SI 521
Open Educational Resources and the University of Michigan

Lecture 1

Week 0

January 8, 2009

Joseph Hardin

Are we at a turning point in knowledge?

- Are new technologies and new methods making for new ways of creating, learning and using knowledge?

- If so, what does this mean for universities? For us?

- Is the notion of "openness" at the center of all this?

- What corollary/related ideas are part of this: social tools, networks, peered-ness, commons, remix…

- How do these ideas play out in various domains of scholarship? science vs humanities, say; research vs teaching vs learning

- Do these methods transfer to other learning environments, like work or self-improvement?

What are some examples

- Open courseware
- Open learning objects
- Open data
- Open science - Science commons
- Open access/open journals
- Open publishing
- Open source software
- Open textbooks

Course Overview

- What is "open" or "openness"
- What is scholarship?
- How does one affect the other?
- What is the "institutional perspective" from a university on openness?
  - Really a number of perspectives, of faculty, students, administration, varying by department…
- What is happening at the University of Michigan?

Michigan Activities

- Open Source Software
- Open Access - Google Books, Hathi
- Merlot
- Open Data
- Open textbooks
- Open Health
- Defending/expanding the Commons - legal initiatives around copyright, fair use

Repeatedly Re-Orienting Ourselves

- Definitions and quick investigation of, eg, types of learning (JSB), to give us some common ground, some common understandings as we encounter new notions and move forward

- Want as much of the assumptive base and arguments exposed as possible

- For clarity, in understanding and critique

- To understand what we are assuming as we move from one area to another, or choose a road to go down

Complex of Ideas

- Ability to universally publish - web
- Power of peer to peer - in different contexts
- Centrality of these for (at least one theory of) teaching - practical engagement of Dewey
- Learning by teaching
- Moral, ethical, normative imperatives around openness, eg, development, equal opportunity to education
- Missions of institutions - what is UM's?
- Motivations of various community constituencies

Scholarly Stance

- What's different about scholarly research?
- How is it different than, say, research for work decisions?
- What is the goal - decision at work, and/or contribution to knowledge?
- What is the "stance" - problem-solving, critical, skeptical - critique
- Pursuing knowledge within a community of scholars - scholarly values of well-warranted, open argument in the search for truth within an open community
- 4 quadrants - helpful here?

Pasteur's Quadrant

Why do we investigate something?
What does this have to do with scholarship?

	Considerations of Use?	
	No	Yes
Yes	Pure basic research (Bohr)	Use-inspired basic research (Pasteur)
No		Pure applied research (Edison)

Quest for fundamental understanding?

Role of Academics - Social Responsibilities

"Most academics are really reluctant to take part in the public dialog, because the public dialog requires you to have an opinion about things you can't really be sure about," says Mr. Rajan. "They fear talking about things where everything is not neatly nailed in a model. They stay away and let the charlatans occupy the high ground." – Justin Lahart

Source: "Ignoring the Oracles: You Are With the Free Markets, or Against Them." *Wall Street Journal Blogs*. 1 January 2009. http://blogs.wsj.com/economics/2009/01/01/ignoring-the-oracles/1 (accessed January 8, 2009)

What we're doing in this course

- Surveying the field of Open/Openness
- Looking at projects, rationales, projections, global and local views - tacking back and forth - eg, from University mission to specific practices at the University
- Focusing on UM examples
- Seeing how they are affecting practice of scholarship - for good or ill?
- Developing open materials to carry on the conversation - specifically an open textbook

One Goal, Among Others

To become a participant in the conversation

My Teaching Assumptions/ Approach

- Teaching is learning - for both you and me - and learning is enhanced by teaching

- Peer learning is very valuable

- Sharing enhances peer learning

- Learning should be contextualized - student and mentor goals should be understood - why are you taking this course/why am I teaching it

- Course will morph as we go along to accommodate our evolving understandings, desire for depth in investigations, emerging goals - this will be reflected in the wiki textbook

Getting Started

- Definitions - open, openness, scholarship, argument, teaching, learning, research
- Foundations of Open - legal, historical, social, economics, moral, political
- Types of Open - textbooks, data, course content, access, health, ICT4D, publishing…
- UM examples…
- We will develop these in the wiki

