R., and Thomas Wier Stafford, Jr.

- 2013 The First Americans: A Review of the Evidence for the Late-Pleistocene Peopling of the Americas. In *Paleoamerican Odyssey*, edited by Kelly Graf, Caroline Ketron and Michael Waters, pp. 541-560. Texas A&M University Press.

White, Randall

- 1992 Beyond Art: Toward an understanding of the origins of Material representation in Europe. *Annual Review of Anthropology* 21: 537-564.

White, Tim, et al.

- 2009 *Ardipithecus ramidus* and the Paleobiology of Early Hominids. *Science*, vol. 326 (5949): 75-86.

Whitlock, Michael, C.

- 2014 From DNA to Phenotypes. In *The Princeton Guide to Evolution*, edited by Jonathan B. Losos et al., pp. 40-46. Princeton University Press, New Jersey.

Willoughby, Pamela R.

- 2007 Modern Human Origins: A People without History. In *The Evolution of Modern Humans in Africa*, pp. 1-28. Altamira Press, Lanham.

Wilson, Michael, L., et al.

- 2014 Lethal aggression in Pan is better explained by adaptive strategies than human impacts. *Nature*, vol. 513: 414-417.

Wood, Bernard

- 2011 Did early Homo migrate "out of" or "in to" Africa? *Proceedings of the National Academy of Sciences of the United States of America*, vol. 108 (26): 10375-10376.

Wundram, Ina Jane

- 1979 Nonreproductive Sexual Behavior: Ethological and Cultural Considerations. *American Anthropologist*, New Series, Vol. 81, No. 1, pp. 99-103.