Work: An Introduction

Reading:

(1) **David Bollier, *The Future of Work: What It Means for Individuals, Businesses, Markets and Governments* (Aspen Institute, 2011).**

The "gist": This Aspen Institute report attempts to summarize the transition from the industrial economy of the twentieth century (represented by Alfred P. Sloan and General Motors) to the "post-Sloan" economy of Netflix and Facebook. Bollier describes the twentieth century as centralized, standardized, and oppressive. The twenty-first century promises to be decentralized, flexible, and free. *Here's a graphical representation of the basic shift he's talking about.*

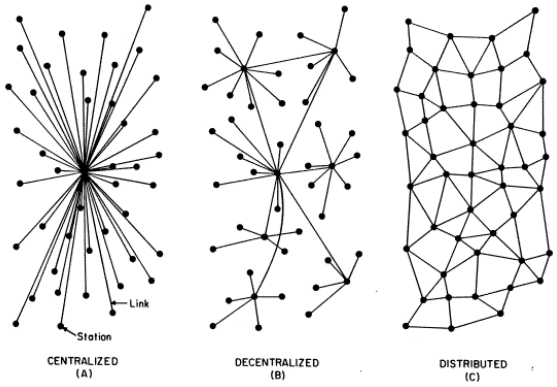


FIG. 1 — Centralized, Decentralized and Distributed Networks

Key terms and definitions:

Digital disruption – The crisis produced by the transformation from industrial work to information or knowledge work.

Philosophies of "push" and "pull" – A push economy attempts to plan for future demand and then push standardized products to consumers. A pull economy encourages just-in-time production of custom goods and services designed and possibly manufactured by the customers themselves.

Decentralization of workforce – The movement of work away from physical factories and offices and into virtual networks and informal project spaces.

Born global and international – Describing a generation of people around the world who don't think of the nation-state as the great organizing feature of their personal, cultural, or political lives.

Mining the tail – The way to overcome the bottlenecks that stand between supply and demand in our culture. Everything becomes available to everyone, and the obscure becomes ubiquitous. The long tail in the context of business is the 80% of stuff that didn't used to be worth selling.

Crowdsourcing –Outsourcing tasks, traditionally performed by an employee or contractor, to a large group of people or community (a crowd), through an open call, often with little prospect of remuneration.

Learning platforms – Usually thought of as an integrated set of interactive online services that provide teachers, learners, parents and others involved in education with information, tools and resources to

support and enhance educational delivery and management. They may develop or reinforce human "dispositions."

Invert the pyramid – Subvert hierarchies by putting the people traditionally assigned to the lowermost rungs of the institution at the top.

Virtual company – A business that relies on "clicks" rather than "bricks"; or, a company that has no permanent or full-time workforce.

Government 2.0 or open governance – A philosophy of governance that favors total transparency in government actions and free flow of information between representatives and the represented.

Discussion questions:

- Bollier seems to be arguing that the economy and society being created right now is much better than the one we had before. Is he right about this? Are there any drawbacks to this world to come?
- How realistic are Bollier's various metaphors and models? Are they an accurate depiction of life in your hometown or country? How utopian is this dream? What does it teach us about ourselves and our values and aspirations? Or, said another way, what does this have to do at all with my life?
- The Aspen Institute is usually described as well connected to Washington, DC, and politically centrist. What would a more conservative or more liberal roadmap for the future of work, economy, and education look like? What would a less America-centric roadmap look like?
- Can we all become individual "social entrepreneurs" in the future, each of us guided by our own personal philosophy for achieving a better, more peaceful world?
- What does any of this have to do with sustainability? Won't global environmental catastrophe prevent any of this from happening?

Additional comments: This is the white paper report that led me to create this new version of Senior Seminar. The president and CEO of the Aspen Institute is Walter Isaacson, the author of last year's bestselling autobiography of Steve Jobs.

Work: Automation, Robotics, and Remote Work

Readings:

(1) **John Markoff, "Skilled Work, Without the Worker"**
http://www.nytimes.com/2012/08/19/business/new-wave-of-adept-robots-is-changing-global-industry.html

(2) **Antonio Regalado, "When Machines Do Your Job"**
http://www.technologyreview.com/news/428429/when-machines-do-your-job/

The "gist": Each day brings a raft of new stories about the potential of robotics and automation to revolutionize our economy. Usually, the story turns on the potential of machines to reduce menial labor and free up humankind for more creative and important jobs. Markoff's article shows us a world where automation is eliminating factory work and manufacturing jobs – even in China. Some of that automation may make America more competitive again: robots don't get paid whether they work overseas or right here at home. On the other hand, more and more humans are going to find they aren't going to get paid for their work anymore either. Robots are able to take over work previously thought to require the flexibility and initiative of the human being.

In Regalado's interview of Andrew McAfee it becomes clear that automation, robotics, and remote work are going to dramatically transform the way we do business in the near future. Those who own the machines and automated factories and resources are going to have an unequal advantage over everyone else. These machines will surely exacerbate unemployment numbers. White collar jobs for knowledge workers, as well as blue collar jobs in factories, will go away forever because of computer technology. Some brain workers and more creative human beings may find their livelihoods and futures threatened. Some people who survive the transition will find their skills in high demand, and will work longer and longer hours. And ironically, some menial jobs will remain because it is easier to make machines smart than graceful.

Key terms and definitions:

Remote work – Work done at a distance; in this instance, robots that are remotely controlled by workers or managers from another location, also called "telepresence" or "avatarization."

"Hollowing out" the job market – High-wage, high-skill employment is still created as "top" or most desirable jobs, but so are many poorly compensated service industry jobs for food preparers, home care aides, and others. Employment in the middle ranges of salary and skill is disappearing: clerical, sales, and administrative jobs and those on factory floors.

Automation – The use of largely automatic equipment in a system of manufacturing or other production process. It is generally credited with raising efficiency and productivity and eliminating routine or repetitive work.

Moving "bits, not atoms" – It is much cheaper and easier to manipulate bits of information rather than atoms of material substance. This philosophy, applied to the economy, has made lots of traditional products and services obsolete. Netflix replacing physical video rental stores with online viewing of movies is one example.

Luddite fallacy – The notion that machines will only take away human jobs and our ability to support our families through work. Luddites are contrasted with technophiles, those who think computers and automation will usher in a new golden age for humankind and fix all of our current problems.

Digital Athens – The idea that computers will free us from the drudgery of daily life and give us time to practice complex entrepreneurial skills and become more creative.

Discussion questions:

- If routine and unskilled work goes away, what will undereducated and less intelligent people do to support themselves?
- Humans are creatures of habit. What are the advantages and disadvantages of taking away work that is repetitive, or even ordinary?
- If we agree that job demand exceeds foreseeable demand, what should we do about it? Ban robots? Reeducate the workforce for something else? What else? Are public works and public service jobs the only fix to this inflection point in capitalism?
- What kinds of mental work is it reasonable to assume will be automated? What kinds of mental work will be hard or impossible to automate? Watson the Jeopardy computer anyone?
- Could personal robots be the answer to the problem of inequality? If everyone owned a 3D printer (factory) or robot, wouldn't this make everyone rich and happy?
- Will this movement for automation impact certain parts of the world more than other parts? Is this really a "first world problem" or a developing world problem.

Additional comments:

Martin Luther, the protestant reformer, argued strenuously that work is good for the human body. It seems likely that we'll continue to need exercise. One of the consequences of the loss of hard physical labor is vast and expanding waistlines as well as vast and expanding rec centers. I wonder if we aren't replacing one kind of human struggle for another, at the cost of lots of nonrenewal energy sources. There's a lot one human being can do with a shovel. Perhaps we are underestimating manual labor and a set of values based on hard work and diligence?

Work: Gadget Freakery

Readings:

(1) Alex Hudson, "The Age of Information Overload" ***BBC News***
http://news.bbc.co.uk/2/hi/programmes/click_online/9742180.stm

(2) Matt Richtel, "Silicon Valley Says Step Away from the Device" ***New York Times***
http://www.nytimes.com/2012/07/24/technology/silicon-valley-worries-about-addiction-to-devices.html

(3) Alexis Madrigal, "Are We Addicted to Gadgets or Indentured to Work?" ***The Atlantic***
http://www.theatlantic.com/technology/archive/2012/07/are-we-addicted-to-gadgets-or-indentured-to-work/260265/

The "gist": Hudson reports that human beings eat more data than ever before, and repeats the common complaint that there is now too much information. The consequence is a potentially paralyzing "information overload." Most disquieting, he says, is multitasking, which makes it possible to have more than 24 hours of screen time in a single day.

Richtel says that even technology executives know that there is a problem with Internet addiction and gadget freakery. In fact, they may have noticed the effects of electronic obsessions before the rest of us did. Electronic screens, particularly interactive ones – as opposed to passive ones, like television – increase dopamine in the reward center of the brain. Instead of making us more productive, and augmenting our creativity, our digital devices have debilitated us.

