Goals and Orientation for Values in Design

The study of human values in the design of information systems and technology (VID, for short) takes place in many disciplines. Scholarship has recognized that our technological systems are not, by nature, neutral or free of human agency. The typical approach to discourse about values and technology takes place long after systems are deployed in the world and we can see social reaction and reconfiguration as a result of their existence. This course is a part of a growing movement to take the lessons gained from past examination of values surfaced by technology, and turn that knowledge back onto the process of technological design. As such, this is an emerging field without a clear roadmap. Throughout the course, we will engage with the ideas of individual and social values, different approaches to technological design, and some of the pressing issues that arise at this critical intersection. Sometimes we will struggle with them. Sometimes we will see something in a completely new way. These are all part of our work in contributing to the emerging roadmap, making it clearer both for ourselves, as well as a larger community. We will approach this inquiry in two primary ways. The first will be through reading relevant literature and writing about it. The second way will be actively deconstructing and designing technologies with mindful attention to the human values in play.

Each week, we will read a number of articles that address different aspects of the VID topic. For most weeks, you will write a short paper (2.5 pages single-spaced or 5 pages double spaced) that draws you into this theme\(^1\). We will spend time in class discussing what you have written and how you are developing your thoughts about values in design. We will also

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\(^1\) Papers are due (hard copy) at the beginning of class. Late papers are not accepted. Final grade is based 50% on papers, 25% on participation, and 25% on the game project. All letter grades from A to C are used in this course, both on individual papers and in the determination of a final grade.
be engaging a team project designing and developing games that promote a particular set of chosen values. These games will be premiered at the end of the semester in a public forum.

## Semester At-a-Glance

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## Required Texts


## SCHEDULE OF READINGS AND WRITTEN ASSIGNMENTS

The readings for this course can be found on the CourseWeb site in electronic format. The two books are available through Amazon.com or at many bookstores. (The Flanagan book is also available as a Kindle download.) Abbreviated titles of the assigned readings are below, and a full bibliography is found at the end of this document. The assignments are due at the beginning of the session in which they are assigned. You may want to bring two copies to class: one to hand in, and one for reference during discussion. The assumption is that you have read the articles before coming to class, as the assignments are typically focused on leveraging the course readings in some way.

Students will be assigned to lead the discussions once the course gets underway. Further details will be described in class.
1. Introduction: What are Values in Design? | January 10

No assigned reading

2. Values in Systems | January 17

*Note – the University of Pittsburgh is closed on this day for observance of Dr. Martin Luther King's birthday. We will make the decision as a class to find an alternative time to meet, as there will be material to cover.

1. Flanagan, Howe, & Nissenbaum (2005), Values in Design: Theory and Practice
2. Sengers et al (2005), Reflective Design
3. Friedman & Nissenbaum (1996), Bias in Computer Systems
4. Williams & Edge (1996), The Social Shaping of Technology

Assignment
These four articles provide different perspectives on the definitions and roles of human and social values as they relate to technology design. Comparatively discuss the various theories and methods the authors explore. Which of the approaches particularly appeal to you (regardless of whether you feel you could pull off such an analysis yourself.) Why do these approaches seem useful? [Maximum 5 pages, double spaced]

3. Social Construction | January 24

2. Winner (1993), Upon Opening the Black Box and Finding It Empty
3. Brey (1997), Philosophy of Technology Meets Social Constructivism
4. Star (1999), The Ethnography of Infrastructure

Assignment
This week’s readings discussed several artifacts and how their social positioning affects the ways in which we understand them. Choose a technological artifact of interest to you and map out the various social values that position it and the groups in which it resides. Be sure to annotate and explain your map with accompanying text. [Maximum 5 pages, double spaced]

4. Values at Play – Workshop I | January 31

1. Flanagan (2009), Critical Play: Radical Game Design

Assignment
Flanagan describes an alternative to the traditional game design model called "Critical Play Game Design." How might you use this model to deconstruct an existing game so that you may modify it to incorporate new values-based components? Choose a game that you know well and discuss how you would use the critical play approach to understand and modify the game. [Maximum 5 pages, double spaced]

