Science, Technology & Society  
Sociology 4481  
Fall 2005

Wesley Shrum

Class meets each Thursday from 6:00-9:00 PM.

Office Hours (114 Stubbs): Thursday 10-12AM & anytime by appointment  
Telephones: Office 578-5311; Sociology Dept. 578-1645

PLEASE DEPOSIT ALL ASSIGNMENTS IN ONLINE DROP BOX  
ALL ANNOUNCEMENTS/ ASSIGNMENTS WILL BE EMAILED OR POSTED BY MONDAY OF THE WEEK

Course Requirements:  
Grade Breakdown:

(a) Weekly Points (Quiz or Assignment)  
Six points maximum per week. Your ten highest scores are counted out of twelve.

(b) Controversy Study  
References & Topic=5; Notes=5; Outline=10; First draft=10; Final draft=10  
½ point deduction for each day late

(c) Final Exam (optional)  
5 points

ALL ASSIGNMENTS ARE DUE ELECTRONICALLY AT 5pm on Mondays

Grading Scale:  
A=90+  
B=80-89  
C=70-79  
D=60-69  
F=59-

THIS COURSE REQUIRES ACCESS TO THE INTERNET

Required Materials:


Massimiano Bucchi. Science In Society.


All other materials will be available electronically through Blackboard.

**Attendance:** Attendance is not required, but there are six points every week and no makeups. Let me repeat that. **THERE ARE NO MAKEUPS.** Ever. Attendance is assessed only through submission of the weekly quizzes and assignments. Leaving class before dismissal is considered an absence. It will result in a three point deduction from your weekly quiz or assignment. This does not mean that you can't ever miss a class. Since only your top ten weekly assignments will be counted, you can miss a couple of classes without any penalty. I don't care why you miss class--illness, work, or love (an excellent reason, in my own view). If you come to all the classes, you can get low scores a couple of times and drop the scores for those weeks. If you only come to 10 classes, you need to do pretty well on most assignments. The final is optional.

**COURSE AIMS & RATIONALE**

A survey of non-academic employers asked: **which skills should college graduates have learned?** Employers were presented with a list of 55 work-related skills and competencies. The highest scores were given to general skills rather than specific ones. No one cares if you know some specific software program. If you have experience using computers, you can learn it. The most important skills were: (1) ability to listen to others; (2) effective speaking skills; (3) ability to organize thoughts and information; (4) ability to conceptualize problems clearly; (5) effective writing. If you have the general skills, you can learn the specific ones. One new skill that is highly important is using the Internet. We use it in this class, so ask me if you need help.
Objectives

(1) to understand the fundamentals of STS and the relationships among its three components. (Note: Science, Technology, and Society is usually abbreviated "STS," but this can also stand for Science & Technology Studies.)

(2) to develop--through the process of listening, questioning, and critical evaluation—views about important issues in the STS field that go beyond commonsensical beliefs about science & technology.

(3) to be skeptical when someone uses "Science Says..." or "This Technology Works."

Course Format

To implement our objectives we will proceed as follows:

A lecture format will be used to convey basic concepts, familiarize you with certain classical and contemporary studies in the field, and evaluate basic theoretical perspectives. (Not more than 90 minutes, I hope, but I’m usually wrong about this.)

Controversy studies will be used to sharpen your analytical, organization, and writing skills. 40% of the grade is based on this. For each part of the assignment, maximum points are given only for timely submissions. There is a One half point reduction for each day late. Since all assignments are submitted electronically, I will use the Date/Time stamp as proof of submission.

Critical discussions of contemporary science & technology issues, based on the "Science Times" and "Circuits."

ASSIGNMENTS, QUIZZES, PROGRESS REPORTS: 60% of the grade is based on attendance-related measures. These are assignments or quizzes that will take place on specific days and are not subject to makeup. If you miss one, you miss that opportunity.

CURRENT Science and Technology NEWS


"Science Times" section of the **Tuesday edition.**

"Circuits" section of the **Thursday edition.**

Both are available online: [http://www.nytimes.com](http://www.nytimes.com)

On Tuesday & Thursday of each week there are special sections of the New York Times that are pertinent to the course. They should be read on a weekly basis and the weekly quiz usually contains a couple of questions on the major articles (not the small ones). Both are several pages, consisting of five main articles concerning recent innovations, discoveries, technological controversies, debates between experts, science policy issues, and so forth. (If you are doing any
research on e-business, the Monday edition also has a Business section with a focus on the
Information Industries.

