

Society, Information Technology and the Global University

Syllabus (in development)

<http://worlduniversityandschool.org/InfoTechNetworkSocGlobalUniv.html>

Fall 2024, Tuesdays 9am-10am,
In Google group video Hangouts,
time to be determined on Harvard's virtual island
in the 3-D virtual world of Second Life/Google Streetview
September 26th – December 12, 2017

Instructor: Scott MacLeod, M.A., D.R. – <http://scottmacleod.com>

E-mail: sgkmacleod@worlduniversityandschool.org

Materials:

- I'll provide you with readings/videos for this course.

Description of the Course:

What is information technology, broadly conceived? How did it develop? Who did it? What has been the process of diffusion into the economy and society? How and why did the Network Society take shape? In this course, we'll analyze the interaction between society and contemporary information technologies, in a multicultural and comparative perspective. In doing so, we'll examine what data and evidence are in the social sciences, how they are used, and how they are interpreted. We'll examine these questions in the first two hours of the class.

Relationship to other Courses and to the World University and School's Mission

This course meets both Humanities and Social Science Division requirements.

Course Objective (in development)

Information Technology is re-shaping the world in significant ways, and social science is an integral part of our culture. You can more fully appreciate and analyze the complex issues before you if you **understand the fundamental processes** involved. Gaining analytical tools to study information technology and their far-reaching effects on social processes will help you make crucial decisions in the network society.

Course Requirements and Method of Evaluation:

Course grading will follow the traditional academic letter grade system (A=outstanding, B=above average, C= satisfactory/ competent college level work, D=below average/marginal, F=unsatisfactory/failing). Final course grades for students will be determined as follows:

Attendance	20%
Blog Entries	23%
Editing Wikipedia entry	2%
Audio or Podcast Assignment	25%
SL Building Assignments	5%
Essay on Information Technology Rev.	15%
Final Assignment	10%

The relative portions of the final course grade for assignments and tests *may* be adjusted slightly depending upon the actual number of tests and assignments. Students are encouraged to discuss any concerns regarding grading with the instructor. Additional information regarding grading practices is available upon request.

Expectations:

Participation: Please participate actively in this course. Please come prepared to meaningfully discuss the topics covered in each lecture. In order to meaningfully contribute to the discussion, please read the assigned material before the lecture. Your comments, thoughts, questions and engagement in the class demonstrations will count toward your final grade. (See more about the attendance policy below). Please be advised that I may call on students or make comments that are intended to make the lectures a little more lively and interesting. These remarks are not intended to embarrass, harass, humiliate, or offend anyone.

Attendance. Please attend all classes and participate in class discussions. This course follows the attendance policy established by Penn State. Students may make up missed examinations only if the absence is due to illness or family emergency and only if they notify me PRIOR to the scheduled time. You (or a friend, roommate, parent, etc.) may telephone me at (412.478.0116) or leave a message via voice mail or with the faculty secretary. Students who fail to follow this procedure will either: (1) be required take an examination/quiz, which may be significantly more difficult than the original; or (2) receive a zero for the missed quiz/examination.

Responsibility. If you miss class, you are responsible for obtaining the assignment and any class notes. I do not accept absence as an excuse for not knowing about an assignment or a topic. If you have special concerns or problems with any aspect of the course (e.g., an assignment deadline), it is up to you to contact me to discuss the matter as soon as possible so that we can make necessary arrangements.

Commitment. Please engage this course. This includes attending classes, participating in class discussions, and asking questions when you need clarification. It also involves doing whatever is necessary to succeed--being willing to spend the time necessary to understand reading material, doing a thorough job on assignments and papers, and seeking extra help when necessary.

Academic Integrity / Honesty. I expect that you will follow all University policies pertaining to academic honesty--especially with regard to taking examinations and submitting written work. University policies are described in your student handbook.

Consideration. I expect that you will be considerate both of your fellow students and me. This includes avoiding disruptions such as arriving late or leaving early, getting up during class, or carrying on conversations during class. If you bring cell phones or beepers to class, they should be turned off. In this class please be respectful of others--even when you disagree with their comments.

If you act in accordance with the above, you will find me to be understanding of special needs and more than willing to do my part to help you succeed. On the other hand, you can expect that I will impose appropriate penalties for late work, missing exams, disruptive behavior, and academic dishonesty.

If you have concerns with any aspect of the course, please feel free to discuss them with me. If you ever feel that I have treated you in less than a respectful manner, please talk to me about this issue.

COURSE OUTLINE AND READINGS

(in development)

This course outline and reading list is a **projected** schedule and may be modified at the discretion of the instructor. Some assignments will be made during the course of the semester in class.

