Cultural Opening Class, Epita

Teacher: Fuji FRANK

The students are required to bring this booklet to every class.

First half: Digital Economy: Themes and principles of Digital Economy. Emphasis on note taking. Don Tapscott's speech.

Second half: Economic Crisis of 2008 through the documentary film *Inside Job*.

Skills evaluated: Note taking, Listening comprehension, Vocabulary related to Economics, Presentation on a given topic.

Attendance and participation: There is no textbook for the course. Consequently, attending lectures and taking notes is the best way to maximise your performance. Exam questions are certainly going to be from topics covered in class.

Week 1: Introduction: Course overview, Transformations in society, The New Economy, Reengineering and its problems. Networked Intelligence.

Week 2: Problems with reengineering. Features of digital economy.

Week 3: Video 1, Talk 1: Openness. Networked Intelligence.

Week 4: Article 'Fixing the Digital Economy': Reading and discussion

Week 5: Revision of previous weeks.

Start watching *Inside Job*.

Week 6: Contd. *Inside Job*

Week 7: Contd. *Inside job*

Week 8: Presentation explanations, forming groups

Week 9, 10, 11, 12: presentations

Worksheet, *Inside Job*

Questions for the documentary to keep in mind while watching it. This will be graded in class:

1) What is the population of Iceland? _____

2) How much money did Iceland's three banks borrow? _____

3) What happened to house prices during the boom that resulted from deregulation?

_____

_____

_____

4) What rating did the Icelandic banks have from American auditing firms and rating agencies?

_____

5) When did Iceland's banks collapse? _____

6) What happened to unemployment in Iceland when these banks collapsed?

_____

_____

7) During the period of deregulation where did Iceland's government regulators go to work after leaving government posts? How did that happen?

_____

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_____

8) When did Lehman Brothers declare bankruptcy? When did Merrill-Lynch sell itself out of existence?_____

_____

_____

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_____

9) How many years after the Great Depression did the economy grow without a major crisis?

_____

_____

10) Who is Paul Volker? What important economic positions did he hold? When?

11) When did investment banks begin to grow dramatically? Why?

12) What process did President Reagan initiate concerning financial institutions?

13) Who was Charles Keating? Why did he go to jail?

14) What did Alan Greenspan do for Keating? What position will Greenspan hold regulating banks?

15) Who was Robert Rubin? What position did he hold in financial services? What position in government?

16) What is the Glass-Steagall Act? What was the Gramm-Leach- Bliley Act?

17) What did NY Attorney General Elliot Spitzer discover about investment banks and Internet companies?

18) Who was Brooksley Born? What agency in the federal government did she head?

19) What is the Commodities Futures Modernization Act? What did it outlaw?

20) What are the riskiest loans called? _____

21) Who was Richard Fuld? What did he earn?

22) What is AIG? What service did they perform in the financial sector?

23) Who was Joseph St. Denis? _____

24) Who is Raghuram Rajan? What did he predict?

25) Who is Henry Paulson? What positions did he hold in both private business and in government?

26) Who is Frederic Mishkin? What is his opinion about the financial collapse of 2008?

27) Who is Angelo Mozilo? How much did he earn between 2003 and 2008? What happened to his company?

28) How much money did Stan O'Neal receive when he was fired from his job?

29) How many lobbyists are employed by the financial services industry?

30) How did the financial services industry corrupt the college professors who taught economics?

31) Who was Martin Feldstein? How much did he earn as a consultant?

32) From where did President Obama get the financial advisors and regulators he appointed?

Articles for test questions:

Fixing the Digital Economy

By Jaron Lanier

- June 8, 2013, The NYT

TWO big trends in the world appear to contradict each other.

On the one hand, computer networks are said to be disrupting centralized power of all kinds and giving it to the individual. Customers can bring corporations to their knees by tweeting complaints. A tiny organization like WikiLeaks can alarm the great powers with nothing but encryption and net access. Young Egyptians can organize a nearly instant revolution with their mobile phones and the Internet.

But then there's the other trend. Inequality is soaring in rich countries around the world, not just the United States. Money from the top 1 percent has flooded our politics. The job market in America has been hollowed out; unpaid internships are common and "entry-level" jobs seem to last a lifetime, while technical and management posts become ever more lucrative. The individual appears to be powerless in the face of tough prospects.

Both trends are real, and they are related. The disruption and decentralization of power coincides with an intense and seemingly unbounded concentration of power. What at first glance looks like a contradiction makes perfect sense once one understands the nature of modern power.

It isn't clear when the Egyptian revolution will lead to better government in Egypt, but it is already clear that the Arab Spring increased the power and wealth of the networking companies used by Arab activists.

How did we get here? A healthy middle class is essential to both business and politics. Markets cannot function without customers, and government cannot remain democratic if wealth is overly concentrated.

Technological change might sometimes seem to be an automatic threat to the middle class. Operating a motor vehicle is easier than dealing with horses; people love to drive. So why should a truck driver or cabby be paid? People are still needed to do that driving, even if they suffer less than their equestrian forebears did. Unions fought for pay and working conditions that turned driving jobs into middle-class ones. In this century, however, we have forgotten that wisdom and decided that when it comes to digital networks, more and more people will not be paid for what they do even though what they're doing is needed.