How to Get Them:
You can have Circuits emailed to you each Thursday, but I don’t know how to get the Science
Times that way. So this is the procedure that I will use (and what I do when making up a quiz).
Go to www.nytimes.com
To the left side of the screen, click on Science (Tuesday) or Technology (Thursday).
(You can also click the Circuits link below Technology.)
Click on the large “Science Times” or “Circuits” graphic on the right near the top.
This will pull up two (main) columns of links to articles.
Read the main articles, which are the ones in the left column (not counting the ads).

Where can you get hardcopy? LSU Union, outside Allen Hall, Louie's Cafe, at all Albertson's
grocery stores, some convenience stores (Country Corner on Perkins), Highland Coffee (corner
of Chimes & Highland), Foster Café, by the Circle K on Highland.

"CONTROVERSY" STUDY

Your controversy study is the most important aspect of this course and your course grade (40%).
However, you get only 10 points (25% of the total paper assignment) for the final paper. Why?

What typically occurs is that an essay is assigned, turned in, and graded--and the assessment of
the essay is primarily in that grade. That's not, IMHO, the best way to operate. Writing is a
process that begins with an idea, continues as you think it through, and sometimes results in a
slam dunk in the trash bin rather than a polished essay submitted for credit or publication. Our
current Internet project, funded by the National Science Foundation, began with assignments for
essays such as this many years ago. This essay assignment is designed to give you credit for the
thinking part, the bibliography, the note-taking, the outline, the first draft. If you skip the final
version and hand in nothing, you would still get a B in the course (assuming perfect scores on
everything else).

The assignment is to conduct a study based on a "controversy"--an issue involving science or
technology where there are two (or more) positions that have been staked out by competing
groups or people. You may study a new controversy or an old one. The disadvantage of
selecting a controversy that is new is that it is harder to find materials (that is, no one has
published any research on it—only lightweight treatments and web sites are available). Many of
the readings for the semester are examples of controversy studies. Both volumes of the Golem
deal with scientific and technological controversies. A controversy can be a dispute about (1)
whether something is good or bad (that is, whether it has mainly positive or negative effects),
(2) whether something does or does not work, (3) whether something is or is not risky, (4)
whether something is or is not true. It is generally related to other matters in which knowledge
and expertise are employed by one or both parties.
"Controversy" studies have a long history in STS. For further ideas on what is meant by "controversy" and the sociological analysis of controversies in science and technology, you can have a look at the following articles.


You must examine a controversy. However, almost anything can be put in this format: it may not have seemed like a controversy when you first read about it—but it will be by the time you're done with it. The key to doing well on the essay is that you must use concepts or ideas that have been covered in class or introduced in the readings. If your essay study does not do that, there will be a reduction in your score. This is to insure that you have treated the topic in a sociological manner, as opposed to, say, a "commonsensical" or "journalistic" treatment. No credit for giving your opinion on what you like or don't like. The objective is to apply a critical and analytical perspective to your topic. That will be done in a sequence of five stages.

Stage I: Select your references & topic (5 points credit)
Stage II: Take notes on these sources (5)
Stage III: Write an outline of the paper (10)
Stage IV: Write a first draft (10)
Stage V: Write a final draft based on my comments (10)

½ point deduction for each day late: this applies to all assignments

Here is an outline for the major sections of your paper, together with suggested lengths for each section (see below for spacing and format).

Beginning (allow 1 page)
1) An introduction (one paragraph, no more) to get the reader’s attention. Use something catchy or interesting--it can even be a question, or a story about a particular person or group.
2) An outline of what you will say. This is your "argument," that is, the basic points you want to make, your line of thinking. You can use the format, "First, I will discuss the origin of the controversy....," "Next, I will show....," "Next, I will discuss...," and "Finally, I will recapitulate..." (Again, no more than one paragraph for this.)

Middle (allow 3-4 pages)
[For sections 3-5, the length of each will vary according to the topic.]
3) A description of the origin of the controversy. This will include an account of (a) the issues or technology involved, (b) the groups or people or organizations who are participating, including their credentials and attempts to establish credibility, and (c) their interests in presenting facts, artifacts, or views of the world in a particular way.
4) Your account of how the controversy developed over time. Include the action(s) the participants took in advancing their cause; whether any of the participants changed their views; how they responded to events.

5) Your version of how "closure" was reached. This may be one or two paragraphs telling how it was resolved, or, if it was not resolved, how things stand at the present time.