5. Technological Determinism | February 7

1. Latour (1991), Technology is Society Made Durable
2. David (1985), Clio and the Economics of QWERTY
4. Ryan (2009), The Sociotechnical Infrastructures of Virtual Worlds

Assignment
Latour, David, and Page engage a discussion about how historical choices made in the design of technologies shape our uses of them in enabling and constraining ways. Use the ideas presented in the first three articles to critique Ryan's discussion of virtual world infrastructure. [Maximum 5 pages, double spaced]

6. The Politics of Technology | February 14

1. Winner (1988), Do Artifacts Have Politics?
2. Pfaffenberger (1992), Technological Dramas
3. Joerges (1999), Do Politics Have Artefacts?
4. Introna & Nissenbaum (2000), Shaping the Web: Why the Politics of Search Engines Matters

Assignment
The four readings for this week are in a discourse with each other about the relationship between technological artifacts and embedded social values. Discuss the points of confluence and dissonance among these articles. Based on a thoughtful exploration of these articles, what do you think about the role of the political in technology? How would you design a technology to promote a political ideal? Alternatively, how would you examine a political ideal to construct a relevant technological artifact?

7. Technology and Identity | February 21

1. Perry et al (1997), Disability, Inability, and Cyberspace
2. Weber (1999), Manufacturing Gender in Military Cockpit Design

Assignment
Read through the descriptions of player races and classes in World of Warcraft (WoW) [http://us.battle.net/wow/en/game/] and tell us what you notice about representations of identity in the descriptions (both textual and graphical). Draw from the week’s readings to comment on values that are both highlighted and left unaddressed in the WoW cast of characters. [Maximum 5 pages, double spaced]

8. Values at Play – Workshop II | February 28

1. Nardi (2010), My Life as a Night Elf Priest

Assignment
Come to class prepared to discuss your reactions to Nardi’s book. Specifically, think about the social values embedded in WoW and the infrastructure of the game (in terms of previous weeks’ topics.) We will then be walking through Second Life as an alternative virtual world. Think about how the values of WoW’s infrastructure can be applied to modify aspects of SL.

9. NO CLASS – PITT SPRING RECESS | March 7
10. Tricky Topics: Education | March 14

1. Amory (1999), The Use of Computer Games as an Educational Tool
2. Hayes (2008), Making Computer Games and Design Thinking

Assignment
Do some independent research on games that have been developed as educational tools. Choose one and engage a values-based analysis, suggesting modifications that shift the embodied or represented values. [Maximum 5 pages, double spaced]

11. Tricky Topics: Science | March 21

1. Stapleton (2005), The Art of Nurturing Citizen Scientists through Mixed Reality

Assignment
Do some independent research on games that have been developed as tools for involving non-scientists in modern scientific practice. Choose a research field of interest to you and find a project underway within that field. Sketch and suggest a game that would invite citizen scientists to engage with this type of work. [Maximum 5 pages, double spaced]

12. Tricky Topics: Industry | March 28

1. Wyld (2010), A Virtual Explosion or SNFU is *Always* Better than a Real One
2. Stuckey (2009), Virtual Environments Overview

Assignment
IBM’s “Virtual Rehearsal Studio” (described in the Stucky reading) is a virtual environment to facilitate business and industrial/government training. Discuss the assumptions about social values (both individual and organizational) that are embedded in the environment they propose. Do you think their understanding of social interaction in virtual worlds is reasonable? Discuss the advantages and limitations of their project with an eye toward values and incentives to participate. [Maximum 5 pages, double spaced]

13. Tricky Topics: Residual Issues | April 4

1. Mumford (1964), Authoritarian and Democratic Technics
2. Dreyfus (1995), Heidegger on Gaining a Free Relation to Technology
3. Brewer & Dourish (2008), Storied Spaces: Cultural Accounts of Mobility, Technology, and Environmental Knowing