"Openness"
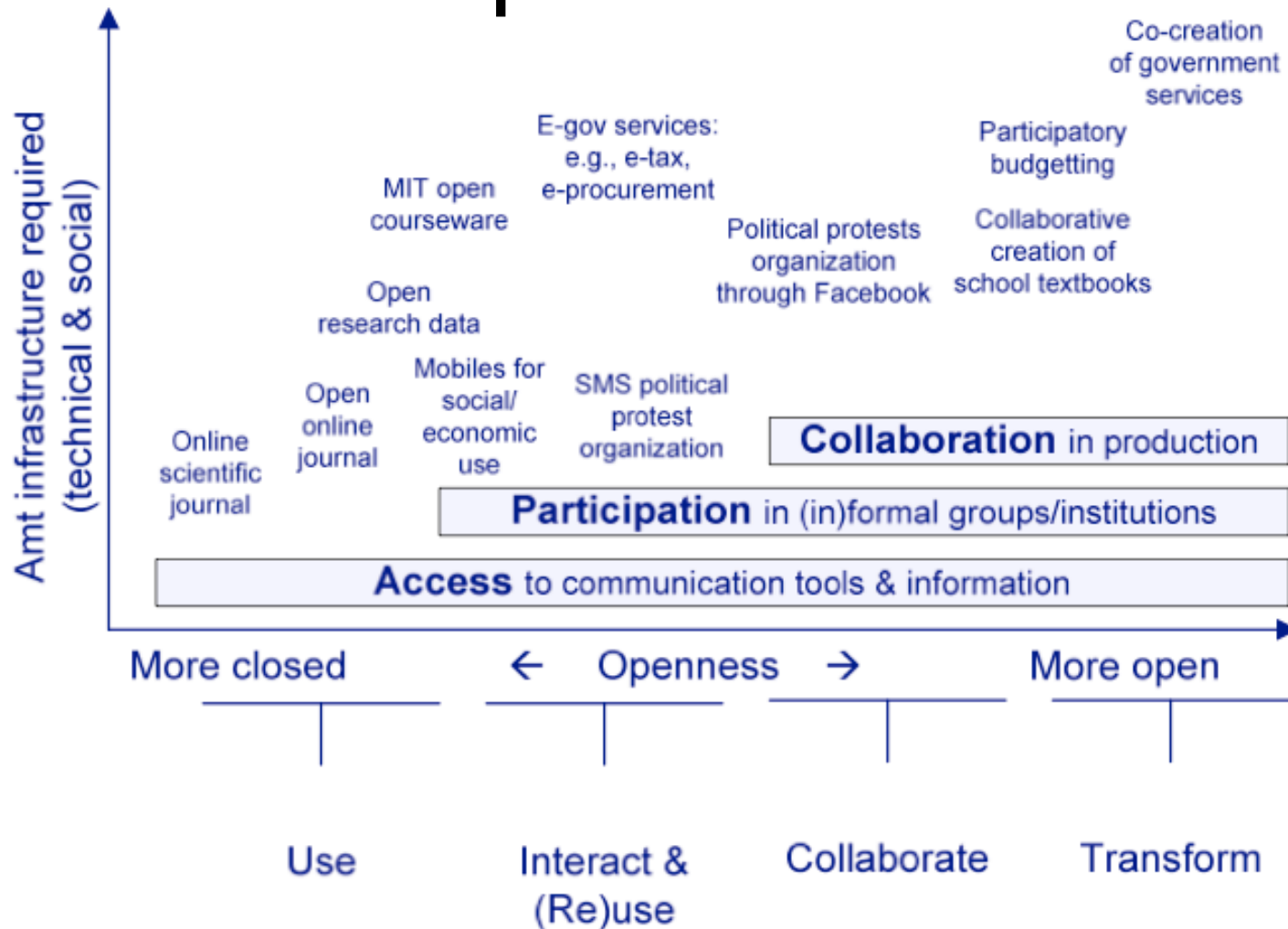
"The Commons"

Photos by Jon Gardiner / Video by Alex Anderson

James Boyle
Legal Scholar

▶ **Creative Commons**
Building site for "the next generation of intellectual property"

▶ **Public Domain**
"Think about saying to Shakespeare: 'Do not quote Marlowe'"

▶ **Two Markets**
A small, tight market vs. leaky billions: you pick

▶ **Laws of Constraint**
"The norm is, 'lock it all up'"

▶ **Cultural Environmentalism**
"A common interest, a common purpose...a movement"

▶ **A New World**
"Just imagine..."