Jobs involving communication and expression (music, journalism and so forth) are suddenly much harder to come by, because information is now held to be free. Naturally, a 19th-century trope, the Horatio Alger story, has reappeared. With enough hard work, opportunity is said to be around the corner for young journalists and musicians. Alas, there are only a few genuine success stories. Almost everyone else in the game lives on false hope, accepting the benefits of an informal economy — reputation and barter — while helping a small, distant elite build real wealth. Instead of a bell curve, the distribution looks like a razor-thin skyscraper dragging an emaciated "long tail" behind it.

The fate of journalism and music awaits every other industry, and every kind of job, unless this pattern is undone. As this century unfolds, technology will continue to evolve. More and more activities will be operated by software. Instead of Teamsters, there will be robotic trucks. Where there had once been miners, there will be mining robots. Instead of factories, there will be 3-D printers in

every home. Experimental robots have already outperformed many a white-collar worker, including the legal researcher, the pharmacist and the scientific investigator.

All forms of automation ultimately rely on data that come from people, however. There is no magical "artificial intelligence." When a big, remote computer translates a document from English to Spanish, for instance, it doesn't understand what it is doing. It is only mashing up earlier translations created by real people, who have been forgotten because of the theater of the Internet.

There are always real people behind the curtain. The rise of inequality isn't because of people not being needed — more precisely, it's because of an illusion that they aren't even there.

DISSECT almost any ascendant center of power, and you'll find a giant computer at the core. In the past, power and influence were gained by controlling something that people needed, like oil or transportation routes. Now to be powerful can mean having the most effective computer on a network. In most cases, this means the biggest and most connected computer, though very occasionally a well-operated small computer can play the game, as is the case with WikiLeaks. Those cases are so rare, however, that we shouldn't fall into the illusion of thinking of computers as great equalizers, like guns in the Wild West.

The new class of ultra-influential computers come in many guises. Some run financial schemes, like high-frequency trading, and others run insurance companies. Some run elections, and others run giant online stores. Some run social network or search services, while others run national intelligence services. The differences are only skin deep. I call this kind of operation a "Siren Server."

Siren Servers are usually gigantic facilities, located in obscure places where they have their own power plants and some special hookup to nature, like a remote river, that allows them to cool a fantastic amount of waste heat.

Siren Servers calculate actions for their owners that reduce risks and increase wealth and influence. For instance, before big computers and cheap networking, it was hard for health insurance companies to gather and analyze enough data to be tempted to create a "perfect" insurance business, in which only those who need insurance the least are insured. But with a big computer it becomes not only possible, but irresistible.

Giant financial schemes are similarly tempting. It is commonly believed that deregulation motivated financial adventurism, but it can also be argued that Moore's law, which holds that computing becomes better and cheaper at an accelerating rate, guaranteed that sooner or later the temptations of using computation to displace risk would become irresistible.

Financiers caught the seductive whiff of digital perfection in the 1970s. The first major market crash at least partially attributable to automated trading came in 1987. Big computer-centric schemes like those hatched by Long Term Capital Management and Enron, laid down a pattern that continued with the Great Recession of 2007-9.

Since networking got cheap and computers became enormous, the financial sector has grown fantastically in proportion to the rest of the economy, even though it has done so by putting the rest of the economy at increased risk. This is precisely what happens naturally, without any evil plan, when someone has a more effective computer than anyone else in an open network. Your superior calculation ability allows you to choose the least risky options for yourself, leaving riskier options for everyone else. If the economy were infinite, it would be able to absorb the radiated risk. The inevitable massive public bailouts were needed not because the schemes didn't make sense, but because they eventually made impossible demands on the world outside of the scheme.

A hip trope holds that privacy is passé, but the loss of one's privacy to a Siren Server means more than the loss of one's credit card or Social Security number to a petty online thief. An ordinary

person's choices in music, friends, purchases, reading material and travels in the course of the day are just some of the streams of data that feed into algorithms that compare and correlate the activities of everyone being spied upon.

The motivation for the omni-ogling is that it leads to effective behavioral models of people. These models are far from perfect, but are good enough to predict and manipulate people gradually, over time, shaping tastes and consumption in more effective and insidious ways than even subliminal advertisements do.

MANIPULATION might take the form of paid links appearing in free online services, an automatically personalized pitch for a candidate in an election or perfectly targeted offers of credit. While people are rarely forced to accept the influence of Siren Servers in any particular case, on a broad statistical basis it becomes impossible for a population to do anything but acquiesce over time. This is why companies like Google are so valuable. While no particular Google ad is guaranteed to work, the overall Google ad scheme by definition must work, because of the laws of statistics. Superior computation lets a Siren Server enjoy the magical benefits of reliably manipulating others even though no hand is forced.