Madrigal responds to Richtel's piece, arguing that this is really a problem of *Homo economicus,* which has made us callous to our social needs for things like conversation, love, and acceptance. Our bosses are exacerbating the problem by instilling fear of job loss. Now it's not only "all work and no *play*," but "all work and no *pay*." Madrigal recommends we revolt – not against the machines per se, but our political, cultural, and corporate masters.

Key terms and definitions:

Worker productivity – The ratio of production output to what is required to produce it (inputs); amount of goods and services that a worker produces in a given amount of time.

Homo economicus - Humans are rational and narrowly self-interested actors who have the ability to make judgments toward their subjectively defined ends; contrast with *homo reciprocans*, which states that human beings are primarily motivated by the desire to be cooperative and to improve their environment.

"The Great Speedup" – an employer's demand for accelerated output without increased pay.

Internet addiction disorder (IAD) –Internet overuse, problematic computer use, or pathological computer use; excessive computer use that interferes with daily life. IAD was originally proposed as a disorder in a satirical hoax by Ivan Goldberg, M.D., in 1995.

Discussion questions:

- Do we really consume more data today than we did pre-Internet? Or are we just consuming different kinds of information than we once did?
- Should kids still be learning how to write in cursive in elementary school? How about how to write a letter (snail mail)? Should these be replaced with keyboarding and texting/tweeting?
- Is it duplicitous for computer companies to be making these products and at the same time telling us to use them only in moderation?
- Is there a technological solution to every problem? Will our gadgets and technology inevitably save the world, or will they destroy the world?
- Evaluate the following claim: Information is not just increasing exponentially; it is obsolescing at a rapid rate as well. It no longer makes sense to make students memorize vast quantities of information that will become outdated a few years beyond college.

Additional comments:

What the zombie apocalypse really looks like.

Source: http://www.submerryn.com

Work: Virtual Companies and the Death of the Permanent Office

Reading:

(1) **Max Chafkin, "The Case, and the Plan, for the Virtual Company,"** ***Inc.***
http://www.inc.com/magazine/20100401/the-case-and-the-plan-for-the-virtual-company.html

Video:

(1) **"Workplace Trends,"** ***YNN***
http://www.youtube.com/watch?v=uthxYPsEHmU

The "gist": Virtual companies get their work done with minimal or no corporate headquarters or dedicated workspace. Sometimes they create cyberspace boardrooms using tools like Skype and ooVoo. Virtual work requires adjustments. Workers must be dedicated to the work itself rather than the social routines of the office. But, he argues, lots of types of work can't be done efficiently at work anyway, especially tasks that require concentrated effort over long periods of uninterrupted time. As Chafkin notes, the workplace becomes an online market where a "culture of collaboration by a group of competent generalists" is replaced by "one based on specialists who are cheap, efficient, and good at meeting deadlines." To counteract this negative effect, successful company owners and managers introduce and foster new online and offline collaboration products.

Key terms and definitions:

Mobile Work, Distributed Work – Distributed work reaches beyond the restrictions of a traditional office environment. A distributed workforce is disbursed geographically over a wide area – domestically or internationally. By installing key technologies, distributed companies enable employees located anywhere to access all of the company's resources and software such as applications, data, and e-mail without working within the confines of a physical company-operated facility.

Virtual company – In virtual companies, employees are distributed but primarily remain unconnected. Such companies employ electronic means to transact business as opposed to a traditional brick-and-mortar business that relies on face-to-face transactions with physical documents and physical currency or credit. Workers telecommute from other locations, and as much work as possible is usually outsourced to non-employee contractors. Some virtual businesses operate solely in a virtual world.

Work-life balance – Work-life balance is having enough time for work and enough to have a family and personal life. It also means having a measure of control over when, where and how you work, leading to being able to enjoy an optimal quality of life.

Co-working centers – Co-working is a style of work that involves a shared working environment, often an office, and independent activity. Unlike in a typical office environment, those co-working are usually not employed by the same organization. Typically it is attractive to work-at-home professionals, independent contractors, or people who travel frequently who end up working in relative isolation. Some co-working spaces were developed by nomadic Internet entrepreneurs seeking an alternative to working in coffee shops and cafes, or to isolation in independent or home offices. See the recent story on Hacker Dojo ("Silicon Valley Techies Fight to Save a Popular but Illegal Haven" http://www.nytimes.com/2012/08/23/technology/techies-fight-to-save-hacker-dojo-a-popular-silicon-valley-work-space.html), which local authorities are threatening to close for violations of city regulations governing traditional workspaces.

Collaboration tools – A collaboration tool helps employees collaborate. Today, the term is often used to mean a piece of collaborative software. Conference phone calls are being replaced by asynchronous conferencing, video conferences, IRC or Instant Messaging. Peer review and editing of documents is done through Google Docs, Microsoft Office 365, and Wikis rather than as iterative versions printed out on paper. Board room whiteboards are imitated by online whiteboards that allow telework.

Discussion questions:

- What do you consider the best place to get your homework done? Why is this a good place to work?
- Should "distractions" like Facebook and Twitter – and perhaps even email on specific days – be banned at work? Why or why not?
- Think about a place where you have worked or your parents worked. How could this work be improved (or degraded) by implementing the strategies mentioned in Chafkin's article or the video?
- In companies with flexible schedules, how do you manage who picks up the slack during crunch times? Are employees who are parents a special class, and do they get or deserve special

treatment? How do you juggle competing interests to work/school tasks and family or home responsibilities?

- Do managers really distract employees from their work? Do managers tend to mismanage their time and the time of others? What should managers really be doing, and where should they be learning how to be better supervisors?

Additional comments: Urban sociologist Ray Oldenburg in *The Great Good Place* argues that the best places to gather and get things done informally are what he calls "third places" like coffee shops, libraries, and pubs. He says these places, unlike home and work, represent "neutral ground" are important for civil society, democracy, and civic engagement.

As gasoline gets more expensive and commuting times get longer, virtual work is going to look more and more enticing to companies and their employees. In Iowa, my home state, government has made substantial progress in creating co-working centers in all 99 counties. Iowa is a big rural state with a low population, and workers are already dispersed over large geographical spaces. It makes sense to establish local workplaces where people do their daily jobs and can be gregarious – even when other employees in the building are working for entirely different companies.

Free Agent Nation: Workerless Businesses and Project-Based Employment

Readings:

(1) **Douglas Rushkoff, "Are Jobs Obsolete?"**
http://www.rushkoff.com/blog/2011/9/7/cnncom-are-jobs-obsolete.html
(2) **Daniel H. Pink, "Free Agent Nation," *Fast Company***
http://www.fastcompany.com/33851/free-agent-nation
(3) **Thomas Frey, "Workerless Businesses: An Explosive New Trend," *The Futurist***
http://www.futuristspeaker.com/2012/07/workerless-businesses-an-explosive-new-trend/

The "gist": Our economy is being transformed by technology and providing new ways for individuals to work. Technology has enabled individuals to leave a corporate market and focus on niche markets that are made accessible through the internet and other connective technologies. This shift in the economy means that more individuals are becoming their own bosses and pursuing jobs of specific personal interest. Permanent, long-term jobs are becoming scarce as people begin working on projects rather than at institutions.

New technologies are "wreaking havoc on employment figures" as many jobs such as toll collectors and postal workers have become increasingly obsolete. We have entered an era where we have the means to provide all of the material things we need without needed everyone to work. That is to say that employment rather than production has become the new problem we face.

Key terms and definitions:

Free agents – Individuals who are self-employed, independent contractors, or temporary workers.

Empire of One business – A personal business with far-reaching spheres of influence. Typically the business outsources everything. Products produced abroad are then marketed and sold online. All operators are handled as part of the "gig economy."

Discussion questions:

- In "Are Jobs Obsolete?" the author suggests that permanent employment is a relatively new concept. And until the advent of the corporation in the early Renaissance, most people worked for themselves. Are we seeing a trend back towards self-employment? Based off of the three readings what seems to be the driving force for this change? Is this just a historical cycle which we are doomed to repeat? Will people in the future end up working for big organizations again? Why or why not?
- What is an example of a niche business? How have technological advances made them more profitable? How can globalization help or hurt Empire of One businesses?
- Is the Free Agent Nation truly composed of different kinds of workers? How might their goals and priorities differ from the traditional "permanent employee"?
- Do some of these quotes imply that the Free Agent Nation is also the Hipster Workforce? "Everybody was looking for that big plum job. Everybody wanted to be a brand manager." "They were fake; they were plastic. I was looking for authenticity." "I get to do yoga every day in my house. Other people are commuting while I'm doing yoga." 'I have a lot of great friends, but they haven't chosen this path. No matter how kindhearted they are, they just can't cheer you on. They're on a different emotional frequency."

