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Office Hours: TBA

## **Science, Technology, and Science Fiction**

### **LTMO 145B-01**

This specialized upper-division course introduces students to the disciplinary methods, politics, and aesthetics of science and technology as they have been theorized since the twentieth century and as they have been expressed in works of science fiction over the past forty years (although in the second week there will be a brief excursus as we look at Bertolt Brecht's *Life of Galileo* in preparation for Kim Stanley Robinson's *Galileo's Dream*). Surveying major works and tendencies, we will reflect upon the problems and compositional forms to be found in science fiction novels and shorts stories in order to evaluate the possibilities for meaningful interdisciplinary exchange between (and within) the humanities and the sciences. Interrogating the grounds for drawing such a distinction between the sciences and the humanities in the first place, this seminar will go on to review and analyze competing theories of scientific methodology, the roles played by sex and gender in the life sciences, philosophical treatments of technology and its relationship to the (post)human, and critiques of instrumental reason in critical theory.

#### **Seminars.**

MWF, 11AM–12:10PM, Natural Sciences Annex 102

#### **Course Requirements.**

- \*Good attendance (**no more than three absences allowed**) and participation.
- \*Three 2-4 page reading responses
- \*One 10-15 page final paper on text(s) of student's choice

#### **A Note on Plagiarism.**

Don't do it. UCSC's guidelines for Academic Integrity are quite specific with regard to cheating and plagiarism, and those guidelines will be taken very seriously in this course. **In a nutshell, plagiarism will adversely affect your grade in this course and your standing at this university.** For Academic Integrity policy, please see [http://www.ucsc.edu/academics/academic\\_integrity/undergraduate\\_students/](http://www.ucsc.edu/academics/academic_integrity/undergraduate_students/).

#### **Required Texts (Available at the Literary Guillotine).**

Greg Bear, *Blood Music*  
Bertolt Brecht, *Life of Galileo*  
Octavia Butler, *Fledgling*  
Donna Haraway, *The Companion Species Manifesto*  
Gwyneth Jones, *Life*  
Alexander Kluge, *Learning Processes with a Deadly Outcome*  
Thomas Kuhn, *The Structure of Scientific Revolutions*  
Bruno Latour, *We Have Never Been Modern*  
Adam Roberts, *Yellow Blue Tibia*  
Kim Stanley Robinson, *Galileo's Dream*  
The Course Reader (texts marked with \* can be found in the Reader)

### Schedule of Readings and Assignments

- 09/28 F** \*Selections from C.P. Snow, *The Two Cultures* (1959/1964)  
 \*Alan Sokal, “Transgressing the Boundaries: Toward a Transformative Hermeneutics of Quantum Gravity” (1996) and “A Physicist Experiments with Cultural Studies” (1996)

#### Week 1. We Have Never Been Two Cultures?

- 10/01 M** Bruno Latour, *We Have Never Been Modern* (1991), pp. 1-48  
 Adam Roberts, *Yellow Blue Tibia* (2009), pp. 3-131
- 10/03 W** Bruno Latour, *We Have Never Been Modern* (1991), pp. 49-106  
 Adam Roberts, *Yellow Blue Tibia* (2009), pp. 132-217
- 10/05 F** Bruno Latour, *We Have Never Been Modern* (1991), pp. 106-145  
 Adam Roberts, *Yellow Blue Tibia* (2009), pp. 219-326

#### Week 2. Galileo, or the Logic of Scientific Discovery

- 10/08 M** Bertolt Brecht, *Life of Galileo* (1945/1947), scenes 1-7  
**PAPER ONE DUE**
- 10/10 W** Bertolt Brecht, *Life of Galileo* (1945/1947), scenes 8-15  
 \*Selections from Karl Popper, *The Logic of Scientific Discovery* (1934/1959)
- 10/12 F** Bertolt Brecht, *Life of Galileo* (1945/1947), texts by Brecht  
 \*Selections from Karl Popper, *The Logic of Scientific Discovery* (1934/1959)

#### Week 3. Galileo, or the Structure of Scientific Revolutions

- 10/15 M** Thomas Kuhn, *The Structure of Scientific Revolutions* (1960), pp. 1-76  
 Kim Stanley Robinson, *Galileo’s Dream* (2009), pp. 3-117
- 10/17 W** Thomas Kuhn, *The Structure of Scientific Revolutions* (1960), pp. 77-134  
 Kim Stanley Robinson, *Galileo’s Dream* (2009), pp. 118-204
- 10/19 F** Thomas Kuhn, *The Structure of Scientific Revolutions* (1960), pp. 135-208  
 Kim Stanley Robinson, *Galileo’s Dream* (2009), pp. 205-74

#### Week 4. Galileo, or the Anarchist’s Philosophy of Science

- 10/22 M** Kim Stanley Robinson, *Galileo’s Dream* (2009), pp. 275-371  
 \*Selections from Paul Feyerabend, *Against Method* (1975)
- 10/24 W** Kim Stanley Robinson, *Galileo’s Dream* (2009), pp. 372-463  
 \*Selections from Paul Feyerabend, *Against Method* (1975)
- 10/26 F** Kim Stanley Robinson, *Galileo’s Dream* (2009), pp. 464-532  
 \*Selections from Paul Feyerabend, *Against Method* (1975)

**Week 5. Life and the Science of Sex (Part 1)**

10/29 M Gwyneth Jones, *Life* (2004), pp. 1-84  
**PAPER TWO DUE**

10/31 W Gwyneth Jones, *Life* (2004), pp. 85-137  
 \*Selections from Londa Schiebinger, *Nature's Body* (1993)

11/02 F Gwyneth Jones, *Life* (2004), pp. 138-201  
 \*Selections from Londa Schiebinger, *Nature's Body* (1993)

**Week 6. Life and the Science of Sex (Part 2)**

11/05 M Gwyneth Jones, *Life* (2004), pp. 202-50  
 \*Raccoona Sheldon (James Tiptree, Jr.), "The Screwfly Solution" (1977)  
 \*Selections from Roger Short and Evan Balaban, eds., *The Differences between the Sexes* (1994)

11/07 W Gwyneth Jones, *Life* (2004), pp. 251-310  
 \*Selections from Roger Short and Evan Balaban, eds., *The Differences between the Sexes* (1994)

11/09 F Gwyneth Jones, *Life* (2004), pp. 311-68  
 \*Selections from Roger Short and Evan Balaban, eds., *The Differences between the Sexes* (1994)

**Week 7. Technical Fictions (Part 1)**

11/12 M **VETERANS DAY (NO CLASS)**

11/14 W \*Isaac Asimov, "The Bicentennial Man" (1976)  
 \*Martin Heidegger, "The Question Concerning Technology" (1954), "The Turning" (1949/1962), and "Science and Reflection" (1954)

11/16 F \*Isaac Asimov, "The Bicentennial Man" (1976)  
 \*Selections from Bernard Stiegler, *Technics and Time* (1994)

**Week 8. Technical Fictions (Part 2)**

11/19 M Greg Bear, *Blood Music* (1985), from Interphase to Metaphase (Chapter 27)  
 \*Vernor Vinge, "The Coming Technological Singularity" (1993)  
**PAPER THREE DUE**

11/21 W Greg Bear, *Blood Music* (1985), from Metaphase (Chapter 27) to Interphase  
 \*Charles Stross, "Three Arguments against the Singularity" (2011)

11/23 F **THANKSGIVING BREAK (NO CLASS)**

**Week 9. Vampires and Humans, Companion Species**

- 11/26 M** Octavia Butler, *Fledgling* (2005), pp. 1-149  
Donna Haraway, *The Companion Species Manifesto* (2003)
- 11/28 W** Octavia Butler, *Fledgling* (2005), pp. 150-229  
\*Selections from Donna Haraway, *When Species Meet* (2008)
- 11/30 F** Octavia Butler, *Fledgling* (2005), pp. 230-310  
\*Selections from Donna Haraway, *When Species Meet* (2008)

**Week 10. Science, Critical Theory, and Pedagogy**

- 12/3 M** Alexander Kluge, *Learning Processes with a Deadly Outcome* (1973),  
pp. xiii-64  
\*Selections from Max Horkheimer and Theodor Adorno, *Dialectic of Enlightenment* (1944/1947)
- 12/5 W** Alexander Kluge, *Learning Processes with a Deadly Outcome* (1973),  
pp. 65-104  
\*Selections from Max Horkheimer and Theodor Adorno, *Dialectic of Enlightenment* (1944/1947)  
**In-Class Film:** Scenes from *Der große Verhauf* (1971; dir. Alexander Kluge)
- 12/7 F** Alexander Kluge, *Learning Processes with a Deadly Outcome* (1973),  
\*Selections from Max Horkheimer and Theodor Adorno, *Dialectic of Enlightenment* (1944/1947)

**FINAL PAPER DUE TO ME BY EMAIL NO LATER THAN 5 P.M.  
WEDNESDAY, DECEMBER 12<sup>TH</sup>**