

TECHNOLOGY & SOCIETY (Online)

Soci-2755-SDE/SDF/SDG/SDH

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Course Description

This course of study examines the relationship between technology and society. The course proceeds according to a *socio-technical perspective*; that is, the notion that technology and society share a reciprocal relationship wherein first we shape our technologies, and then our technologies shape us. The course begins with a breakdown of the concept “technology” in an attempt to determine its fundamental nature. To this end we will examine technology’s linguistic roots and historical *raison d’être*, its essential components, its relationship to rationalism and social progress, and its tendency in modern societies to alienate and disempower. We will examine various sociological theories which inform our understanding of technological development and diffusion (e.g., Technological Determinism, Social Constructivism, Convergence Theory, and so on). The course will identify several sources of technological change (from the contributions made by self-reliant, genius inventors of yesteryear to the hi-tech, corporate research laboratories of today) and examine a number of high profile technological impacts such as the automobile, bio-engineering, printing, mass production, the internet and others. The course of study includes a careful examination of the differential effects of technological change and the tendency for the benefits, and the costs, of technological development to be unequally distributed throughout the population. We will study the historical relationship between science and technology, the patterns and theories of technological diffusion, the role of engineers and other experts in the development of technology, the reciprocal relationship between organizational structure and technology, and the role of the government in determining the direction and pace of technological change. All of these topics, and others, will be considered in light of an important observation in the sociological study of technology; namely, technology is a subversive social force... it delivers benefits, but it also exacts costs. And not always in equal measure.

How to Proceed Through the Course of Study

This course of study has no classroom. Rather, it includes 2 excellent books which examine the relationship between society and technology. One book, Rudi Volti’s *Society and Technological Change* (7th Ed), identifies and discusses most of the important theories and basic concepts needed for developing a thorough understanding of how society shapes technology, and how technology shapes society (the *socio-technical perspective*). The other book, Bianca Mugenyi’s (with Yves Engler) *Cars and Capitalism: On the Road to Economic, Social and Ecological Decay*, offers an in-depth study of the impact of the most significant technological innovation in the 20th century: the automobile. The course of study also includes a course package which offers helpful learning objectives for each of the 12 units of study, brief synopses of the required chapters from Volti’s book, and review questions pertaining to each chapter which you will find helpful in your preparations for the course’s 2 examinations.

Here is what I recommend:

- Set aside 4-5 hours for each of the 12 units of study, find a quiet room, close the door, shut out the world, and focus on the required Volti readings.
- While reading, take notes which address the Learning Objectives and the Review Questions which appear in the course package for each unit of study. When I set the examinations, I will use the Learning Objectives and the Review Questions as my primary guidelines.
- You might also use the various synopses of the Volti chapters that appear in the course package to help identify the most important terms and concepts for each required chapter.

- Follow along with the Course Schedule, and don't fall behind!

If you have a question, post it in our Discussion Area and I, or one of our classmates, will respond. Or, simply send me an email using brian.mcmillan@lakeheadu.ca

Required Reading Material

Volti, Rudi. 2014. *Society and Technological Change*. 7th Edition. New York: Worth Publishers. ISBN-13: 978-1-4292-7897-3

Mugenyi, Bianca and Yves Engler. 2011. *Stop Signs: Cars and Capitalism on the Road to Economic, Social and Ecological Decay*. Fernwood/Red Publishing. ISBN-13: 978-1-55-266384-4

Timed Online Examinations

There are 2 examinations scheduled throughout the course of study. Both exams will be based exclusively on Rudi Volti's *Society and Technological Change* (2014). Both examinations will be timed online tests. Timed online tests can be taken from any computer connected to the internet. I wouldn't advise the use of smartphones because of common connectivity problems. The exams will be comprised of multiple-choice and true-or-false questions. The first exam will be based on study units 1-6. The second exam will be based on study units 7-12. Please see the *Grading Scheme* for the weighting of exams, and the *Course Schedule* for examination dates.

A timed online test requires you to commence and complete the test within a specified time period on a particular day; e.g., Thursday May 14th, start time 7:00 p.m. EST, completion time 8:30 p.m. EST. You will not be allowed to commence before the designated start time, and no responses will be accepted after the designated completion time.

The timed online tests will be administered through our course website (D2L). At the time of the exam you will be required to login using your usual Lakehead University username and password. I will set up a mock timed online test to give you a chance to practice logging in and answering questions.

