

# GD573: Digital Design Theory Seminar

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**Main text:** *Digital Design Theory* by Helen Armstrong (Princeton Arch Press: 2016)  
<http://www.digitaldesigntheory.com/>

## Week One: Jan 11

**Themes:** *Utopia, Birth of personal computer, Graphic User Interface, Object-Oriented Programming, Code, Ease versus empowerment,*

- Read: Vannevar Bush, “As We May Think,” *The Atlantic* (1945).
- Check out: the Memex online: <https://www.youtube.com/watch?v=c539cK58ees>
- Read: Ivan E. Sutherland, “The Ultimate Display,” *Digital Design Theory* p.36
- Watch: Sketchpad demo online: [https://www.youtube.com/watch?v=6orSmFndx\\_o](https://www.youtube.com/watch?v=6orSmFndx_o)
- Skim: The Mother of All Demos: <http://web.stanford.edu/dept/SUL/library/extra4/sloan/mousesite/1968Demo.html>
- Experiment with: Early Mac desktops: [https://archive.org/details/softwarelibrary\\_mac](https://archive.org/details/softwarelibrary_mac)

## Week Two: Jan 18

**Themes:** *How tools affect design methodologies; Algorithmic approach to art/design; Serial Art; Emphasis on process rather than finished artifact*

- Read: Karl Gerstner, “Programme as Computer Graphics,” “Programme as Movement,” “Programme as Squaring the Circle,” *Digital Design Theory* p.30
- Read: Wim Crowel, “Type Design for the Computer Age,” *Digital Design Theory* p.42
- Read: Sol LeWitt, “Doing Wall Drawings,” *Digital Design Theory* p.48
- Read: Ben Fry and Casey Reas, “Processing . . .,” *Digital Design Theory* p.98
- Check out: Conditional Design: Luna Maurer, Jonathan Puckey, Roel Wouters and the artist Edo Paulus

## Week Three: Jan 25

**Themes:** *Interface background and future, computers and design, mechanical vrs biological, code literacy*

- Read: Alan Kay, “User Interface: A Personal View,” *Digital Design Theory* p.75
- Read: Muriel Cooper, “Computers and Design,” *Digital Design Theory* p.64
- Read: April Greiman, “Does It Make Sense?” *Digital Design Theory* p.62
- Read: Hugh Dubberly, “Design in the Age of Biology: Shifting from a Mechanical-Object Ethos to an Organic-Systems Ethos,” *Digital Design Theory* p.111
- Read: Charles Petzold, *Code: The Hidden Language of Computer Hardware and Software*, (Microsoft Press, 2001). p.3-21, p.69-85

## Week Four: Feb 1

**Themes:** *Birth of Hacker Culture, Politics of Programming, Cybernetics, Tinkering and Mass Making*

- Read: “The Hacker Manifesto” by The Mentor (first published in *Phrack*, 1986)
- Read: Excerpt from Fred Turner, *From Counterculture to Cyberculture: Stewart Brand, the Whole Earth Network, and the Rise of Digital Utopianism*, (Chicago: University of Chicago Press, 2008). p.1-9
- Read: Stewart Brand, “Whole Earth Catalog Purpose and Function,” *Digital Design Theory* p.41
- Read: Allison Parrish, “Programming is Forgetting,” <http://opentranscripts.org/transcript/programming-forgetting-new-hacker-ethic/>
- Read: Hugh Dubberly & Paul Pangero, “Cybernetics and Counterculture,” <http://www.dubberly.com/articles/cybernetics-and-counterculture.html>

## Week Five: Feb 8

**Themes:** *Privacy, copyright, friendship, politics, surveillance,*

- Read:* Richard Stallman, “Why Open Source Misses the Point of Free Software.” <https://href.li/?https://www.gnu.org/philosophy/open-source-misses-the-point.html>
- Read:* Lawrence Lessig, excerpt from *Free Culture*, London: (Penguin, 2005). Preface/Introduction
- Watch* Ted Talk: Glenn Greenwald, “Why Privacy Matters”
- Watch* Ted Talk: Edward Snowden, Here’s how we take back the Internet”
- Watch* Ted Talk: Jame Bartlett, “How the Mysterious Dark Net Is Going Mainstream”
- Check out* your activity on [myactivity.google](http://myactivity.google)
- Experiment:* [aboutmyinfo.org/](http://aboutmyinfo.org/)