(20:25)

In case you've ever wondered what William Shakespeare and Isaac Newton have in common with Ray Charles—and who has never considered this question?—the person to talk to is James Boyle.

A law professor at Duke University, Boyle explains this and a great deal more in his new book *Public Domain: Enclosing the Commons of the Mind*. Under the ingeniously deep cover of a book about copyright, trademark and patent law, *Public Domain* explores an unfamiliar front in the war between security and freedom, where the stakes are nothing less than the fertility of human culture.

His argument begins and ends with an irony: that the Internet age, which has made possible the greatest profusion of culture in human history, has shrunk the world where most of that culture needs to live—the public domain. This is the place where Shakespeare abides, and where Charles found the hymn he made into "I Got A Woman." When Newton talked about how he was able to see further than others could, this is what he meant: the public domain is where all the giants' shoulders are.

As new technology made copying cheaper, content creators and companies fought in court to protect

Learning at the University

- How it's done - to what extent, when, peered?
- Different types
- Discipline differences
- Perceptions and perspectives - pouring info in vs developing skills
- Knowledge stocks vs knowledge flows
- How do you do it? What do you think it is?
- Does openness affect learning?

"The mind is not a vessel to be filled, but a fire to be kindled." -Plutarch
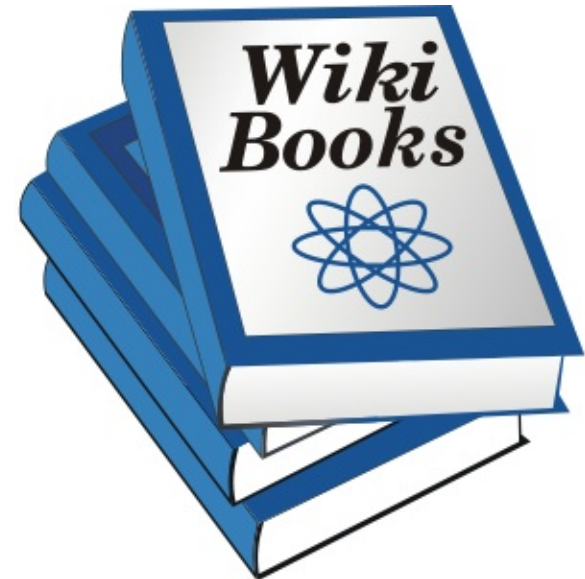
Copyright

"The Congress shall have the power ...to promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors exclusive Right to their respective Writings and Discoveries."

(U.S. Constitution. art 1, Section 8)

If we deconstruct the clause, we can identify its key points:

© It is important that science and the arts be encouraged

© That the creation and dissemination of knowledge is the purpose of copyright

© Congress is granted the power to encourage creation of new works, but only via a very specific method, by granting authors and inventors exclusive rights

© Rights granted should be for a limited time

© That authors and inventors benefit from copyright is a side effect of encouraging the dissemination of knowledge, and not a direct intent of copyright

© The rights of authors and inventors are granted by Congress and are not intrinsic or natural

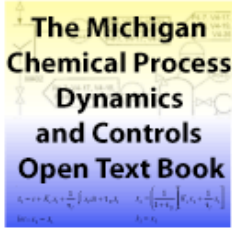# So, an example

"Scholarship and OER in the 21st Century"

- For discussion
- To critique
- To improve

Next week

- Readings
  - A Review of the Open Educational Resources (OER) Movement, Dan Atkins et al, http://hewlett.org/Programs/Education/OER/OpenContent/Hewlett+OER+Report.htm
  - Minds on Fire: Open Education, the Long Tail, and Learning 2.0, John Seely Brown; http://johnseelybrown.com/mindsonfire.pdf
  - Common Wisdom: Peer Production of Educational Materials, Yochai Benkler, http://benkler.org/Common_Wisdom.pdf

  - Pick a chapter from:

    Opening Up Education: The Collective Advancement of Education through Open Technology, Open Content, and Open Knowledge, Ed. Toru Iiyoshi and M. S. Vijay Kumar http://mitpress.mit.edu/catalog/item/default.asp?ttype=2&tid=11309

  Place a 2-4 paragraph review of the chapter you chose up on the wiki by midnight Tuesday

Next Week 2

Look at, play with, come prepared with questions about:

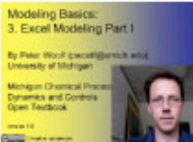| article | discussion | edit | history |

Main Page

Welcome to the University of Michigan Chemical Engineering Process Dynamics and Controls Open Textbook. This electronic textbook is a student contributed open source text covering the materials used at Michigan in our senior level controls course. Click here for the 2007 version, and here for the 2006 version of the text.