Even friendly, consumer-facing Siren Servers ultimately depend on spreading costs to the larger society. Siren Servers can function profitably only if people aren't paid for the data that is used to calculate their statistical schemes.

Siren Servers drive apart our identities as consumers and workers. In some cases, causality is apparent: free music downloads are great but throw musicians out of work. Free college courses are all the fad, but tenured professorships are disappearing. Free news proliferates, but money for investigative and foreign reporting is drying up. One can easily see this trend extending to the industries of the future, like 3-D printing and renewable energy.

A Siren Server gains influence through self-effacement. There is a Zen quality to it. A big computational-finance scheme is most successful when the proprietors have no idea what they finance. The whole point is to make other people take risks, and knowledge means risk. The new idea is to have no idea whether the security you bundled is fraudulent or not.

YouTube doesn't take responsibility for checking if a video, before it's uploaded, violates a copyright. Facebook isn't culpable if a tormented teenager is driven to suicide.

The point is to be a computational actor — the more meta, the better — but without seeming, or behaving like, an actor. The digital pursuit of reward without risk happens automatically, at arm's length. Documents are signed by "robosigners," and prices are set by "price bots."

Once this principle is understood, the seeming contradiction — that power is being more and less concentrated at the same time — melts away. An old-fashioned exercise in power, like censoring social network expression, would reduce the new kind of power, which is to be a private spying service on people who use social networking.

Indeed, Sirenic schemes often offer an upfront treat. Insanely easy and cheap mortgages; free music, video, Web search and social networking: all are examples of the trinkets dangled to lure initiates into answering the call of a Siren Server.

And yet I am optimistic.

Ted Nelson was the first person, in the 1960s, to describe how people might use digital networks for collaboration or expression. His work foresaw both the problems we face and the potential solutions to them. A Nelsonian solution might look like this: Institute a universal micropayment system. Keep track of where information came from. Pay people when information that exists because they exist

turns out to be valuable, no matter what kind of information is involved or whether a person intended to provide it or not. Let the price be determined by markets.

I have become used to eyes rolling. How could such a system ever come about? Would it be too complicated? Would it create barriers for the poor or disadvantaged? Could it really work, or would it just create a new theater of unfairness?

Opportunities for testing new economic ideas are coming along at a rapid pace. For instance, 3-D printing is already a hobbyist craze. People are printing out all varieties of tchotchkes in these magical chambers instead of buying them in stores. Currently, designs for 3-D objects are shared free, in the way that music files are moved around free. Small communities of influential programmers usually set the pattern for how new consumer information services will be used, and the idea that information should be free is deeply entrenched in software culture.

Why not stage an experiment? We techies could set up a trial system in which people pay each other for their printable designs. If it's already too late for 3D printing, other opportunities will come along. We need to experiment; to learn how to nurture a middle class that can thrive even in a highly automated society.

Person-to-person information markets might lead to a simpler and clearer online world. Because our information systems are designed to initially forget who provided information, services like Google and Bing must constantly scrape the global network to reconstitute the context of data. Siren Servers know who links to your data, but you don't.

EVEN today's titanic Siren Servers would benefit from a more monetized information economy, because it would be a healthier-growing economy. The information economy cannot exhibit the long-term growth it ought to if information coming from ordinary people is forever declared to be off the books. (Though I do research for Microsoft, it does not vet my writing and this essay represents only my point of view.)

Skeptics sometimes reveal hidden and unfounded wells of elitism. These surface in comments like: "Most people wouldn't contribute very much." But there are already empirical hints to counter such pessimism.

In networks with a central point of control, like YouTube or the Apple Store, we do see a Horatio Alger pattern in the distribution of outcomes, where there are very few viable winners and an unbounded number of hopefuls. But in more directly and thickly connected networks like Facebook, we see people typically exposed to a large number of other people, rather than just a few stars. Therefore, if Facebook users paid one another, they would see a less elite distribution of economic benefits.

Another potential benefit of monetized information is to balance the power of government. When information is free, there is no cost to gathering information about citizens. I would like the government, or anyone else, to pay each person each time that person is tracked by a camera. The government should be able to use cameras for security purposes, but in a limited, not unbounded way. Similarly, candidates should not be able to win elections by having the best Siren Servers, but that's only a problem if the information is free. Citizens should not lose the power of the purse.

The Internet has often been compared to the Wild West, with its dreamers and schemers, its glimmering promise of free land (primarily accessible, of course, through a monopolized railway). We have evolved out of these something-for-nothing schemes before, and we can do so again.

Presentation Guidelines

In groups of four, you are going to have to present one of the following topics:

1. The biggest invention of mankind and how it transformed the society.
2. An example of Digitization and how it has transformed the society.
3. How disintermediation has made middlemen redundant.
4. Information immediacy
5. Innovation and imagination.
6. Technology and globalization.
7. Technology and discordance.
8. Leadership but no leader in the New Economy.

Requirements:

Each presentation must

- Last 25-30 minutes
- Follow the BOMBER B structure
- Have at least one video
- Have several slides with images
- Not have mistakes in the slides.

These presentations will have a co-efficient of 6.

Notes: