

History of Science 180: Freshman Honors Seminar
Science, Medicine, and Technology in the Utopias
University of Wisconsin-Madison, Spring 2008

Michael H. Shank, Professor
Anna Moreland and Lindsay Taylor, Writing Fellows

Thursdays, 2:25 - 5:00 p.m.
Social Science Building 5231
Office hours 2-3:30 W 7135 (mhshank@wisc.edu; 262-3972)

Books (in order of appearance in the course):

Available at A Room of One's Own, Underground Textbooks, and University Bookstore

More, Utopia, (Dover Thrift Edition) ISBN: 0486295834

The New Atlantis, and the City of the Sun (Dover Thrift Edition) ISBN: 0486430820

Samuel Butler, Erewhon (1876) (Dover Thrift Edition) ISBN: 0486420485

Edward Bellamy, Looking Backward, 2000-1887 (Dover Thrift Edition) ISBN: 0486290387

H. G. Wells, The Time Machine (Dover Thrift Editions) ISBN: 0486284727

Charlotte Perkins Gilman, Herland (Dover Thrift Editions) ISBN 0486404293

Evgenii Zamyatin, We (1924) (Avon, 1999); ISBN: 0380633132

B.F. Skinner, Walden Two (1948) (Allyn and Bacon 1976) ISBN: 002411510X; Reissue edition

Ursula LeGuin, The Dispossessed: An Ambiguous Utopia (Harper; repr. 1994) ISBN: 0061054887;

Wayne Booth, Gregory G. Colomb, and Joseph N. Williams, The Craft of Research (Chicago: University of Chicago Press, 1995) ISBN: 0226065847

Photocopied selections will be handed out to supplement the books (photocopied in the dept at cost—price is cheaper than you can print it on your own printer)

Course Requirements

A. Reading and speaking

1. Active participation in discussion: listening as well as speaking effectively and to the point.
2. Point 1 requires conscientious reading of assigned selections (note: relatively heavy load; VERY important to keep up). **Plan ahead: read on the week-end; starting the night before will never work.**
3. Take good notes on your reading—you will need them for in-class discussion, for comparisons with the material in your research project, and for the future.
4. **Bring your readings and your notes on them to class;** use them in discussion.

B. Writing

5. One-page informal focus paper each week (based on your notes)
6. Short in-class oral presentations:
 - a) one assigned author's biography and contextual sketch (5 minutes)--

- b) one report on your research project during the last weeks of the seminar (15 minutes plus discussion)
- 7. Two papers that build on one another:
 - a. the first on the history of STM in a particular period (ca. 5 pp.)
 - b. the second on your special utopia/dystopia written in the preceding period (12-15 pp.)
- 8. Participation in two conferences with your writing fellow
 - a. Late papers and failure to participate in conference: ½ grade penalty
- 9. Paper revisions based on comments by instructor, writing fellow (and peers).

Evaluation:

All one-page focus papers: 10%

In-class participation (quality counts) 15%

Oral presentations (historical context, biography, final report): 5%

Revised paper #1 20%

Presentation of research (last weeks): 10%

Final Paper: 20%

Revision of final paper: 20%

References: Utopia on the Internet (<http://users.erols.com/jonwill/utopialist.htm>)

History of Science Resources: History of Science Society website

History of Science Reading Room

Dictionary of Scientific Biography (in the major reference collections).

Key Journals: Alternative Futures, Science Fiction Studies, Isis, Bulletin of the History of Medicine, Technology and Culture

For bibliography: go to UW Library website, go to E-Resource Gateway, then to "H" for History of Science, Technology, and Medicine Database—and search

Research and Writing Schedule with **Key due dates:**

1/31 explore general area of interest (19th c. medicine? 19th c. evolution? 20th c. technology? etc)

2/7: choose area and time period of STM, preferably (but not necessarily) in conjunction with the specific "new" utopia/dystopia that will be the focus of your research paper.

2/21: 5-page History of STM paper due (both electronic copy for me and hard copy to me for your writing fellow)

week 7 conferences with writing fellows

week 8 revised 5-pager due in class (3/13)

week 11: no meeting; 12-15-page papers due following Monday 4/14, by noon

4/14 noon: All papers due (hard copy to me; email copy in rtf format to class list)

Week 12-14: reports and peer reviews with in-class discussions of papers

4/24: writings fellows return papers

Week 13: conference with your writing fellow

5/9 (Friday): revised papers due (also hand-in my marked-up version and the revised versions)

Week 1 (1/24/08): Introduction and Introductions

Introduction

Steven Weinberg, "Five and a Half Utopias," Atlantic Monthly 285 (January 2000), pp. 107-114.

Suggestions for further reading:

Roger Emerson, "Utopia," Dictionary of the History of Ideas, ed. P. Wiener, vol. IV (New York, 1973), pp. 458-465; Frank Manuel and Fritzie Manuel, Utopian Thought in the Western World (Cambridge: Harvard University Press, 1979), ch. 1-2.

Start reading Plato for next week!

Week 2 (1/31/08): The Predecessor (Plato) and the Archetype (More)

Meet the Writing Fellows: Anna Moreland and Lindsay Taylor

Due: 1 focus paper

include a few sentences about possible areas of interest for the first paper: time period, or subject (e.g., biological issues), or special question (e.g., mechanization), or specific utopia/dystopia, or...).

Reports: Plato; More; context of each

Plato, The Republic, 368a-427c, 449a-474b, 497a-507a, 521c-541b (I give the "Stephanus numbers" so you can check passages in other editions). As last resort:

<http://www.perseus.tufts.edu/cgi-bin/ptext?doc=Perseus%3Atext%3A1999.01.0168>

Thomas More, Utopia (1516).

Suggestions for further reading:

For a classic reaction to the Republic in response to fascism, see Karl Popper, The Open Society and Its Enemies [1943] (Princeton: Princeton University Press, 1971), vol. 1: The Spell of Plato, esp. ch. 1, 9-10.

Frank Manuel and Fritzie Manuel, Utopian Thought in the Western World (Cambridge: Harvard University Press, 1979), ch. 4.

R. P. Adams, "The Social Responsibilities of Science in Utopia, the New Atlantis and After," Journal of the History of Ideas 10 (1949) 374-398.

John Steintrager, "Plato and More's Utopia," Social Research 36 (Autumn 1969) 357-372.

Richard Marius, Thomas More: A Biography (New York: Knopf, 1984).

Week 3 (2/7/08): The Scientific Revolution

Due: -Hand in one page about the rationale for the area of history of science, medicine or

technology and for the rough period you are choosing for the first paper assignment, preferably with a specific utopia (new to you) in mind. **Take a good look** at Booth et al., The Craft of Research, Part II, esp. pp. 29-63.

focus paper

Reports on Bacon and Campanella; Italian context; English context

Francis Bacon, The New Atlantis (ca. 1624)

Tommaso Campanella, The City of the Sun (1623)

Manuel and Manuel, Utopian Thought, ch. 9-10, pp. 243-88.

Suggestions for further reading:

Judah Bierman, "Science and Society in the New Atlantis and Renaissance Utopias," Publication of the Modern Language Association 78 (1963) 492-500.

Nell Eurich, Science in Utopia (Cambridge, Mass.: Harvard University Press, 1967).

Eleanor Blodgett, "Bacon's New Atlantis and Campanella's Civitas Solis: A Study in Relationships," PMLA 46 (1931) 763-780.

J. Weinberger, "Science and Rule in Bacon's Utopia: An Introduction to the Reading of the New Atlantis," American Political Science Review 70 (1976) 865-885.

Mulford Q. Sibley, Technology and Utopian Thought (Minneapolis, 1971).

Week 4 (2/14/08): Nineteenth Century Britain I

Due: After serious browsing and looking at summaries and reviews, pick a utopia/dystopia
1 focus paper

Reports: Butler; natural selection

Samuel Butler, Erewhon (1876)

Charles Darwin, On the Origin of Species, ch. 4 (Natural Selection).

Suggestions for further reading:

Joseph Jones, The Cradle of Erewhon: Samuel Butler in New Zealand (Austin: University of Texas Press, 1959).

W. G. Bekker, An Historical and Critical Review of Samuel Butler's Literary Works (Rotterdam, 1925).

Karl Popper, "The Erewhonians and the Open Society," Etc. 20 (1963) 5-22.

Week 5 (2/21/08): Nineteenth Century Britain II

Due 5-page History of STM paper due (both electronic copy for me and hard copy to me for your writing fellow)

1 focus paper

reports: Wells; context of Wells

H. G. Wells, The Time Machine [1895] (Dover Thrift Edition)

Roslynn D. Haynes, H. G. Wells, Discoverer of the Future: The Influence of Science on his Thought (), ch. 2: The Conversion to Science, pp. 18-38.

Due: Trimmed bibliography based on your skimming of items in your first bibliography.

Suggestions for further reading: Manuel and Manuel, Utopian Thought, ch. 33.

Week 6 (2/28/08): The U. S. in the Nineteenth-Century

1 focus paper

Reports: Bellamy, impact of Bellamy

Edward Bellamy, Looking Backward, 2000-1887 [1888], ch. 1-13.

Howard Segal, Technological Utopianism in American Culture (Chicago: University of Chicago Press, 1985), Chapter 5.

Recommended: Manuel and Manuel, Utopian Thought, Chapter 32.

Suggestions for further reading:

Sylvia Bowman, The Year 2000: A Critical Biography of Edward Bellamy (New York, 1958).

Arthur E. Morgan, The Biography of Edward Bellamy (New York, 1975).

Ira L. Mandelker, Religion, Society and Utopia in Nineteenth Century America (1984).

Jean Pfaelzer, The Utopian Novel in America, 1886-1896 (Pittsburgh: Pittsburgh University Press, 1985).

Charles J. Rooney, Dreams and Visions: A Study of American Utopias, 1865-1917 (Westport, Conn.: Greenwood Press, 1985).

Week 7 (3/6/08): An Early Feminist Utopia

Paper: you should be reading items in your bibliography, cutting out the irrelevant items, taking notes on the relevant, and thinking about the argument you want to make.

1 focus paper

Reports

Charlotte Perkins Gilman, Herland [1915] (Dover),

Evelyn Fox Keller, "Science and Power for What?" in Everett Mendelsohn and Helga Nowotny, eds., Nineteen-Eighty-Four: Science Between Utopia and Dystopia (D. Reidel, 1984), pp. 261-72.

For further reading, see the Resource on feminist utopian literature and science fiction:

<http://www.feministsf.org/femsf/reviews/index.html>

Week 8 (3/13/08): Paper-writing workshop

Revised HSTM paper due
writing workshop

Look at Booth et al., The Craft of Research, Part III, pp. 85-148

Spring recess Mar 15-23 (S-N)

Week 9 (3/27/08): The Early Soviet Union

Thesis statement and detailed outline due/ (ca. 2 pages) (begin work hard on paragraphs about background, analysis, comparisons/contrasts)

Reports: Zamiatin; early Soviet context
Evgenii Zamiatin, We (1924).

Suggestions for further reading:

Frank Bartholomew, "The Russian Utopia," in E. D. S. Sullivan, ed., The Utopian Vision (San Diego: San Diego State University Press, 1983), pp. 69-91.

Alexander Shane, The Life and Works of Evgenii Zamiatin (Berkeley, Calif.: University of California Press, 1968).

J. J. White, "Mathematical Imagery in Musil's Young Torless and Zamyatin's We," Comparative Literature 18 (1966) 71-78.

Week 10 (4/3/08): Mid-Twentieth Century U.S.

Schedule reports

1 focus paper

Reports: Skinner; behaviorism; context

B.F. Skinner, Walden Two (Macmillan, 1948), Selected Reviews [New York Times, 13 June 1948, p. 6; New Yorker 24 (12 June 1948) 94; Christian Science Monitor 24 June 1948, p. 11; New York Herald Tribune, 18 July 1948, p. 6; School and Society 67 (29 May 1948) 416]
Work on the paper!

For further reading:

B.F. Skinner's autobiography, Particulars of My Life (New York: Knopf, 1974).

R. Puligandla, Fact and Fiction in B. F. Skinner's Science and Utopia (St. Louis: Warren Green, Inc., 1974).

Krishan Kumar, Utopia and Anti-Utopia in Modern Times (Oxford: Blackwell, 1987), ch. 9:
"The Utopia of 'Behavioral Engineering': B. F. Skinner and Walden Two" 347-78.

Week 11 (4/10/08): Finish papers

No meeting

Papers due next week—by noon Monday (4/14)

Tentative Report Schedule

Monday (4/14) papers due

Week 12 (4/17/08)

read and comment on relevant papers

no more than seven 15' reports

Week 13 (4/24) reports; read and comment on relevant papers

Writing fellows return papers with comments
No more than six 15' reports

Week 14 (5/1): reports; read and comment on relevant papers
7 reports
no more than seven 15' reports

[Week 15 (5/8) Final reports; read and comment on relevant papers]

Week 15 (5/8/08): Late Twentieth-Century America

1 focus paper
Reports
Ursula LeGuin, The Dispossessed: An Ambiguous Utopia [1974]

Suggestions for further reading:

Krishan Kumar, Utopia and Anti-Utopia in Modern Times (Oxford: Blackwell, 1987), ch. 10: "Utopia and Anti-Utopia in the Twentieth-Century", pp. 380-424.

Judah Bierman, "Ambiguity in Utopia: The Dispossessed," Science Fiction Studies 2 (1975) 249-55.

Raymond. Williams, "Utopia and Science Fiction," Science Fiction Studies 5(1978) 203-214.

revised papers due by 5 pm Friday (**hand-in my marked-up version and the revised version**)

Some guidelines on the assignments

The one-page "focus papers"—brief and informal (cleaned up notes)

This assignment is due for every week **at the beginning of the relevant class** and are graded "credit/no credit" basis. I will probably mark them up and hand them back only at the beginning of the course. Their purpose is to commit you in writing to choosing some issues that you find worthy of discussion, because they are surprising, stimulating, disturbing, or problematic, etc. (Explain why) You need to think about the assignment ahead of time and select some specific issues/passages that you consider particularly significant in relation to the themes of the course. You can fulfill the assignment by making observations on the material or by raising questions that you would want to discuss, by discussing. Ideally, your focus paper will contain the best of your reflections: if you take good notes, this is an easy assignment.

The weekly reports (5-7 minutes max.)

You will want to say a few things about the author's biography, but the report is not meant to be primarily biographical; the focus should be on the historical background relevant to the book (what is happening in the world and in the history of science, medicine, and technology?). Some weeks will offer an opportunity for a separate introduction to the context of the author.

The Writing Fellows

We are very lucky to have the assistance of two Writing Fellows, Anna Moreland and Lindsay Taylor, who will be a crucial part of the writing in this course. They have been specially trained to comment on and to help you improve the structure, organization, and clarity of your **writing** (not your research!). Precisely because they are not in the course, they will offer the invaluable service of reading our writing for coherence and clarity of exposition from the point of view of non-specialists.

Scholars tend to write for each other and forget about non-specialists; students too often write as if their professor is the audience. In each case, we make too many assumptions about how much our audience knows and we often fail to explain sufficiently to our larger audience what we are doing. The writing fellows will be in a position to serve as the non-specialist colleague who can look over our work. This is a privilege now, and also in the future if you can find a counterpart to them (I also try to find a colleague to act as my writing fellow)

They will comment on the 5-page paper and on the final 12-15-page paper. Writing fellows do not grade papers; they help improve them.

You will each meet twice with your writing fellow.

The papers

Topic: Start with a work that is not on our list and is new to you. **Check with me for approval of the topic.** The paper should be "on-topic"--that is, deal with some aspects of science, technology, or medicine). It should have a thesis (pose a question, set out to solve a problem, or argue a case). Booth et al., *The Craft of Research*, contains much valuable advice on the matter of moving from a topic to a question.

Ideally, the paper will be analytical, historical, and comparative.

Analytical: you will analyze the utopia/dystopia you have chosen for its ideas in relation to one another and the plot of the work itself. What attitudes toward STM surface in it? Why?

Comparative: you will draw upon the readings in the seminar to compare and contrast views/approaches in the work you have chosen with the ones we are reading as a group.

Historical: Your paper will probably involve some attention to the author's intellectual development and to the work as a literary document, but the bulk of your paper will seek to understand the work in its historical context (intellectual, political, social, etc), and investigate themes relevant to the history of science, medicine, and/or technology.

It is important that you start exploring ideas for a paper at an early stage, so that you can find out early if your idea will "fly."

The first assignment I have therefore given you an early deadline for such exploration. In addition, it takes some time to learn about the historical context of the utopia/dystopia that you will choose. You will probably integrate a good portion of your first paper into your final one.

I will have more to say about this in a separate hand-out.

Formally, the each paper should include the following elements:

- an introduction that sets out the main problem, thesis, argument, or question around which the paper is organized;

- a main body that places the work of your choice in its historical context, analyzes it, and proceeds to build a case, marshal evidence on its behalf, and refute actual or potential objections to it. This section of the paper will normally be thoroughly documented, with footnotes to the relevant primary and secondary sources (if the paper is word processed, the notes should appear at the bottom of the page; if typewritten, they may be placed at the end). It is very important to distinguish the words and work of others from your own: place all direct citations in quotation marks and acknowledge the paraphrased ideas of others;

- a conclusion that recapitulates for the reader the main findings of the paper;

- a bibliography of works cited, including articles (also works consulted, if they are relevant to the topic at hand, but were not cited).

Use Booth, et al., The Craft of Research, which is an invaluable guide to writing an effective paper.

All work must be your own. You must give proper credit to the exact words of authors by placing them in quotation marks, and to the ideas of others by citing them. Needless to say, the purchase of papers or research services is out of the question. For most of us, writing a paper from beginning to end is an intellectual struggle, and it should be. Some people can make it look easy, but for most of us, it's a lot of hard work. As such, a paper is an invaluable experience in research, organization, and communication that should not be "short-circuited." This is only one of the reasons why I do not tolerate any form of plagiarism or academic dishonesty. For the record, when I have found it, I have done everything in my power to have the guilty expelled.

The research reports (final 3-4 weeks):

Everyone will have a copy of everyone else's work, which we will all be reading for the relevant week. It will therefore not be necessary to give much detail, which in any case will not fit into the final oral report (15 minutes maximum). The report should highlight the main argument/thesis and you main conclusions--the most important messages that you wish to communicate. Everyone is expected to participate in the discussion of the papers and to offer constructive feedback about improving the argument and the presentation of the paper generally.