Follow this link to find more information about this course.

Lectures

Recorded video lectures and lecture materials for the course are freely available online. These lectures are available here.

Modeling Basics:
3. Excel Modeling Part I

By Peter Woolf (pwoolf@umich.edu)
University of Michigan

Michigan Chemical Process Dynamics and Controls Open Textbook

Chemical Process Dynamics and Controls Text

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6 Chemical Process Controls
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   6.3 Dynamical Systems Analysis
   6.4 Control Architectures

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http://controls.engin.umich.edu/wiki/index.php/Main_Page

http://www.merlot.org/merlot/materials.htm
Find open textbook link

Find 2 more open textbook resources, put up on wiki

Libraries, Wikis and the Law

- **The SI Information Policy (IPOL) Speaker Series** is pleased to present **Mary Minow,** J.D., A.M.L.S, Library Law Consultant

- The Wisdom (and the Laws) of Crowds: 2.0 Intersects with Privacy, Free Speech and Copyright Law: What legal issues do libraries face when they open their websites and catalogs to user content?

- This talk examines the range of legal and policy issues swirling around user contributions to blogs, wikis, social networks, and other web 2.0 technologies, along with efforts by librarians to harness the considerable opportunities posed by such technologies. Can libraries pioneer new models of outreach and open exchange while protecting themselves from liability?

- **Thursday, 15 January 2009, 12:00-1:30pm Ehrlicher Room, 411 West Hall University of Michigan**

Copyright Balance and Fair Use in Networked Learning: Lessons from Creators' Codes of Best Practices

January 13, 2009

1:00 p.m. ET - Duration: 1 hour

Guests: Patricia Aufderheide & Peter Jaszi

Info: https://net.educause.edu/content.asp?SECTION_ID=421

- Copyright balancing has become a critical issue in the academy as digital practices increasingly have challenged creaky policies and practices. Scholars, academic administrators, librarians, and intellectuals, as well as their students and mentees, need reasonable access to copyrighted culture to research and produce new knowledge. They and their distributors, whether journal publishers or YouTube, need to be able to share work that references and quotes copyrighted material without going through clearance processes never designed for this sector.

- Academics have begun to explore their rights under copyright law to quote copyrighted culture, especially under the doctrine of fair use. They have powerful examples: since 2005, several creator groups, including documentary filmmakers, remixers, and media literacy teachers, have developed codes of best practices in fair use. These codes are having a powerful, even game-changing, effect in practice. In this session, the presenters will discuss their collaboration to facilitate the creation of these codes and discuss how this model might apply to the academic environment.

"Building The Research Web: Access or Control?"

John Wilbanks

Vice President of Creative Commons,

Executive Director of the Science Commons

Tuesday, 13 January 2009, 1:00 - 2:00 p.m., Forum Hall, Palmer Commons

- We've learned over the past decades of technological development that open systems create the conditions for exponential innovation. The Internet and the Web are obvious examples. But it is worth remembering that there was private competition for these systems, premised on control, and that the systems that won were those that embraced access over control. This choice has many ramifications. For example, if hypertext linking required permission, modern search engines might never have come into existence. Similarly, the open stance of the Human Genome Project benefited public and private interests alike, and won out over its private competition, Celera. As a result of design and policy based on access, users can add value to online resources by annotation, tagging, and forms of description.

- The access versus control choice is again at stake in scholarly and scientific information. With the emergence of the Semantic Web, with its controlled vocabularies and ontologies that extend the power of grassroots tags and folksonomies of Web 2.0, the deluge of online content can be made far more useful and valuable. We now have the potential power of a "knowledge web," whereby today's web could function as well for science as it currently works for culture. A knowledge web is predicated on access, and not control, of knowledge. This talk will address the technology and policy issues involved in building that Knowledge Web, exploring the roles of naming authorities, publishers, intellectual property rights, and technology in the construction of knowledge layers on the existing network.

Class Wiki

http://mediaonion.com/si521/