GREEN BOOKS: (CONTEMPORARY VIEWPOINTS)

Davies, K. 2001. Cracking the Genome: Inside the Race to Unlock Human DNA. Johns Hopkins University Press (1X, green). This book summarizes the historical and political battles to obtain funding for the human genome project, including the competing interests of academic and commercial interests. If you have an interest in a career in biotechnology, you should read this whole book, just for a primer and guide on these topics. Read chapter 1 (Knights of the Double Helix) and any other 2 chapters. Summarize the key people, or points.

Dawkins, R. 1982. The Extended Phenotype. Oxford University Press, Oxford. (1X of 2, green). A collection of 14 chapters covering many ideas and concepts about evolution. Select any 4 chapters (preferably consecutive) and write 2-3 paragraphs on each describing (a) the main ideas and (b) your views on these ideas.

Dawkins, R. 1987. The Blind Watchmaker. W.W. Norton & Co., New York. (1X of 2, green). A collection of 11 chapters covering many important concepts and theories of evolution. Select any 4 chapters (preferably consecutive) and write 2-3 paragraphs on each describing (a) the main ideas and (b) your views on these ideas.

Dawkins, R. 1989. The Selfish Gene. Oxford University Press, Oxford. (2X-1P of 3, green). A collection of 13 chapters covering many interesting and exciting new concepts in evolution. Select any 4 chapters (preferably consecutively) and write 2-3 paragraphs on each describing (a) the main ideas and (b) your views on these ideas.

Dawkins, R. 1997. Climbing Mount Improbable. W.W. Norton & Co., New York. (1X, green). The jacket blurb says it all, "Dawkins is a genius of science popularization. If you have not read one of his books before, (this one) is a place to begin: it is nonstop mental and literary pleasure." A collection of 10 chapters covering some really interesting genetic observations (Check out the odd frog on pp97!). Select any 3 chapters (preferably consecutively) and write 2-3 paragraphs on each describing (a) the main ideas and (b) your views on these ideas.

Gould, S.J. 1973. Ever Since Darwin. W.W. Norton and Co., New York. (1X of 2, green). A collection of 33 essays divided into 8 sections. Read any 3 sections and write 2-3 paragraphs on each describing (a) the main theme and (b) why you agree or disagree with that theme. Note: section 8, "The Science and Politics of Human Nature" is particularly interesting!

Gould, S.J. 1980. The Panda's Thumb. W.W. Norton & Co., New York. (1X-P, green). A collection of 32 essays divided into 8 sections. Read any 3 sections and write 2-3 paragraphs on each describing (a) the main theme and (b) why you agree or disagree with that theme. Note: ladies in the class may be particularly interested in commenting on section 4, "Science and the Politics of Human Differences".

Gould, S.J. 1981. The Mismeasure of Man. W.W. Norton and Co., New York. (1X of 2, green). A collection of essays divided into 7 chapters. Read any 3 chapters, including chapter 5 "The Hereditarian Theory of IQ" and write 2-3 paragraphs on each describing (a) the main theme and (b) why you agree or disagree with that theme.

Politics") and write 2-3 paragraphs on each describing (a) the main theme and (b) why you agree or disagree with that theme.

Gould, S.J. 1985. The Flamingo's Smile. W.W.Norton and Co., New York. (1X of 2, green). A collection of 30 essays divided into 8 sections. **Read any 3 sections** and write 2-3 paragraphs on each describing (a) the main theme and (b) why you agree or disagree with that theme. Use your own discretion to select sections of interest.

Gould, S.J. 1987. An Urchin in the Storm. W.W. Norton and Co., New York. (1X of 2, green). A collection of 18 essays divided into 5 sections. **Read any 3 sections** (including section 5 "In Praise of Reason") and write 2-3 paragraphs on each describing (a) the main theme and (b) why you agree or disagree with that theme. Use your own discretion to select the other two sections.

Gould, S.J. 1990. Wonderful Life. W.W.Norton and Co., New York. (1X of 2, green). A contiguous series of chapters chronicling the story of the Burgess Shale; the theory and ideas behind random nature of evolution that serendipitously led to the existence of the major taxa that are extant today. **Read a minimum of pp 13-64, 79-102, 207-240, 277-319** (smaller sections within the major chapters) and describe (a) the importance of the Burgess Shale to modern evolutionary theory, (b) the importance of contingency (c) and the concept of the false order of the status of science.

Gould, S.J. 1992. Bully for Brontosaurus. W.W. Norton and Co., New York. (1X-P, green). A collection of 35 essays divided into 10 sections. This is considered by Gould himself and many others to be Gould's finest collection of essays. Read the following essays: Section 1 - essay 3 or 4, Section 3 - essay 8 or 9, Section 4 - essay 10 or 11, Section 5 - essay 15, Section 6 - essay 17 or 19, Section 7 - essay 21 or 22, Section 8 - essay 28 or 30. Write 1-2 paragraphs on each essay describe the main theme and your ideas & opinions on that theme.