Leadership Skills from MMOs: From Guild Master to General Manager

Readings:

1. **Joi Ito, "Leadership in World of Warcraft"**
   http://joi.ito.com/weblog/2006/03/13/leadership-in-w.html
2. **Douglas Thomas and John Seely Brown, "Why Virtual Worlds Can Matter"**
   http://johnseelybrown.com/virtualworlds.pdf
3. **Wagner James Au, "World of CEO-craft"**
   http://gigaom.com/2008/05/07/world-of-ceo-craft/
4. **WoWhead Forums, "WoW on Your Resume?"**
   http://www.wowhead.com/forums&topic=129370/wow-on-your-resume
5. **John Seely Brown and Douglas Thomas, "You Play World of Warcraft? You're Hired!" *Wired***
   http://www.wired.com/wired/archive/14.04/learn.html

<u>Video:</u>

1. **"The Office Plays Call of Duty"**
   http://www.youtube.com/watch?v=ltktCcbBjE0

The "gist": What used to be known as a way for video gamers to get completely absorbed into a game, often held with the stigma of developing an addiction to a virtual fantasy world, is now being acknowledged as a set of useful skills that business professionals look for. These virtual worlds combine a person's real life with the one they fabricate with their character, opening up a whole new world of possibilities.

Guilds slowly became one of the most key features of MMORPGs, used to enhance the fact that World of Warcraft is not generally a game that is played alone. The structure of these guilds can vary tremendously based on the intentions and goals of the guild master. Some guilds that are raid-focused have application processes and requirements that need to be fulfilled to maintain membership, such as a minimum number of hours that the player must be online or a commitment to the raid schedule. Your guildmates easily fit into the role that a co-worker might play in your life: someone you raid with when it is time to "work," but can also easily develop into a relationship within the "work arena." The most successful guild masters earn the reputations of great leaders due to their responsibility to keep the guild structurally sound and the members satisfied.

Key terms and definitions:

MMORPGs – A popular acronym for "massively multi-player online role-playing games." World of Warcraft is the most famous and successful MMORPG of all time with over 11 million subscribers.

Guild – An online organization for players to become members of to gain the benefits of asking guildmates for help, organizing rais or PvP (player vs. player) team fights, etc. The structure of a guild can be either extremely relaxed or contain a schedule and application process for serious raids.

Guild Master – A specific player who leads the guild, appoints officers, and keeps the guild balanced and members satisfied.

Discussion questions:

- How have popular MMORPGs such as WoW lost the general stigma of being so addicting that they ruin lives, and instead now show good leadership and dedication? WoW has a stigma, addictive habits. Were we simply trying to redeem it? Leeroy Jenkins – the point is that WoW inspires planning. "Accidental learning" of real world concepts. Once something is required kids will lose interest in it. Once it's been institutionalized kids will think its horrible. (Short shelf life as a learning tool.)
- If guild masters hold such appealing traits such as good leadership in guilds, what could be a reason for these players generally not having leadership positions in real life?
- How could the lifestyle that MMORPGs present influence how one might act in a general work environment? What keeps guild members willing to help each other? See. Do. Teach.
- What makes the ability for a raid leader to embrace failure during a raid so important?
- Compare WoW with with LARPing and Cosplay.

Gamification

Readings:

(1) **"The Dangers of Gamification: Why We Shouldn't Build a Game Layer on Top of the World" by Krystle Jiang**
http://krystlejiang.files.wordpress.com/2011/07/the-dangers-of-gamification.pdf
(2) **"How Games Can Level Up Our Everyday Life" by Olga Beza**
http://www.cs.vu.nl/~eliens/create/local/material/gamification.pdf

Videos:

(1) **"Sight" by Eran Ray-Maz and Daniel Lazo**
http://www.mobilespect.com/a-short-futuristic-film-by-eran-may-raz-and-daniel-lazo.html
(2) **"World of WifeCraft" by farkTV**
http://www.youtube.com/watch?v=TVhwwFHGEFI

Quest:

(1) **Gamification Journal via Chore Wars**
http://www.chorewars.com/chore.php?id=806969

The "gist": Gamification, sometimes called "funware" or "gameful design," refers to the process of applying gaming techniques to everyday life, like adding level-up implements or reward elements to tasks. These game mechanics add motivation to tasks where there was little or no motivation before, rewarding us for doing something as simple as clicking a mouse.

Pros of gamification include:

- Increase of satisfaction
- Creating motivation where there is none (unpaid training, for example)
- Clear goals and knowledge of progress
- New ways of self-expression
- Encouraging "exploration and discovery" (Beza 11)

Cons of gamification include:

- Relying "too much on extrinsic motivators and [not focusing] enough on developing intrinsic motivation" (Jiang 2).
- Becoming addicted to rewards
- The risk of stifling creativity

Physical Therapy at a distance; Arkansas Telesurgery Telemedics. Oregon Trail. Carmen Santiago. Epic Win. Anxiety and boredom – "flow" – bliss or ecstacy. We can either manipulate and control (intrinsic motivation) or be manipulated and controlled (extrinsic motivation).

Discussion questions:

- If we lose all intrinsic motivation, will it really matter? For example, if our lives become more "gamified," will extrinsic motivation simply replace intrinsic motivation? What will happen if we lose that intrinsic, or internal, motivation?
- Did you complete the journal quest on Chore Wars? If so, did you feel rewarded? How about other quests on the site? Is gaining XP a good motivator, or are you inclined to do your chores anyway?
- "… there can only be so much addiction one can take before he decides the reward is not worth it" (Jiang 3). When will the increase of rewards stop, if ever?
- In both articles, it's mentioned that the current public school system is a form of gamification, albeit a flawed one. Is there benefit in "fixing" the school system to become more game-like, or will the cons outweigh the pros?

Digital Maoism and Online Collectivism

Readings:

1. **Jaron Lanier, "Digital Maoism"**
   http://www.edge.org/3rd_culture/lanier06/lanier06_index.html
2. **Kevin Kelly, "Hive Mind"**
   http://www.kk.org/outofcontrol/ch2-c.html
3. **Kevin Kelly, "The New Socialism: Global Collectivist Society is Coming Online," *Wired***
   http://www.wired.com/culture/culturereviews/magazine/17-06/nep_newsocialism

The "gist": Lanier says that "the beauty of the Internet is that it connects people. The value is in the other people. If we start to believe that the Internet itself is an entity that has something to say, we're devaluing those people and making ourselves into idiots." The internet has indeed provided us with almost endless connections to the world around us. This has created an overwhelming large sharing of

ideas, images, texts, and so forth that would not otherwise have been shared or perhaps even created. While this socialism or collectivism through technology is creating new identities for some organizations, it is also causing a loss of individualism.

Key terms and definitions:

Meta – A prefix meaning one level of description higher. If X is some concept then meta-X is data about, or processes operating on, X. For example, a metasyntax is syntax for specifying syntax, metalanguage is language used to discuss language, meta-data is data about data, and meta-reasoning is reasoning about reasoning.

Hive mind – A system in which progress is based on ability and talent rather than on class, privilege, or wealth

Maoism – The doctrines of Mao Zedong, most notably the doctrine that a continuous revolution is necessary if the leaders of a communist state are to be kept in touch with the people.

Aggregate – Formed by the conjunction or collection of particulars into a whole mass or sum; total; combined.

Discussion questions:

- Lanier claims that collectivism largely takes information and ideas out of context, thus invalidating them. Do you think this is true in the case of Wikipedia? What about an online version of the Encyclopedia Britannica? Is there a difference between the two?
- Kevin Kelly says of the popurls site, "There's no better way to watch the hive mind." But the hive mind is for the most part stupid and boring. Why pay attention to it?" Is there value in the hive mind or collectivist thought?
- Kelly presents a strong case for collectivity/hive mind because it allows us to perhaps see or think of what we would not otherwise have seen or thought. Is there value in this idea? What are some examples of this? What can the whole accomplish that the individual cannot?
- Kelly describes this emerging collectivism as "socialism without a state." Given traditional American views on socialism, in what ways could this collectivism improve society? Or, is it something that, as Lanier claims, could be harmful to future growth?
- In what ways does Kelly's idea of new socialism conflict with traditional views? Do you think that his idea is something that can actually succeed? In the reading, Kelly gives the example of how many people use Wikipedia, but not nearly as many contribute to it. Without this interaction and feedback, can new socialism really grow?

Workaholism

Readings:

(1) **Sara Robinson, "Bring Back the 40-Hour Week," *New York Times***
http://www.salon.com/2012/03/14/bring_back_the_40_hour_work_week/

(2) Tim Kreider, "The 'Busy' Trap," *New York Times*

http://opinionator.blogs.nytimes.com/2012/06/30/the-busy-trap/

(3) **Tim Jackson, "Let's Be Less Productive,"** ***New York Times***
http://www.nytimes.com/2012/05/27/opinion/sunday/lets-be-less-productive.html

(4) **"Stop Being So Damn Productive,"** ***Lifehacker***
http://lifehacker.com/5867102/stop-being-so-damn-productive

(5) **Ray B. Williams, "Why 'Busyness' Doesn't Equate with Productivity,"** ***The Financial Post***
http://business.financialpost.com/2012/07/25/why-busyness-doesnt-equate-with-productivity/

(6) **Ray B. Williams, "Workaholism and the Myth of Hard Work,"** ***Psychology Today***
http://www.psychologytoday.com/blog/wired-success/201203/workaholism-and-the-myth-hard-work

The gist: Americans have become indoctrinated with the belief that if we work more hours, we will be more productive, and if we are more productive, we will be happier. These articles and their foundational research contradict both of these claims. A law of diminishing returns seems to be in effect: a drastic increase in work hours does not increase productivity; it often decreases it. Our ceaseless attempts to work harder keep us from working smarter, and we will become less efficient. Working fewer hours would promote economic sustainability as well as personal sustainability. Leisure time is crucial for mental health. Without relaxation time, we become anxious, jumpy little Chihuahuas on caffeine.

