FRST 101: Freshman Studies II Winter 2012

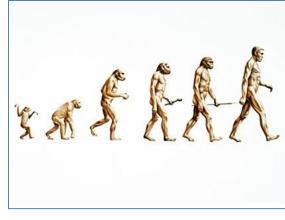
Instructor: Stoneking

Handout #4: GOULD, BULLY FOR BRONTOSAURUS

Wednesday 25 January 2012:

• For Wednesday's class, read

- o essay # 11: Life's Little Joke (pp. 168-181) and
- o essay #29: **An Essay on a Pig Roast** (pp. 432-447)
- As you read these essays (and those that will be discussed in subsequent classes) pay attention to some of the following general questions:
 - o How does Gould grab your interest in the essay?
 - o Does he have a clear thesis? If so, what is it and how does he state it?
 - o How does Gould treat those who might have a different opinion on the subject?
 - How does Gould support the elements of his argument/main point(s)?
 - o How does he tie up the essay and conclude in a satisfying way?
 - Are there elements of Gould's writing style that you might like to emulate in writing essays for Freshman Studies or other courses?
- Specific discussion topics/questions for Life's Little Joke:
 - o What is the thesis of this essay? Can you find a succinct statement of that thesis?
 - Compare the two figures on pages 174 and 176. What's different about these figures? What aspects of the figure on p. 174 are wrong? What aspects are misleading? How does each visual depiction influence your understanding of how horses evolved? Can you picture how the newer data of Prothero & Shubin alters Simpson's 1951 version of horse evolution?
 - Compare the illustration on p. 174 to the diagram at the right depicting human evolution. What do you think is/was/would be Gould's view of this iconic image?
 - O Discuss the importance of iconography for understanding and teaching scientific concepts. What are the pitfalls in our use of iconography to aid understanding? Is iconography equally important and dangerous in other disciplines? Provide examples.



- o Decipher the meaning and importance of the following quotes in the context of the essay:
 - "Horses evolved in America, through a continuity that extends unbroken across 60 million years." p. 169
 - "Sit down before fact as a little child, be prepared to give up every preconceived notion." p. 171
 - "Scientific illustrations are not frills or summaries; they are foci for modes of thought." p. 171

- "...the path proceeds not by continuous transformation but by lateral stepping..." p. 175
- "There is no central direction, no preferred exit to this maze—just a series of indirect pathways to every twig that ever graced the periphery of the bush." p. 175
- "[Simpson]...could not entirely let go of biases imposed by the metaphor of the ladder." p. 178
- Our proudest cases do not become our classic illustrations..." p. 180
- o What is the meaning of the title of this essay? What is the "precious irony"?
- What do these words/terms mean: phylogeny/phylogenetic, stratigraphic boundary, punctuated equilibrium, iconography, odd and even-toed ungulates?
- What is the connection between Cortes and Huxley? Is this important to Gould's argument? Why is it included?
- Who were John Scopes, William Jennings Bryan, Hernando Cortes, Montezuma, Kurt Vonnegut, Thomas Henry Huxley, O.C. Marsh, W.D. Matthew, G.G. Simpson, Prothero and Shubin?
- Specific discussion topics/questions for An Essay on a Pig Roast:
 - What is Gould's main point in this essay?
 - Discuss the roles played by peer-review and reproducibility in science and in creation science.
 - What relevance does the thesis of this essay have for examples like climate science, cold fusion, faster-than-light-speed neutrinos, and claims of paranormal powers (other examples?).

Friday 27 January 2012: Midterm Exam