Gould, S.J. 1995. Dinosaur in a Haystack. Random House, Inc., New York (1X-P, green). One of the more recent Gould books, continues along the same themes as he is famous for. This time, there are 34 short chapters, divided into 8 sections. **Read all the short chapters within any two sections of your choice**, then summarize the main themes and your reactions to those themes. Section six on eugenics is especially provocative. See if you agree with any of these viewpoints!

Hubbard, R. and E. Wald. 1997. Exploding the Gene Myth. Beacon Press, Boston (1X-P, green). Popular science book that explores how genetic information is produced and manipulated by scientists, physicians, employers, insurance companies, educators and employers. To quote the dust jacket, "(They) have shown how the marriage of science and business has created that most treacherous of American progeny: commerce masquerading as human liberation" Or, "A much-needed antidote to the daily hype of biotechnology." Within 12 short chapters, the first 6 are historic background for non-scientists. **Read any 3 of chapters 7-11**, and briefly summarize the salient points. Your personal comments (agreement or outrage) on the issues raised in these chapters are warranted, since these are exactly the ethical and scientific issues you will be facing as a future scientists.

Kolata, G. 1998. Clone: The Road to Dolly and the Path Ahead. William Morrow & Co., Inc. NY (1X-P, green). The story of the scientists and science that resulted in the first cloning of a mammal from an adult somatic cell. The analysis focuses on the ethical implications, but the tone is written for the lay public. This is pretty light, **read the whole book**, comment on your personal opinions on the ethics and implications of this work for
the future of bioengineering. Should human cloning be allowed? Is there a moral limit beyond which scientists should not cross, even if it is technically feasible?


**Milunsky, A and Annas, G.J. (editors)** 1985. Genetics and the Law. Plenum Press, New York (1X-P, green). Contains 35 short chapters, under 11 main headings, discussing the ethical and legal implications of recombinant genetics, gene therapy and related technologies, as they relate to current biotechnology and the law. Pick any 1 main heading, and discuss moral and scientific issues raised in those chapters that may confront researchers, doctors, administrators and lawyers of the present and future, as they strive to “improve the condition of human kind.”

**Nussbaum, M.C., and C.R. Sustein**. 1998. Clones and Clones: Facts and Fantasies about Human Cloning (2X-P, green). A collection of 24 short essays divided into 5 parts, each discussing the moral, religious and scientific issues that now confront us in this new age of awesome biological technology. As young scientists, these issues, and the moral dilemmas associated with them will lie squarely upon you. This is light reading, but it covers a lot of ground. Read all the essays associated with any one major section, and summarize the authors’ main points, and your own personal and scientific reactions to their arguments. How does one restrict scientists from carrying out morally repugnant techniques, if some one is willing to pay for them? Where do you draw the line between personal scientific freedom, and ethical professional behavior?

**Ridley, M.** 1999. Genome: The Autobiography of a Species in 23 Chapters. Harpers Collections (1X, green). In yet another attempt to popularize modern science and make it understandable to the general public, Ridley has divided his text into 23 chapters, each corresponding to a "human chromosome." In each he picks a gene or gene family and related the moral issues arising from the sequencing of the genome, and possible consequences to society and medicine. The result is interesting and thought provoking, especially from an ethical point of view. Read any 3 of chapters 1-22. Summarize the main points, and whether you agree or disagree with his contentions. Is the sequencing of the human genome a "good thing" or is it likely to produce the ultimate doom for mankind?

**Sykes, B.** 2001. The Seven Daughters of Eve. W.W. Norton & Co (1x, yellow). This is a wonderful book, and if you start it, you will wish you read the whole thing! It chronicles the evolution of humans according to the chromosomal and mitochondrial evidence, as we now know it. Fascinating stuff! Read (minimum) Chapter 4 (The Special Messenger), chapter 14 (Adam joins the Party) and any additional 2 chapters between15-21, that describe the 7 human mitochondrial clades (and presumed origins of our ancestors and cultures). Do you think Sykes and his analyses are right? Do these directions make you think more about your own origins?

**Wilkie, T.** 1994. Perilous Knowledge: The Human Genome Project and its Implications. U. California Press, Los Angeles (1X-P, green). A contemporary discussion of the history, politics and potential ramifications (scientific and social) of the genome initiative. According to the dust jacket, the book "provides background for the startling headlines that quite possibly signal changes to all human life in the next century." Read chapter 8 (Moral Consequences of Molecular Biology) and any other one chapter and write 3-4 paragraphs on each describing (a) the main theme and (b) your opinions on these topics.
Wills, C. 1989. The Wisdom of the Genes: New Pathways in Evolution. Basic Books, a division of Harper Collins, USA. (IX of 2, green). This book deals with two questions: (1) Has the ability to evolve evolved? (2) Is there some way that the power of selection on individuals can be brought to bear on this ability to evolve? Read chapter 2 + 6 and 7, 9 or 10 and write 2-3 paragraphs on each describing (a) the main ideas and (b) your views on these ideas.