14. Final Commentary on Values in Design | April 11

No readings assigned

Assignment
Bring a sheet of “talking points” to class this week. You should be ready to talk about four different things. First, what is the best article you read in the course and why is it the best article? Second, what did you find out about the role of social values in the design of technology that surprised you over the course of the semester? Third, how do you think that focusing on values in technological design will affect the way you approach your
information career moving forward? Fourth, what readings that you were exposed to this semester do you wish you had read earlier? Why? [Be prepared to hand in a copy of your talking points.]

15. Game Fair | April 18

No readings assigned

Assignment
Be ready to demo your game to a public audience.
ACADEMIC INTEGRITY

Students in this course are required and expected to comply with the University of Pittsburgh’s Policy on Academic Integrity (see SIS policy below). Anti-plagiarism software may be used to monitor for instances of plagiarism in student submissions. Any student suspected of violating this policy for any reason during the term will be required to participate in the procedural process, initiated at the instructor level, as outlined in the University Guidelines on Academic Integrity. If it is determined that a student has violated the policy on academic integrity, he or she will fail the course.

Academic Integrity
(for full SIS policy and information on Adjudication see http://www.ischool.pitt.edu/about/academic-integrity.php)

Students and Faculty Obligations and Hearing Procedures
This document supplements the University of Pittsburgh’s Guidelines on Academic Integrity. No attempt to use it should be made without consulting the parent document. Effective September 1991 and Revised September 1995

Academic Integrity: Student Obligations | Academic Integrity: Faculty Obligations (See Also: Pitt’s Guidelines on Academic Integrity)

ACADEMIC INTEGRITY: STUDENT OBLIGATIONS

I. STUDENT OBLIGATIONS

A student has an obligation to exhibit honesty and to respect the ethical standards of the library and information professions in carrying out his or her academic assignments. Without limiting the application of this principle, a student may be found to have violated this obligation if he or she:*

1. Refers during an academic evaluation to materials or sources or employs devices not authorized by the instructor.
2. Provides assistance during an academic evaluation to another person in a manner not authorized by the instructor.
3. Receives assistance during academic evaluation from another person in a manner not authorized by the instructor.
4. Engages in unauthorized possession, buying, selling, obtaining, or using a copy of any materials intended to be used as an instrument of academic evaluation in advance of its administration.
5. Acts as a substitute for another person in any academic evaluation process.
6. Utilizes a substitute in any academic evaluation procedure.
8. Depends on the aid of others in a manner expressly prohibited by the instructor, in the research, preparation, creation, writing, performing, or publication of work to be submitted for academic credit or evaluation.
9. Provides aid to another person, knowing such aid is expressly prohibited by the instructor, in the research, preparation, creation, writing, performing, or publication of work to be submitted for academic credit or evaluation.
10. Presents as one’s own, for academic evaluation, the ideas, representations, or words of another person or persons without customary and proper acknowledgement of
sources.

11. Submits the work of another person in a manner which represents the work to be one's own.

12. Knowingly permitting one's work to be submitted by another person without the instructor's authorization.

13. Attempts to influence or change one's academic evaluation or record for reasons other than achievement or merit.

14. Indulges, during a class (or examination) session in which one is a student, in conduct which is so disruptive as to infringe upon the rights of the instructor or fellow students.

15. Fails to cooperate, if called upon, in the investigation or disposition of any allegation of dishonesty pertaining to another student, or any other breach of a student's obligation to exhibit honesty.

16. Violates the canons of ethics of the library and information professions.
Full Bibliography

**Week 1**

No assigned readings

**Week 2**


**Week 3**


**Week 4**


**Week 5**


**Week 6**


**Week 7**


**Week 8**

**Week 9**

No assigned readings

**Week 10**


**Week 11**


**Week 12**


**Week 13**
