

**English 171ES.01---F2005**

**103 Allen, MW 10:05-11:20**

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### **The Human Genome in Fiction, Film and the News**

Consider the dramatic changes that have followed from the Human Genome Project. Have you thought about the implications of those changes for your lives, the lives of everyone you know and care about, people you will never meet, your children and their children? Have you thought about the impact of work in the genome sciences in areas that do not appear to be connected to genomics? There is no doubt that contemporary work involving the human genome is changing the way we think about who and what we are. In so doing, it inevitably intersects with the most fundamental questions and beliefs that shape our understanding of personal responsibility and collective identity. This course is structured around several primary questions: how are the genome sciences changing, challenging and complicating our most basic assumptions and interactions? How does the general public learn about the genome sciences and make sense of the changes it provokes? What are the consequences of public misconceptions about genomics? What assumptions do scientists begin with, and how do those assumptions affect their interpretation of genomic information? What is genomic information? How can the work we do in an English class help us to respond to these questions and promote informed and responsible discussion about these issues?

In this class, we will study fictional science narratives beginning long before anyone had conceived of the HGP and extending into the present, but we will also apply the skills and approaches of literary criticism--careful attention to language, images and stories--to the study of representations of science in a variety of works from scientific articles and legal cases to journalism, popular fiction to film. Aesthetics is the study of how a work of art evokes particular feelings. In this class, we will extend that exploration to works that are not typically thought of as "art" and consider the "vocabulary," imagery and storylines that are shaping public perception of and attitudes towards the genome sciences. We are all, after all, part of that public.

### **Introduction**

**Aug. 29** Introduction

**Aug. 31** Lakoff and Johnson, selections from *Metaphors We Live By*; Jones, "The Fingerprints of History"; Morange, "The Concept of the Gene"; recommended: Keller, "What Are Genes For?"

**Sept. 5** *Gattaca*

**Sept. 7** *Gattaca*; Vonnegut, "Harrison Bergeron"

## I. Science Narratives

The novels in this section preceded the Human Genome Project (and, in the case of *Frankenstein*, the science of genetics), yet they are concerned with the nature of human being and the impact of science on human transformation. We will explore the ways in which these works registered attitudes towards and anxieties about science and social and personal change. These novels will allow us to begin to explore the cultural narratives that were in place before the HGP and give us insight into how the pre-existing narratives shaped both the science and the cultural response to the HGP.

**Sept. 12** Shelley, *Frankenstein*

**Sept. 14** *Frankenstein*

**Sept. 19** Wells, *The Island of Dr. Moreau*

**Sept. 21** *The Island of Dr. Moreau*

**Sept. 26** Dick, *Do Androids Dream of Electric Sheep?*

**Sept. 28** *Do Androids Dream of Electric Sheep?; Blade Runner*

**Oct. 3** Levin, *The Boys from Brazil*

**Oct. 5** *The Boys from Brazil*

**OCT. 7 FIRST ESSAY DUE BY 4 PM (EITHER ELECTRONIC SUBMISSION OR HARD COPY TO ALLEN 314)**

## II. Genomics and Human Boundaries

In this section, we will look at some of the most dramatic debates and concerns that have emerged from the discoveries in the field of genomics and the possibilities they have enabled. We will consider how the pre-existing cultural narratives of science have shaped the issues that have emerged from these discoveries and, conversely, how the discoveries have in turn transformed the debates. The works we will examine in this section include a legal case, articles from a medical journal, and newspaper pieces as well as a popular novel and film, but in each case we will bring the skills of literary critics to the analysis of these works. In other words, we will pay particular attention to the language, images and the stories that inform all of these works, fiction and non-fiction alike, in order to understand the cultural assumptions that inform the debates.