   End (allow 1-2 pages)

6) Your analysis, using concepts from lectures and/or readings. (One or two paragraphs, the more the better here.) You can also include a prediction of how things might evolve in the future (optional, but you might want to say one or two sentences about this).

7) A summary of what you have done (one short paragraph).

Don’t wait until the end (section six) to use the course concepts.

Another kind of study would be a comparison of two cases (e.g., a controversy in two different settings, how two countries, or two communities have each handled some issue; or a comparison of controversies over two distinct issues).

In terms of length, the final product should be no less than 2000 and no more than 3000 words of text. Since you will submit the first draft and final version electronically (in Word) I will do a word count, excluding references & front matter. There is no way to fudge this, so you should check as you are writing the paper (this is easy in Word—don’t include references in your count). You should use Times New Roman 12 pt (a standard font used here in this syllabus) with one inch (left justified) margins. 2000 words is about six double-spaced pages of type--so you may find that you need between six and nine pages (not including references). The format for references is what we call "ASA" (American Sociological Association) format. You can find a PDF version at  http://www.asanet.org/pubs/asaguidelinesnew.pdf

I expect a high quality product since you aren't waiting until the night before to get it started. Some of the weekly assignments relate to your study, to help you plan it in advance. If you submit a study that is not between 2000 and 3000 words of text and does not use concepts or ideas that have been drawn from lectures/readings, the point total will reflect that.

ASSESSMENT

Just to give you an idea of how the study will be graded, I reproduce here the form I used the last time I taught the course. It is not necessarily what I will use when I begin marking the essays (reserve the right of improvement when you can!). But it worked well last couple of times and it follows the essay guidelines above. People who followed the directions closely generally received high marks. Where permission was granted in advance not to use the controversy study outline, there was variation in specific items.

__ Statement of purpose / General argument of paper

__ Outline of paper / Flow of the argument

__ Coverage of first position in the controversy

__ Coverage of second position in the controversy (assuming only two main sides--there could easily be more)

__ Use of Course Concepts (4 points possible)
Let’s think about this and make it a conscious choice. It’s easy to plagiarize. Just download a web page, reformat it and send it to me for an essay. Plagiarism is especially tempting when you are working on the Internet and even taking a course of it. What’s the definition? Well, let me tell you mine. Taking one sentence from a book or article without proper attribution is sufficient cause for me to refer you to the Dean of Students. In recent memory, two graduate students have had to leave the sociology program for this very reason. I am familiar with both the on-line services for providing papers to students and the faculty sites that allow automated plagiarism checks. The most popular site for free papers is schoolsucks.com with about 5,000 downloadable pieces. What you don't know is whether the essays here got an A or an F. As schoolsucks puts it: "You could be downloading garbage and probably are." One of the most popular watchdog sites is plagiarism.org, which reports that about a third of the high school papers it examines have Internet content. Almost half 1/2 of high school students in a 2001 survey by the Center for Academic Integrity admitted have plagiarized from an online source to some extent.

There is a high incidence of plagiarism at LSU. Last year someone took a paper directly from the Web. The minimum penalty, which was applied in this case, is an F in the class and suspension from the University. (See the Code of Student Conduct for details.) Some professors are not willing to make the effort to deter or prosecute cheaters, which has led to a kind of "cheating subculture" at LSU--you have to "decide" whether or not to cheat, rather than simply assuming you don't. Some teachers think it is difficult to prosecute and some are just lazy. I helped to formulate the current version of the Code of Student Conduct. I have chaired Hearing Panel for student offenses for 10 years, so you would be right to assume I am familiar with the procedure. Recently we have actually made it easier to bring charges and protect the rights of the accuser as well as the accused. I am willing to make the effort. And I enjoy it.

NOTE ON REQUIREMENTS FOR GRADUATE STUDENTS

Requirements are higher for graduate students because graduate credit is received for the course. This will be one additional article each week and a more extensive term paper, or other assignment to be approved on an individual basis. Additional materials, outside the scope of what we are reading in class will be necessary for the paper. You may begin this paper as soon as you OK the topic with me. The topic and the paper may not be prepared (or have previously been prepared) for another class without explicit prior approval. I will not accept any paper without this approval. The length is 15 pages (ds). Reduction of one letter grade will apply to
papers with fewer pages. Point reductions will also apply for poor spelling or grammar. The paper is 80 points and the weekly assignments are 20 points.