Key terms and definitions:

Workaholism – Obsession with and compulsive need to work; workaholics often compromise aspects of their personal, family, and social lives in order to spend more time working.

Bulimic workaholism – Procrastination, then work to the point of exhaustion.

Relentless workaholism – Taking on too many tasks at one time.

Attention-deficit workaholism – working furiously on a project, but failing to complete it.

Savoring workaholism – working slowly and methodically, but often missing deadlines.

Productivity – the amount of output delivered per hour of work in the economy.

Discussion questions:

- What is the primary motivation for workaholism? Do we work more hours because we want to earn more stuff? Or do we work because we are addicted to being busy? Who is to blame? The worker? The boss? Capitalism itself?
- "For every four Americans working a 50-hour week, every week, there's one American who should have a full-time job, but doesn't." Is the 40 hour work week the solution to our unemployment problem?
- We've discussed that employment is now more of a concern in our society than production. We can now afford to slow things down and focus more on quality than on quantity. How do we encourage people to be "less productive"?

- Why do so many people feel a need to micromanage their schedules and systematically plan out every hour of every day? What are the benefits and limitations of this kind of lifestyle?

The Creative Class

Readings:

1. **"Creative Class Counties,"** ***USDA***
   http://www.ers.usda.gov/data-products/creative-class-county-codes.aspx
2. **The Creative Class**
   http://www.creativeclass.com/
3. **Brian J. Bowe, "Fennville: A Haven for the Creative Class"**
   http://www.rapidgrowthmedia.com/features/fennville32.aspx
4. **"The Rise of the Creative Class,"** ***Washington Monthly***
   http://www.washingtonmonthly.com/features/2001/0205.florida.html
5. **Arkansas Arts Council, et al., "Unveiling the Creative Economy in Arkansas"**
   http://www.arkansasarts.org/documents/CreativeEconApril_09.PDF
6. **"Why Richard Florida's Honeymoon is Over,"** ***Toronto Star***
   http://www.thestar.com/news/insight/article/656837--why-richard-florida-s-honeymoon-is-over

The "gist": There is a new class of people emerging from this generation that seems to hold the key to the future of the economy. This "creative class" is not determined by income, ethnicity, race, gender, or any other single characteristic. People in this creative class can be anything from an artist to a secretary. Those of the creative class have the potential to stimulate the economy by seeking real experiences that are not available in the standardized workplace. Any single city depends on appealing to this class because if they fail to do so, this class will simply relocate to a more open and diverse city with opportunity, experiences, and recreational venues.

As a class, they value creativity, individuality, difference, and merit. The young workers that mostly make up the creative class are looking for something other than the cookie-cutter "American dream." Members of the creative class tend to be found in more tolerant, open, and diverse cities that give them as many different experiences as possible. Traditional cities that cannot relate or appeal to this new class will not see growth in population or economy.

Be creative but not too creative. What is cool? And what about art is just "creative" on its face?

What is "real experience"? Is this like independently wealthy Nerdistan, where we have arts fests, coffee shops, bookstores, gay bars, motorcycle bars, hacker dojos, and independent filmmakers? Community is a real experience, not a self-centered thing. It's about interacting with other people and learning from them. Creativity as community – people have different perspectives and uniquenesses.

The creative class is always successful. Is this a fallacy? Can you fall out of the creative class once you get there? When you "sell out" do you fall out of the creative class? A migrating population might be the real driver of a creative class economy. Migrant Americans and foreigners represent a breath of fresh air

socioeconomically and creatively speaking. Is there such a thing as an uncreative class? Who are these people? Heidegger would say that it's not a sin to chase fireflies in your Levis. It's a sin to think that you are supposed to. Freebirds need tattoos to work in certain creative spaces. Professionals can't have tattoos and piercings that show during normal work.

Key terms and definitions:

Creative class – The creative class refers to a group of people, not an institutional place of learning. This class of people includes but is not limited to artists, musicians, technicians, journalists, and entertainers. They value individuality, tolerance, experiences, merit, and difference.

Institutional sclerosis – Old, traditional institutions that cannot adapt to the demands of the creative age. They are often trapped by their past and try to attract the creative class with recreational experiences that can be experienced anywhere in America. They cannot appeal to, or attract, the creative class because they lack creative recreational opportunities.

Nerdistan – The experience that the creative class wants to avoid. They are bland places that lack uniquenesses. There are identical office complexes everywhere you turn, endless rows of parking lots, traffic jams, cookie-cutter housing developments, and cliché strip-malls on every corner.

Discussion questions:

- In Fennville the residents are all apparently striving for "something real." What makes the experiences they find in this small town real compared to what they would have experienced in large cities and big businesses? What would you consider to be a "real experience"?
- Consider the sense of community that the creative class found in Fennville. What characteristics make this community strong? What role does collectivism play in the success of each business? How does the community provide a "real experience" to members inside and outside of the community? Where does a sense of community stand in relation to the other values that the creative class embraces?
- After reading Richard Florida's arguments in "The Rise of the Creative Class" would you say that UCA meets the criteria that Florida would say attracts the creative class? What about Conway attracts young, creative workers and students? How does your experience at UCA in the Honors College affect your ability to be a member of this creative class?
- Do you think that the creative class is a legitimate class or is it simply a generation that embraces a different set of values than previous generations? What is the difference? How does looking at this group of young workers as a class instead of a generation affect the work environment and ultimately the economy?
- Look at the two lists of cities and their respective creativity ratings. Do any of the top/bottom cities surprise you? Why do you think Las Vegas is ranked so low when it is obviously a very open, diverse, and recreation-oriented city?

Education: An Introduction

Education is not the filling of a bottle, but the lighting of a fire. – Paraphrase of Plutarch

Readings:

(1) **"How the American University Was Killed, In 5 Easy Steps"**
http://www.opednews.com/articles/How-The-American-Universit-by-Debra-Leigh-Scott-120819-373.html
(2) **Bob Pearlman, "New Learning Environments in the 21st Century"**
http://net.educause.edu/ir/library/pdf/ff0604S.pdf
(3) **Ayesha Khanna and Parag Khanna, "Welcome to the Hybrid Age,"** ***Slate***
http://www.slate.com/articles/technology/future_tense/2012/06/hybrid_reality_avatars_robotics_and_the_coming_human_technology_civilization_.html

The "gist": As we dwell on the edge of the ever-expanding digital frontier, we should come to realize that it is not only our workplaces that begin to change. As new technologies, infrastructures, and cultures are introduced at the office, we send our kids to schools that are changing just as much or more; we might hardly recognize a kindergarten class anymore. 30 years from now, when our progeny become our age, even the venerable university has changed into something its founding fathers could have never imagined.

This is the beginning of the unit that will look into these changes, what they might be, and whether they are for better or for worse. We will look at how the American university has been treated and mistreated, how research and lectures are changing even now, and how the rise of technology might even make our beloved brick-and-mortar campuses obsolete. As the world becomes more universal and interconnected, curriculum might become universal as well; testing might be viewed as either the core component of a successful education or as a relic of a bygone age. The future's as bright or dark as we want to make it, and it all begins in the classroom.

Key terms and definitions:

For Profit University – A university that operates primarily for the purpose of making money, usually through offering classes, degrees, and certifications either in person or online.

Not for Profit University – A university that operates primarily for the purpose of provided the service of education.

Pro-Amateur – A non-professional (unpaid) participant in some field, hobby, or activity that nonetheless has a high degree of passion for the subject, often above that of the layman or lay participant.

Avatar – Virtual representation of a person; based on the idea of a god's incarnation (earthly, bodily presence) in Hindu mythology.

Augmented Reality – A view of the real environment augmented with computationally supplied information, providing a composite view of the world that is partly real and partly digital. A military heads-up display is a simple example of augmented reality.

Virtual Reality – A view of an entirely digital space located within a computer system, providing sensory interaction with entirely digital objects and environments. A video game is a very primitive example of virtual reality.

Adjunct Faculty – An educator at an institution of higher learning that is hired on a temporary basis; often has lighter teaching loads, fewer benefits, lower pay, and little job security. Job titles are usually "Instructor," "Lecturer," or similar.

Tenure-track – Name for positions at an institution of higher education that has the possibility of tenure after a given period of time and dependent on successful review by fellow faculty members or administrators. Almost always full-time, with benefits, intended as long-term employment with excellent job security if successful in gaining tenure.

Discussion questions:

- At this point, it's not a question of will new technologies such as AR, VR, and robots affect education, but how they will affect it. What changes do you foresee (or not foresee) in K-12? In higher ed?
- 75% of higher ed faculty are adjuncts or non-tenure track professors. Is this good or bad for the students? How about for the universities themselves?
- "Finally, one of the greatest challenges we face is how to encourage our institutions of higher learning to become learning institutions themselves. Some for-profit institutions, such as the University of Phoenix, are doing this quite well. Perhaps the not-for-profit institutions can learn some practices from them." Is this true? How so?
- Are formal institutions of learning still necessary? Or does the rise of Wikipedia and the proamateur make them obsolete?

CCSS (Common Core State Standards) Initiative

Readings:

(1) "Common-Standards Commentaries: Year in Review"
http://www.edweek.org/ew/articles/2012/04/23/29comm-commoncore.h31.html

(2) **William J. Mathis, "The 'Common Core' Standards Initiative: An Effective Reform Tool?"**
http://nepc.colorado.edu/files/PB-NatStans-Mathis.pdf

(3) **"No National Standards: Strength or Weakness for Schools in the U.S.?" *VOA News***
http://learningenglish.voanews.com/content/no-national-standards-a-strength-or-weakness-of-us-schools-123948044/113808.html

(4) **"Should All U.S. Students Learn the Same Thing?" *VOA News***

http://learningenglish.voanews.com/content/should-all-students-in-us-learn-the-same-things-123503384/113803.html

The "gist": The Common Core State Standards have been adopted by more than 80 percent of all American states, yet they continue to spark heated discussions between proponents and opponents. Supporters believe that adopting these standards may better prepare students for college and jobs, and may ultimately improve American competitiveness on a global scale. Critics refute these statements on the grounds that the idea oversimplifies education and may lead to a one-size-fits-all high school curriculum that disregards diversity and inequality in resource allocations. Though there is little research over the standard's effectiveness, some scholars assert that these standards negatively influence student academic performance. It remains to be seen whether Common Core State Standards will be effective in enhancing student readiness for college and career in the U.S.

Adopted by state of Arkansas in June 2010 – one of the first in the nation; way ahead of most of the country in implementing the standards. Why? We now have an "expectations gap" – too many students are graduating unprepared for college. Students are not prepared for the workforce, especially w/ technology

We've experienced a decline of manufacturing jobs right here in Conway, and a rise of skilled technical work. We need standards for ELA, Math – literacy standards for social studies, science, technical subjects that are benchmarked to international standards so we can compete globally. We want consistent, clear standards about what students are expected to learn (www. Corestandards.org). We want complex thinking from our students that is relevant to the world. Students will engage in independent and collaborative research projects.

- How-to projects
- Guidance and support expected from parents; teachers as facilitators and guides on the side
- Recall of information deemphasized. Learning comes from experience and research
- Students will study a few big ideas in depth rather than a bunch more shallowly

We will have lots of class projects. The average student will spend 2 ½ full weeks in front of a computer this year. (BTW, the American Academy of Pediatrics recommends no more than 1 hour in front of any kind of screen – including a smart phone – each day.)

Example from mathematics education, focus will be on:

- Critical thinking
- Entrepreneurship
- Creativity
- Preparation for online testing of math skills

Integrated literacy focused on technology:

- Reading complex texts

- Informational and technical texts – novels are not read in the business world
- Narrative, expository, and persuasive writing (persuasive now emphasized)
- Increased complexity of the texts

Expectations from most students will jump a grade level. In the case of 5th and 6th graders, they will jump two grade levels.

Lingering questions:

- Will CCSS meet the needs of the workforce described in the first unit of the class?
- Is a non-standardized education such a bad thing? Should all states be put "on the same page"? Do we lose some distinctiveness born of 50 separate experiments in education? That's the essence of federalism. Maybe 200 different national standards is enough diversity? Should we have national standards for education at K-12? Why not in college too?
- What will this mean for teacher creativity? What about student creativity?
- The emphasis will be on non-fiction texts? Most freshman summer readers at American universities are non-fiction texts. We do literature. What's the better choice?
- Are teachers being adequately prepared for this kind of curriculum? Do we have the capacity in public education for this?
- What does it mean for an education to be rigorous?
- What do we think of high-stakes testing?

Barack Obama says that because economic progress and educational achievement go hand in hand, educating every American student to graduate prepared for college and success in a new work force is a national imperative. Meeting this challenge requires that state standards reflect a level of teaching and learning needed for students to graduate ready for success in college and careers.

My generation: Not everyone who completes high school goes to college. The national average is 67.2 percent.This past year 53.4 percent of Arkansas high school grads went to college.

Key terms and definitions:

Common Core State Standards – Lists of content and concepts that students are supposed to learn at each grade level from kindergarten to high school.

NGA/CCSSO effort – The work of the National Governors Association and the Council of Chief State School Officers in developing proposed "common core" standards in reading and math.

The Elementary and Secondary Education Act ("No Child Left Behind") – Essentially required states to create and adopt new curriculum and performance standards.

NCTM – The National Council of Teachers of Mathematics

NCTE – The National Council of Teachers of English

Discussion questions:

- What are some of the advantages and disadvantages of implementing a Common Core standard?
- The common standards approach intends to make all students career- and college-ready, which is a huge leap forward from what was required in the 1970s. Do you think this is necessary and important to today's economy? Do such standards imply that the ultimate goal of pursuing higher education is to land a job upon graduation?
- To what extent do you think it is important to raise the expectations of American students so that America will not be out-competed by other nations? Are Common Standards the key to international competitiveness?
- "Of the more than 65 people involved in the Common Core design and review, only one was a classroom teacher and no school administrator is listed as being a member of the groups." What might be the consequences of not including classroom teachers in the design process?

No College Student Left Behind

Readings:

(1) Doug Lederman, "No College Student Left Behind?" ***Inside Higher Ed***
http://www.insidehighered.com/news/2006/02/15/testing

(2) Heidi M. Anderson, "A Review of Educational Assessment," ***American Journal of Pharmaceutical Education***
http://archive.ajpe.org/aj6901/aj690112/aj690112.pdf

(3) Richard Perez-Pena, "Trying to Find a Measure for How Well Colleges Do," ***New York Times***
http://www.nytimes.com/2012/04/08/education/trying-to-find-a-measure-for-how-well-colleges-do.html

(4) Chris Rust, "The Unscholarly Use of Numbers in Our Assessment Practices," ***International Journal for the Scholarship of Teaching and Learning***
http://academics.georgiasouthern.edu/ijsotl/v5n1/invited_essays/Rust/index.html

(5) Doug Lederman, "Graduated, But Not Literate," ***Inside Higher Ed***
http://www.insidehighered.com/news/2005/12/16/literacy

The "gist": As public elementary and secondary schools are moving completely towards standardized testing, some are wondering whether postsecondary education should be doing the same. With reports that as few as 30 percent of college grads are functionally literate, it's no surprise that many are questioning just what their tax money is funding. Tests such as the CLA are being developed to determining the "value added" that students receive from institutions, but many argue that collegiate gain is something that cannot be empirically measured. Skills such as collaboration and problem solving are hard to be validly tested. In addition, some argue that this type of standardizing is just adding to the problem with the grading system already in place. These tests have the potential to narrow the focus of what students receive in their education, and may greatly decrease the variety in curriculum.

It encourages a "buyers" versus "renters" mindset. ROI reminds us that learning is a business. Education is about "sit and get" rather than meeting in the middle.

Key terms and definitions:

The CLA (Collegiate Learning Assessment) – "The CLA presents realistic problems that require students to analyze complex materials and determine the relevance to the task and credibility. Students' written responses to the tasks are evaluated to assess their abilities to think critically, reason analytically, solve problems and communicate clearly and cogently."

Value Added – Refers to 'extra' features of an item of interest (product, service, person, etc.) that go beyond the standard expectations and provide something 'more' while adding little or nothing to its cost." In this context, value added is what a college gives a student in addition to the standard education.

Discussion questions:

- Who is more responsible for what a student learns in college? The institution or the student?
- Do you think that requiring testing for college graduates will encourage better education, or will it place undue emphasis on teaching only those skills that can be easily measured?
- Have you ever been graded on a "normal curve" scale? What are your thoughts? Do you think that a normal curve is evidence of our failure to teach competencies? What type of marking system would be more effective? Is the normal curve an excuse to keep people out of medical school? What is basic competency? What's the goal: Content? Outcomes? Strategies? Tools on the Belt? Happiness?
- Do you think that some classes should be weighted more heavily than others? Should an A in a general education course mean as much as an A in an upper division course?
- What problems do you see with requiring colleges to publically report their "value added"?