We will consider how human genomic research is forcing both the medical and scientific communities and the general public to think in new ways about the nature of human being and the value of human life. Because it characteristically involves the use of embryonic tissue, stem cell research touches on some of our deepest and most unresolved cultural dilemmas. While the creation of cell lines from the cells of individuals seems less ethically charged, the process of doing so has at times set ideas about fundamental

rights (the inviolability of the person) in conflict with those of social responsibility. We will consider in particular the case of John Moore, a person discovered (during the course of medical treatment) to have cells with unusual properties and from which researchers developed cell lines. The debates surrounding this case have involved religious leaders, secular ethicists, scientists and legal experts. They reveal how research in human genetics is further destabilizing our already unstable ideas about who and what we are as human beings. We will investigate the ways in which debates surrounding cell lines register challenges to and changes in our understanding of what constitutes a biological human being and a legal person.

The readings in this section will also address the revisions of human history that population geneticists are claiming on the basis of genetic research. We will consider how the theories introduced by these scientists are creating new mythologies, and how they are in the process interacting with our most salient religious, historical, social and political narratives of human origin. We will discuss the relevance of this work for the redefinition of the concepts of population, kinship, and relatedness, and we will investigate the nature of the claims made by the scientists that these discoveries once and for all prove the illogic of the concept of race.

**Oct. 10** FALL BREAK

**Oct. 12** John Moore: legal case, selection of journalism

**Oct. 17** Cook, *Chromosome 6*

**Oct. 19** *Chromosome 6*

**Oct. 24** *X-Men*

**Oct. 26** *X-Men*

**Oct. 31** race and genomic medicine: selected medical journal essays (Risch, et. al., Cooper, et. al.), selected essays from *Nature Genetics* special issue

**Nov. 2** race and genomic medicine

**NOV. 4 ESSAY REVISIONS DUE BY 4 PM (HARD COPIES WITH FIRST DRAFTS TO 314 ALLEN)**

### **III. What Are We?: Past, Present and Future**

In this section we will begin with two fictional works in order to consider how two of our best contemporary science fiction writers imagine ideas about human being and relatedness in the context of research in the genome sciences. We will consider in particular the kinds of stories that are being told in the present about the future and how those stories are at once shaped by and participate in the shaping of the hopes, dreams, and fears about individual and social transformation fostered by genomic research and new technologies. With *The Journey of Man* we will consider how research in the genome sciences has led scientists to make strong claims about the rewriting of human

history and why some groups are especially troubled by these claims. We will end with a film that is not specifically about genomics but that will help us to understand how research in the genome sciences is fostering important debates about the nature of human being and its relationship to free will and determinism.

**Nov. 7** Butler, *Dawn*

**Nov. 9** *Dawn*

**Nov. 14** Bear, *Darwin's Radio*

**Nov. 16** *Darwin's Radio*

**Nov. 21** *Darwin's Radio*

**Nov. 23** **THANKSGIVING RECESS**

**Nov. 28** Wells, *The Journey of Man*; selected pieces on genographics project; biocolonialism web site

**Nov. 30** *Journey of Man* and selected pieces

**Dec. 5** *Minority Report*

**Dec. 7** *Minority Report*

**DEC. 9 FINAL ESSAY DUE BY 4 PM (EITHER ELECTRONIC SUBMISSION OR HARD COPY TO 314 ALLEN BUILDING)**

***Course Requirements:*** You will be required to come to class prepared to discuss the readings or viewings. In addition, you will have two written assignments, with the opportunity to revise the first one (as specified in due dates). I will accept electronic submissions (to my email account) or hard copies, but assignments *must* be submitted by 4 PM on the due date. Note that the essays and revision are due on the Friday following the completion of a unit. No extensions without a dean's excuse.

***Readings:*** Readings are available in a variety of formats. Books required for the class are available for purchase at the Duke University Bookstore. Essays will be available through e-reserves, links, or as handouts (as specified). Please let us know if you are having trouble locating or accessing any of the readings.

***Films:*** Films will be shown at a pre-arranged time, usually Sunday night in Alspaugh, prior to the first class in which we will be discussing it. Films will on reserve at Lilly. I encourage you to view the film twice before discussion, but in any case, if you cannot make the viewing, be sure to view the film in Lilly before class discussion.