## Week Six: Feb 15

**Themes:** *Open Source, Participatory Culture, Peer Production, Community Building*

- Skim:* Eric Steven Raymond, “Cathedral and the Bazaar” p.1-23 <https://archive.org/details/CathedralAndTheBazaar>
- Read:* Yochai Benkler, “Chapter 3: Peer Production and Sharing” from *The Wealth of Networks: How Social Production Transforms Markets and Freedom* (New Haven: Yale University Press, 2006)
- Read:* Henry Jenkins, Chapter 1 from *Participatory Culture in a Networked Era* (Polity: 2015)
- Read:* Helen Armstrong and Zvezdana Stojmirovic, “Community” from *Participate: Designing with User-Generated Content* (Princeton Arch: 2011). p.16-38
- Read:* Liz Sanders and Pieter Jan Stappers: excerpt from *Convivial Toolbox* (Amsterdam: BIS, 2012)
- Read:* David Gauntlett, Chapter 9: “Conclusion” from *Making is Connecting* (Polity: 2011)
- In-class:* Discuss paper proposals and literature map

## Week Seven: Feb 22

**Themes:** *the augmented human, technology and disability, inclusive design, big data, biometrics*

- Watch:* Judith Butler & Sunaura Taylor, “Examined Life.” <https://www.youtube.com/watch?v=koHZaPkF6qE>
- Read:* Sara Hendren, “All Technology is Assistive.” <https://www.wired.com/2014/10/all-technology-is-assistive/#.01n4dxz31>
- Listen to:* 99% Invisible: “On Average”
- Read:* Sarah Hendren, “The White Cane as Technology.” <https://www.theatlantic.com/technology/archive/2013/11/the-white-cane-as-technology/281167/>
- Read:* Shoshana Amielle Magnet, *When Biometrics Fail* (Durham: Duke University Press, 2011. p.1-18)
- Due:* Post your Research Questions exercise answers to the blog before class begins.

## Week Eight: Mar 1

**Themes:** *Internet of Things, Nanotechnology, Networks*

- Read:* Brenda Laurel, “Designed Animism,” *Digital Design Theory*. p.122
- Read:* Khoi Vinh, “Conversations with the Network,” *Digital Design Theory*. p.126
- Read:* Excerpt from David Rose: *Enchanted Objects* (New York: Scribner, 2014). p. 193
- Watch Ted Talk:* Wanis Kabbaj, “What a Driverless World Could Look Like”
- Read:* <http://www.fastcompany.com/1842581/why-millennials-dont-want-buy-stuff>

## **Week Nine: Mar 8**

*Due:* Post plan for literature map and project proposal to the blog by Wed, March 6 at 5:00 PM.

*Midterm discussion:* Meet individually with Helen to discuss project proposal and literature map.

## **Week Ten: Mar 14**

*No class:* Spring break

## **Week Eleven: Mar 22**

**Themes:** *AI, machine learning, singularity, creativity, hybrid thinking*

—*Read:* Sherry Turkle: *Reclaiming Conversation* (2016). p.337-362

—*Read:* Harken Faste, “Posthuman-Centered Design” *Digital Design Theory* p.134

—*Read:* Murray Shanahan, *The Technological Singularity* (Cambridge: MIT, 2015). p.179-226

—*Watch Ted Talk:* Nick Bostrom, “What Happens When our Computers Get Smarter Than We Are?”

## **Week Twelve: Mar 29**

**Themes:** *the Commons, automation, sadness, human connection, aesthetics*

—*Listen:* Geert Lovink and Douglas Rushkoff, “Sad by Design.” <https://href.li/?https://teamhuman.fm/episodes/ep-114-geert-lovink-on-sad-by-design/>

—*Watch Ted Talk:* “Yuval Noah Harari, Why Fascism is so Tempting—And How Your Data Could Power It.”

—*Read:* Cathy O’Neil, *Weapons of Math Destruction*, (Broadway: 2017) p.199-218

—*Watch Ted Talk:* Kai-Fu Lee, “How AI can Save our Humanity.”

## **Week Thirteen: Apr 5**

Student work day in class.

## **Week Fourteen: Apr 12**

Half of students present research (paper content): 10 min per student.

## **Week Fifteen: Apr 19**

*No class.* Spring holiday.

## **Week Sixteen: Apr 26**

Half of students present research (paper content): 10 min per student.

*Exam Week:* Final papers due by Wed, May 1 at 5:00 PM.