Education: OpenCourseWare and MOOCs

Readings:

(1) Tamar Lewin, "Universities Reshaping Education on the Web," *New York Times*
http://www.nytimes.com/2012/07/17/education/consortium-of-colleges-takes-online-education-to-new-level.html

(2) Thomas L. Friedman, "Come the Revolution," *New York Times*
http://www.nytimes.com/2012/05/16/opinion/friedman-come-the-revolution.html

(3) Jeffrey R. Young, "A Conversation with Bill Gates About the Future of Higher Education," *Chronicle of Higher Education*
http://chronicle.com/article/A-Conversation-With-Bill-Gates/132591/

(4) **Pew Internet and American Life Project, "Bricks and Clicks: The Internet and Higher Education in 2020"**
http://pewinternet.org/Press-Releases/2012/The-Future-of-Higher-Education.aspx
(5) **William H. Weitzer, "A 'Place' for Higher Education,"** ***Inside Higher Ed***
http://www.insidehighered.com/views/2012/04/23/essay-need-colleges-define-importance-physical-campuses
(6) **Jeffrey R. Young, "Online Classes See Cheating Go High-Tech,"** ***Chronicle of Higher Education***
http://chronicle.com/article/Online-Classes-See-Cheating-Go/132093/
(7) **Audrey Watters, "Dropping out of MOOCs: Is It Really Okay?"** ***Inside Higher Ed***
http://www.insidehighered.com/blogs/hack-higher-education/dropping-out-moocs-it-really-okay

Online Education Examples:

(1) **Khan Academy**
http://www.khanacademy.org/
(2) **Coursera**
https://www.coursera.org/
(3) **edX**
https://www.edx.org/
(4) **Udacity**
http://www.udacity.com/
(5) **MIT OpenCourseWare**
http://ocw.mit.edu/index.htm
(6) **Webcast Berkeley**
http://webcast.berkeley.edu/
(7) **iTunes University**
http://www.apple.com/education/itunes-u/
(8) **American Honors Inc., Overview of Instructure Canvas Learning Management System**
http://www.youtube.com/watch?v=RkouE4Wm7y8

The "gist": The internet has made many sectors of the economy, and indeed life itself, more volatile and decentralized. Coupled with economic insecurity, the online revolution is now transforming higher education. The conventional model for education is under attack for many reasons. Foremost, higher education appears as the exclusive preserve of those who can afford the cost, big blocks of time (measured in semesters and years), and distance from family commitments.

Perhaps we can leverage technology to reduce barriers to access and reduce costs. In the process, decentralization threatens many storied traditions of university life. A physical campus where students interact may become unnecessary. The lecture model for teaching used for a thousand years may wither away. Learning may reside in non-human appliances rather than professors and other students. Cheating may require more sophisticated, high tech policing. More students may succeed as massively open online courses become available for free. Simultaneously, more students may fail as motivation or ability to self-regulate falters.

Networked learning makes a number of assumptions. First, basic digital literacy is presumed. Technical challenges will be overcome. Assessment and evaluation of developmental learning can be standardized or automated. Course developers as inquisitive minds will be stimulated within the context of online learning environments and adequately paid. MOOCs and courseware instructional design also assumes that affective learning mode – pleasure, frustration, feelings, rapport, and interest felt – can be captured as easily as cognitive learning mode – someone's ability to recall a list of learned items, their ability to generalize and apply knowledge – and can be measured or tested.

Key terms and definitions:

MOOCs (Massive Online Open Courses) – Characterized by scalability and oriented at the community, MOOCs are distance education products that often rest on the pedagogy laid out by "deschooling" proponent Ivan Illich.

LMS (Learning Management System) —A client-server application for the administration, documentation, tracking, reporting, and delivery of educational courses. Blackboard/WebCT, Canvas, HCOL virtual classrooms are examples.

Hybrid classes – Courses partially taught in the classroom and partially online. *Blended or mixed-mode courses* are those that take place in multiple contexts or environments.

Flipped classroom – An education where the focus at class time is on one-to-one teacher-student or peer-to-peer education. Homework is reserved for online lectures produced by "superstar professors."

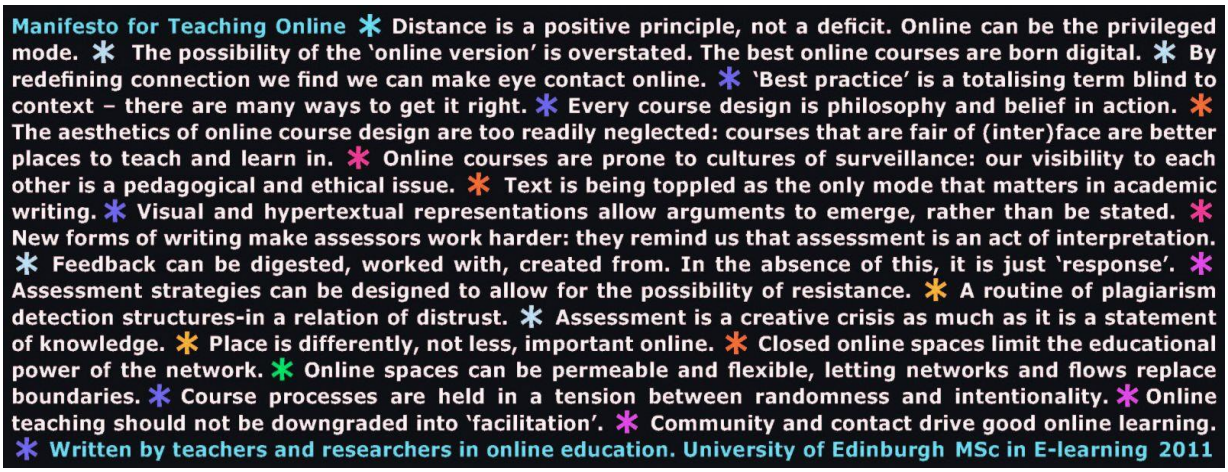
Computer aided instruction (CAI) – The use of computers for education and training. The term often became synonymous in the 1990s and early 2000s with "drilling" facts or message board-style learning.

Keylogging – Monitoring the frequency and rate of keys struck on a keyboard in order to detect cheating.

Discussion questions:

- Is it true that an education is such a scarce commodity these days that most universities are already engaged in rationing such services? If so, will online education relieve the problem?
- Will online educational tools tend to increase variety or homogenize education?
- Charlie Firestone of the Aspen Institute is quoted as favoring "passion-based education" in the Pew Survey story. What do you think that is? Can any online course become "passion-based"? Is there any virtue to an education passively consumed?
- What is it that a teacher or professor (mostly) does? Is she a "content developer"? A "motivator"? Something else?
- Is a face-to-face education always better than one delivered online? Does technology facilitate the gamification of higher education, or is education as delivered in higher education already mostly gamified?
- Is a university education still relevant? If so, why is there so much marketing and administration attached to it?

- Will there still be physical universities with campuses in the future? Why or why not? What will happen to education that happens outside the classroom? Where will that go?
- Is a university that graduates only 42.4% of its students wasting resources? What about 7%? Why or why not?
- What will happen to students who are "demotivated" (as defined by Bill Gates)? Where will they get an education in a world where most education is delivered online?
- Is it okay that most students (enrollees) will never finish any particular MOOC?



Education: Academic Research

Readings:

(1) **John Schwartz, "An Effort to Upgrade a Court Archive System to Free and Easy,"** ***New York Times***
http://www.nytimes.com/2009/02/13/us/13records.html

(2) **John Schwartz, "Open-Access Advocate is Arrested for Huge Download,"** ***New York Times***
http://www.nytimes.com/2011/07/20/us/20compute.html

(3) **David Willetts, "Open, Free Access to Academic Research? This Will Be a Seismic Shift,"** ***The Guardian***
http://www.guardian.co.uk/commentisfree/2012/may/01/open-free-access-academic-research

(4) **"JSTOR Press Release: Free Access to Early Journal Content and Serving 'Unaffiliated' Users"**
http://about.jstor.org/news/jstor%E2%80%93free-access-early-journal-content-and-serving-%E2%80%9Cunaffiliated%E2%80%9D-users

(5) **Lynn Worsham, "Fast Food Scholarship,"** ***The Chronicle of Higher Ed***
http://chronicle.com/article/Fast-Food-Scholarship/130049/

(6) **David Crotty, "Post-Publication Peer Review: What Value Do Usage-Based Metrics Offer?"** ***The Scholarly Kitchen***

http://scholarlykitchen.sspnet.org/2012/04/19/post-publication-peer-review-what-value-do-usage-based-metrics-offer/

The "gist": Open access to information on the Internet threatens to overwhelm many of the traditional, often closed, mechanisms by which scholarship gets written, reviewed, and published. Huge thefts of research from academic databases, as well as files lifted from open government repositories, calls into question the ownership of information essentially paid for by the taxpaying citizen. Do academic publishers and universities have a right to profit from research that authors do "for free"? Should access this fund of knowledge be restricted (by username and password) to those who have "paid" for that access by attending a university? Do alumni deserve preference in accessing such knowledge, over and above the general public? Do proprietary databases of research and articles exacerbate inequities for academics working at poorly funded universities? Are people who "steal" this research criminals or heroes?

In response to pressure from students, faculty, and administrators, a number of library database companies have cracked open their collections to wider usergroups – like alumni and site visitors – and moved the paywall so that older research is freely available. Some people think this does not go far enough. In the United Kingdom, the government recently committed itself to making sure that free access to scholarship is available to everyone.

Cracks in the ivory tower of academic publishing, perpetrated by such open access pre-publication services and journals such as *arXiv, Nature Precedings, Philica, CogPrints,* and *ScientificCommons,* challenge the peer review system, especially the mantra of "publish, then filter." Can a journal article be properly peer-reviewed *after* it has been published? How can its significance and impact be properly assessed? What is the frenetic pace of scholarly publishing doing to the scholarship itself? Does trivia threaten to overwhelm wisdom?

Key terms and definitions:

Skimming—Removing online content and reproducing it (sometimes for free) on another site.

Practical obscurity—The legal doctrine that doctrine that one may have a privacy interest in the compilation of information, even though each piece of information composing the dossier is itself publicly available. Because we (or our data) is scattered or uninteresting, we hope that it is (mostly) private.

Electronic privacy—The right to one's "personal data" and its distribution and redistribution.

Transparency—Open, accountable, and usually collaborative activity. Used today topically in calls for "open government" and "open access" to education.

Open Source movement—An idea borrowed from computer programming that "information wants to be free," and that intellectual property should be given away or copied without cost.

JSTOR—Journal Storage, one of the oldest and most esteemed proprietary online databases of fulltext of scholarly articles.

TripAdvisor—A travel website that relies almost exclusively on user-contributed reviews of hotels, restaurants, and other destinations. The site has attracted considerable criticism, and even legal action, for damages to business reputation.

Post-Publication peer review—Reviewing scholarship after it has been published.

Altmetrics—A movement that works to create and establish metrics for analyzing the reach and impact of published research. Attempts to capture ways in which articles are disseminated in the "scholarly ecosystem," by monitoring research publication and citation.

Fast-Food Scholarship—The idea that quantity is more important than quality in scholarly enterprise, and particularly in tenure decisions.

Discussion questions [several asked in the "gist"]:

- Is information literacy changing as we move more resources online?
- Do academic publishers and universities have a right to profit from research that authors do "for free"? Should access this fund of knowledge be restricted (by username and password) to those who have "paid" for that access by attending a university? Do alumni deserve preference in accessing such knowledge, over and above the general public? Are people who "steal" this research criminals or heroes?
- Can a journal article be properly peer-reviewed *after* it has been published? How can its significance and impact be properly assessed? What is the frenetic pace of scholarly publishing doing to the scholarship itself? Does trivia threaten to overwhelm wisdom?
- Who should be part of the knowledge economy? Is a local steel worker part of the knowledge economy?
- Is open access the future of publishing? If so, who will pay for it? Who owns the intellectual capital? Who should be paid for it and how? Is an online, open access journal a form of vaporware, especially if it's rented?
- Should archives scan more stuff and make it freely available?
- Are we too present-minded in assessing the impact of what gets published? Wiki metrics: page views, page edits, edits per page, views per edit, registered users. Bibliometrics: publication count, citation count, downloads, tweets, facebook mentions, blog links, citations weighed by quality of source publication? Is power and authority shifting? Should it shift? (CiteSeer, ACM Library)

Economy: Crowdsourcing, the Long Tail, and Prosumption

Readings:

(1) **George Ritzer, "Production, Consumption, Prosumption: The Nature of Capitalism in the Age of the Digital 'Prosumer'"**
http://www.georgeritzer.com/docs/Production%20Consumption%20Prosumption.pdf
(2) **Bear Stearns, "The Long Tail in the Entertainment Industry"**
http://www.longtail.com/TheLongTail.pdf
(3) **Jeff Howe, "The Rise of Crowdsourcing,"** ***Wired***
http://www.wired.com/wired/archive/14.06/crowds_pr.html
(4) **David Leonhardt, "When the Crowd Isn't Wise,"** ***New York Times***
http://www.nytimes.com/2012/07/08/sunday-review/when-the-crowd-isnt-wise.html
(5) **Antonio Regalado, "Human Workers, Managed by Algorithm,"** ***Technology Review***
http://www.technologyreview.com/news/428440/human-workers-managed-by-an-algorithm/

For reference:

(1) **"The New Economy"**
http://www.cbpp.uaa.alaska.edu/afef/NewEcon.htm
(2) **"User-Generated Online Content"**
http://firstmonday.org/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/3912/3266

The "gist": The New Economy has been brewing since the mid-1990s, but its major impacts have until recently been deflected by such things as the dot-com crash, 9/11, and the mortgage meltdown. But the reorganization of business and society since the Great Recession depends, in large part, on ideas introduced in these readings. Uncoordinated, amateur, and naive users are transforming American life on and off the internet. They are also creating value and abundance, possibly without appropriate remuneration.

The economy of the future depends on the creative labor and production of individuals as much as collective enterprise. It is also fiercely competitive as digital transparency (for example, online price comparison) drives profit margins down to near zero. Middlemen are being eliminated by technologies of disintermediation, and whole economies are being bypassed by globalization of commerce. Traditional authorities are increasingly undermined and becoming radicalized (examples: Tea Party members, Islamic fundamentalists, librarians).

Key terms and definition:

The Long Tail – A term coin by Chris Anderson in 2004 framing the phenomena of niche markets composed of products and services in low demand and low sales volume. Reduced marketing and distribution costs in the twenty-first century have made these niches potentially profitable for individuals, challenging the traditional markets for "bestsellers" and "blockbusters."

Content Aggregator – An organization or individual that collects online media from various sites and repackages it for reuse or resale on another site.

User Generated Content – Media product and recommendations crafted by amateurs rather than recognized experts and professionals.

Virtualization – Changing physical objects into digital products. The movement of music from CDs and CD making factories to digital music download sites is an example.

Molecularization – The transformation of the markets for production, distribution, and consumption of goods and services from the masses to individuals. The new economies of scale are smaller, plural, and austere. Bigger isn't better anymore.

Disintermediation – The removal of an intermediary, or middleman, from a transaction or communication. The user or consumer gains direct access to information that otherwise would require a mediator, such as a salesperson, a librarian, or a lawyer. New technologies give users the power to look up medical, legal information, travel, or comparative product data directly.

Prosumption – A portmanteau coined by futurologist Alvin Toffler combining the terms "producer" and "consumer," emphasizing the falsity of the dichotomy of the two.

Convergence – The combination of old industries into new and vital ones. One example is the combination of newspaper, television, and web companies into "new media" empires.

Wisdom of Crowds – Collective intelligence producing superior (or mediocre) judgment.

Folksonomy – Collaboratively sorting, tagging, or classifying content using internet technologies. Participating in such a venture is sometimes called microvolunteering (see for example Galaxy Zoo or Foldit).

Discussion questions:

- Does crowdsourcing produce quality or mediocrity? Can a crowd really defeat experts and professionals at all things? Or is crowdsourcing really best for accomplishing simple or nonserious tasks? Consider the list of 2,000+ crowdsourcing sites at http://www.crowdsourcing.org/directory.

- Who can actually make a living in a crowdsourced business like Amazon's Mechanical Turk or InnoCentive? Is a system based on large groups of competing workers paid little (or nothing) for their efforts sustainable over the long haul? Is this unethical exploitation of the labor market?

- What motivates people to do work for free?

- What mundane activities and personal tasks in your daily life would you like to outsource/crowdsource to TaskRabbit? (See https://www.taskrabbit.com/how-it-works)

Kickstarter and Crowdfunding

Readings:

(1) **Dave Kendricken, "Selfstarter May Be a Trendsetter: Crowdfunding Goes Open Source"**
http://nofilmschool.com/2012/10/selfstarter-crowdfunding-goes-open-source/
(2) **Erik Sofge, "The Good, the Bad and the Crowdfunded"**
http://online.wsj.com/article/SB10000872396390443991704577579190431157610.html
(3) **Kickstarter**
http://www.kickstarter.com/
(4) **Daniel Isenberg, "The Road to Crowdfunding Hell,"** ***Harvard Business Review***
http://blogs.hbr.org/cs/2012/04/the_road_to_crowdfunding_hell.html
(5) **William & Mary University, "Crowdfunding Honors at W&M"**
http://honorsfellowships.wm.edu/projects/

The "gist": Before the development of websites like Kickstarter or Indiegogo, independent creative individuals were doomed to either raise funds themselves, try their luck with the corporate system, or just be flat out of luck. Now, the enterprise of independent creativity and ingenuity is completely transformed by crowdfunding: a system in which an individual can post their potential ideas and research in public domains for regular people like you and me to view and potentially become part of their financial backing. This type of exposure can be the difference between a project achieving unfathomable success literally overnight, and a project that never hits the ground. However, although sometimes the masses can fund projects that better society, they can also fund projects we can most certainly live without.

According to one of the articles, there's crowdfunding, then there's equity crowdfunding (angel investing). Equity crowdfunding takes place in the realm of the corporate world where stock is sold to the masses who, in turn, expect some kind of return on their investment. But in this system, unlike Kickstarter, there is no guarantee of a return on investment. According to the author, crowds are just dumb. They follow the principle of "pluralistic ignorance," of the rest of the investors which most of the time, leads to unhappy endings for those investors. This type of investing is also highly complex. It involves a lot of research and understanding of how the corporate system really works.

Key terms:

Crowdfunding – describes the collective effort of individuals who network and pool their resources, usually via the internet, to support efforts initiated by other people or organizations

JOBS (Jumpstart Our Business Startups) Act – a bill signed by President Obama that will make it easier for startups and small businesses to raise funds, especially through online crowdfunding

Kickstarter – an "all or nothing" crowdfunding website created on April 28, 2009. Since creation, they've funded over 30,000 projects with over $350 million.

Discussion questions:

- One author believes that crowdfunding equity stock purchases simply will not work because purchasing equity in early stage ventures is too complex to standardize. Should we not allow

"the crowd" to explore investing for themselves because, in a complex undertaking, it could ultimately cause themselves more harm than good?

- This same author explores the social psychology of the masses. He states that crowds are "wise" only in a very limited set of circumstances. Should purchasing equity be more restricted to prevent "pluralistic ignorance" from funding foolishly? Or should this be more of a free enterprise?
- Kickstarter's model of crowdfunding is thriving. But essentially, they are still a middleman. They have various restrictions and regulations about what kinds of projects can be supported on the site to protect themselves from legal danger. Do you think we will begin to see more open source/free for all/"no restrictions" crowdfunding options like Selfstarter?
- As we see by the William & Mary Honors Fellowships, crowdfunding is expanding beyond creative projects. Research and academia is beginning to capitalize on the movement. Could academic crowdfunding become as successful as creative crowdfunding?

The Post-Scarcity Economy

Readings:

(1) **Jack Schofield, "The Economics of Abundance"**
http://www.salon.com/2005/03/24/long_tail/

(2) **Clay Dillow, "Billionaire Investor Peter Thiel Backs New Venture Aimed at Producing 3-D Printed Meat," *PopSci***
http://www.popsci.com/science/article/2012-08/billionaire-investor-peter-thiel-backs-new-venture-aimed-producing-3-d-printed-meat

(3) **Post-Scarcity Princeton**
http://www.pdfernhout.net/post-scarcity-princeton.html

(4) **The Venus Project**
http://www.thevenusproject.com/

Videos:

(1) **"Contour Crafting: Automated Construction"**
http://www.youtube.com/watch?v=JdbJP8Gxqog

(2) **"Will Minecraft and Makerbot Usher in the Post-Scarcity Economy?"**
http://www.youtube.com/watch?v=klQ7bb8bBsQ

The "gist": Today we live in a scarcity economy where we must compete for the limited number of resources. These resources are often distributed unevenly giving a certain percentage of people a greater share. These members generate the wealth in our society. The money is then distributed in exchange for labor, in order to purchase a share of the scarce resources. In a post-scarcity economy goods and services and information will be virtually easier to access and local costs will be relatively low. With more automated systems we will be able to reduce the labor force making the amount of

resources expended minimal. These resources include raw material, energy, time, money, and physical labor.

The potential result of a post-scarcity economy is that we will be able to live in a utopian society. Everyone will have the same access to fulfill their basic needs, relieving them from the menial task of holding a job for financial support. We will be free to pursue tasks that are intrinsically motivating to us.

There's already enough for everybody. We may already be in a post-scarcity economy: food is essentially free and the internet is our textbook. Affluenza. We can spend more time being human. Under post-scarcity personality will be valued. Time will always be scarce. Everyone in the world is already essentially the same: poor.

There are limits to raw materials and energy. Rip the planet apart. Post-scarcity weakens the concept of ownership? Is it libertarian or fascist? Will machines stunt the spirit of humanity? Is software an example of post-scarcity. We expect free blogs, email, dropboxes, and other online services and media (books, music).

If the 3D printer becomes essentially a matter duplicator, what will happen to retailing and manufacturing? What will happen to unique items like the Mona Lisa if they can be copied authentically? Will anything be natural in the end? Post-scarcity blurs the boundary between nature and artifice even further. The idea of overcoming the limitations of money and possessions is fruitful even if it doesn't actually happen.

Key terms and definitions:

Post-scarcity – an economy in which goods, services, and information are free or nearly free. This economy is made practical by an abundance of resources and automated systems that make manufacturing relatively easy.

Technological singularity – humans may one day create artificial intelligence that exceeds human intelligence. The results of such an event will have an unpredictable outcome on society.

Moore's Law – the number of transistors per square inch on integrated circuits has doubled every year since the intergrated circuit was invented. A simplified version of this law states that processor speeds, or overall processing power for computers will double every two years.

Countour crafting – a computer controlled construction process that uses layered fabrication to construction structures quickly and efficiently, with less manual labor.

Discussion questions:

- In the post-scarcity economy advocated by Post-Scarcity Princeton, there is a call for access to information. Should all collegiate institutions follow the post-scarcity Princeton model? Will a limit on patents and open access to books and music be beneficial?

- Can a post scarcity economy help create a utopian society? Are there any downsides to this utopian post-scarcity economy? Will some things remain the same, preventing a truly post-scarcity utopia?
- If there is no struggle for resources, money will essentially become obsolete. Can we still achieve a fulfilling life with no extrinsic motivation? Will we become lazy, uncreative beings seeking only to have our most basic needs met?
- Some would argue that we should no fear the advancing technology that will bring about a post-scarcity economy. Behrok Khoshnevis, who advocates for contour crafting, says that the cultivation of agricultural technology did not bring about an end to civilization. It greatly reduced the number of farmers in the United States, but it allowed them to work in other sectors of the economy. If we continue to slowly reduce the number of jobs in the economy, will society encounter a major crisis before a post-scarcity economy is achieved?
- Where does the quality go in this kind of economy?

Responsible Nanotechnology

Readings:

(1) Center for Responsible Technology
http://www.crnano.org/index.html
(2) The Lifeboat Foundation
http://lifeboat.com/ex/about
(3) Will Soutter, "Is Nanotechnology a Green Industry?"
http://www.azonano.com/article.aspx?ArticleID=3077
(4) Bill Joy, "Why the Future Doesn't Need Us"
http://www.aaas.org/spp/rd/ch3.pdf

The "gist": "This is the first moment in the history of our planet when any species, by its own voluntary actions, has become a danger to itself—as well as to vast numbers of others (Carl Sagan)." The development of new and dangerous technologies is always in progress, causing many individuals to fear the threat of them becoming too much to handle. Nanotechnology has the potential to fix many of the world's persistent problems: hunger, water shortage, disease outbreak, and the social tensions that result from general dis-ease. As scientists move toward making significant breakthroughs, decisions about how to maintain nanotechnologies need to be answered. Who should they be available to? Who should control the manufacturing of nanotech? These are the current questions being asked, but no one has found the answer quite yet.

Key terms and definitions:

Nanotechnology – Nanotechnology is the engineering of functional systems at the molecular scale. Because of the spread of nanotechnology, many fields have their own ideas of what qualifies technology to be included in the realm of nanotechnology. Essentially, anything sufficiently small and interesting can be called nanotechnology.

Nanotechnology According to the Lifeboat Foundation –There are two types of nanoweapons: (1) *self-replicating weapons* (e.g., ecophages) that make copies of themselves; their only means of attack may be to "eat" the enemy or his resources as they self-replicate; (2) *nonreplicating nanoweapons,* similar to the tools of war today, that are manufactured in a factory and then used in battle.

Molecular manufacturing – Molecular manufacturing (MM) means the ability to build devices, machines, and eventually whole products with every atom in its specified place.

Grey goo – Huge numbers of tiny robots called "assemblers" would self-replicate, then work together to build large products, much like termites building a termite mound. Such systems appeared to run the risk of going out of control, perhaps even "eating" large portions of the biosphere.

Knowledge-enabled mass destruction –The idea that we are no longer bound to the dangers of weapons of mass destruction, but now to a class of knowledge-enabled accidents. Individuals will have the capability to affect many simply by knowing how to use nanotechnology.

Discussion questions:

- Is molecular manufacturing the next Industrial Revolution? Is there still room for any technologies to change the world in that way? Is there a limit?
- The Center for Responsible Technology holds the opinion that moving forward rapidly seems to be the best solution: "Early development of molecular nanotechnology (MNT) increases some risks, but reduces others; overall, we think it's safest to develop as soon as possible. This is a preliminary conclusion, and we may change our opinion, but there are solid reasons for taking this position." Do the potential benefits outweigh the risks that must be taken to make these technologies available?
- Bill Joy expresses two points of view to consider about why humans seems to go along so easily with life-changing advancements in technology, whether they are very dangerous (the atomic bomb) or not apparently so (the Internet): "Danny's answer—directed specifically at Kurzweil's scenario of humans merging with robots—came swiftly, and quite surprised me. He said, simply, that the changes would come gradually, and that we would get used to them " (Joy, 51).
- "Perhaps it is always hard to see the bigger impact while you are in the vortex of a change" (Joy, 55).
- Are we being overtaken by technology so slowly that we aren't even aware of the switch in power or will we one day be taken by surprise by something that was developed irresponsibly?