***PLEASE NOTE:** *Lakehead University has a very strict policy regarding the failure to write formally scheduled examinations at the prescribed time. Special accommodations, such as a make-up exam, will only be offered when missed examinations are due to medical reasons, for which detailed supporting documentation must be submitted. It is your responsibility to familiarize yourself with the University's policy regarding missed examinations. Please note that I have never granted special accommodations in regard to missed examinations on the basis of equipment failure in 30 years of teaching, and I don't plan on spoiling my record any time soon. So please ensure you are at the right place at the right time with the right equipment to avoid disappointment.*

Written Assignment

There is one written assignment based on the book *Stop Signs: Cars and Capitalism on the Road to Economic, Social and Ecological Decay*. (Mugenyi et al. 2011) Assignment description and requirements follow after the *Grading Scheme*.

Grading Scheme

Midterm Exam.....	38%
Assignment.....	24%
Final Exam.....	38%

Written Assignment

This assignment is based on the book *Stop Signs: Cars and Capitalism on the Road to Economic, Social and Ecological Decay*. (Bianca Mugenyi and Yves Engler, 2011). The objective of the first part of this assignment is to learn about the various ways in which the automobile has impacted on North American society. More specifically, your task is to read chapters 1-17 carefully and identify, according to the authors, *various distinct impacts on society that have resulted from the extensive diffusion of the private automobile; that is, the impact of the automobilization of North American society*. For each distinct impact identified, include one brief, direct quotation from *Stop Signs* which is particularly representative of your chosen impact. Cite the page number of each chosen quotation. If you are using an e-version of the *Stop Signs* book (e.g., Kindle), use whatever location number appears on the page from which you draw your quotation. See below for an example of what I have in mind:

In chapter 1 -- "Freedom: Fort Lauderdale" -- the authors point out that our growing dependence on the private automobile as our principal mode of transportation has resulted in an enormous consumption of human time and energy. The authors indicate that "(t)he average American spends 18.5 hours a week in a car, which adds up to about a month a year or one of every six waking hours." (13). This becomes time and energy unavailable to other, perhaps more meaningful, activities relating to such things as social interaction with friends and family, work, recreation, etc.

By the way, the above impact of the automobile can be viewed as one of the many "opportunity costs" associated with automobile dependency. It might be helpful to understand the concept of "opportunity costs" before you read the book.

You should be able to identify 15-20 distinct impacts. This first part of the assignment should account for about ¾'s of the overall assignment.

The objective of the second part of the assignment is to learn about the socio-cultural factors (as opposed to technical factors) that have been instrumental in the private automobile's victory over other modes of transportation (e.g., trolley cars) in the competition for transportation supremacy. For chapters 18-26, your task is to *identify the various factors which have contributed to the private automobile's rise-to-dominance*. As above, for each factor chosen, include a brief, representative quotation from the book with page number. For example:

"In chapter 20 -- "Self-interest, Bullying and a Willingness to Break the Law" -- the authors argue that auto manufacturers used political means in their early rise to dominance. For example, in the 1930's car companies lobbied hard for the enactment of the Public Utility Holding Company Act which made it very difficult for utility companies to maintain their extensive ownership of trolley lines. Once the legislation had passed, auto manufactures stepped in and quickly bought-up trolley lines --their major competitors- and just as quickly dismantled them. The authors write "(w)hen all was said and done a hundred electric transit systems in 45 cities were ripped up, converted and resold. By the mid-50's nearly 90% of the country's electric streetcar structure was gone." (162).

This assignment should be the exclusive product of your own individual effort. It is not meant to be a group project. The assignment is worth 24% of your final course grade. You **MUST** adhere to the following rules:

- your final submission must be 6-7 pages of discussion, not including your title page
- your paper must be typed using a 12 point Times New Roman font, and double-spaced
- you must use regular 1" margins
- no References page necessary
- you must include a title page which offers the title of your paper, course name and number, your name, and date of submission
- you must submit by the deadline (see the *Course Schedule* for the deadline date and time)

- assignments must be submitted using the Dropbox feature on our course site (D2L)
- you **MUST** submit your paper in Word format, all other formats will **NOT** be accepted
- a penalty of 5% per day applies to all assignments submitted after the deadline for whatever reason
- assignments which are more than 48 hours late will **NOT** be accepted, no exceptions
- Please start your assignment now.

End