0. Introduction: Technology and Society (1)

Week 1

Information Technology and Society: Introduction

Tu Sep 26, 2017

Reading / media / projects: Create blog, and write a post

Watch and read:

Identity and Change in the Network Society - Manuel Castells

<http://globetrotter.berkeley.edu/people/Castells/castells-con4.html>

Feedback:

Good beginning with your website/blog - <http://www.tanyatomato.com> and <http://www.tanyatomato.com/2017/10/society-information-technology-and.html>. As an example of blogspot labels, here's the "global university" label in my blog - <https://scott-macleod.blogspot.com/search/label/global%20university> (which will be relevant to this course later on, so please have a glance at it) - and here's the "information technology" label, by contrast - <https://scott-macleod.blogspot.com/search/label/information%20technology>. I think it should be fairly straightforward to add "labels" to your website/blog since it's blogger.com, or to develop a different approach to writing about our two courses. (Please let me know if you have a questions about this).

Week 2

The Information Technology Revolution: History, Geography, Actors

Tu Oct 3, 2017

Reading / media / projects:

Here's "Identity and Change in the Network Society - Manuel Castells" -

<http://globetrotter.berkeley.edu/people/Castells/castells-con0.html>

And could you please read Castells' "Prologue: the Net and the Self" -

<https://pdfs.semanticscholar.org/3746/ef34fd58d047d973008a0a723f832a83797e.pdf>

"The Rise of the Network Society" - Castells

<https://www.well.com/~willard/Castells-%20NetworkSocietyReading.pdf>

What is the Network Society for Castells? What are Networks? What is Society for Castells? ... from this Globetrotter video interview/transcript, and from other sources online? Could you please write in your blog a bit about this for next week?

(Also, here are some notes about what we've been talking about thus far -

<http://socinfotech.pbworks.com/w/page/23323461/InfoTechSoc1> - accessible from here -

<http://worlduniversityandschool.org/InfoTechNetworkSocGlobalUniv.html>).

And here for example is the Atul Gawande article from the 5th week of your MIT OCW Energy course -

<https://ocw.mit.edu/courses/sloan-school-of-management/15-031j-energy-decisions-markets-and-policies-spring-2012/> - (where I had just come across an article by Gawande in last week's

New Yorker "Is Health Care a Right?")

<https://www.newyorker.com/magazine/2009/01/26/getting-there-from-here>

<https://ocw.mit.edu/courses/sloan-school-of-management/15-031j-energy-decisions-markets-and-policies-spring-2012/readings/>

Who invented the microprocessor? When and where did this invention take place?

What is the Internet? (answer in no more than 5 sentences)

What is the relationship between internet-based information technologies and innovation?

And could you please read further both Castells' "Prologue: the Net and the Self" -

<https://www.well.com/~willard/Castells-%20NetworkSocietyReading.pdf> - from the first book in his trilogy

"The Rise of the Network Society" as well as his 2010 Prologue to this same book - <https://pdfs.semanticscholar.org/3746/ef34fd58d047d973008a0a723f832a83797e.pdf> . Reading is another kind of input

Extras:

Here's the multimedia I mentioned on the history of the mobile phone - "40 year evolution of mobile phones" <https://twitter.com/ValaAfshar/status/915958324457345026> - and which I just posted here - <https://twitter.com/WorldUnivAndSch> .

Feedback:

Good beginning with your website/blog - <http://www.tanyatomato.com> and <http://www.tanyatomato.com/2017/10/society-information-technology-and.html>. As an example of blogspot labels, here's the "global university" label in my blog - <https://scott-macleod.blogspot.com/search/label/global%20university> (which will be relevant to this course later on, so please have a glance at it) - and here's the "information technology" label, by contrast - <https://scott-macleod.blogspot.com/search/label/information%20technology> . I think it should be fairly straightforward to add "labels" to your website/blog since it's blogger.com, or to develop a different approach to writing about our two courses. (Please let me know if you have a questions about this).

1. The Information Technology Revolution: History, Geography, Actors (Microelectronics, computers, telecommunications, genetic engineering)

Week 3

The Internet Society: Social History of the Internet - 1980s and 1990s

Tu Oct 10, 2017

Reading / media / projects:

For next week in your blog, could you please write about, in a 3-5 sentences, what the genetic engineering revolution is including a thesis / argument in the first sentence. ("My thesis is that the genetic engineering revolution came about because ..." or ... or ...) ... and begin to think about a midway-through-the-course research writing project (900-1000 words) you might like to explore, especially in terms of what questions you'd like to ask.

Congratulations on getting your web site up and running - a kind of programming.

Re the cloning of Dolly the Sheep in Scotland in 1997 and per the course -

<https://twitter.com/WUaSPress/status/920365608071393280>- here's the link I shared of "An

artificial womb successfully grew baby sheep — could humans be next?" -
<https://twitter.com/ValaAfshar/status/919641144975339520> - both accessible here -
<https://twitter.com/WUaSPress> (around October 17, 2017).

Extras:

Hi Tanya ... just found some MITS Altair and invention of the Microprocessor video resources -
 To ... http://worlduniversity.wikia.com/wiki/Computing_History ...) ... interesting specifics to this
 history ...

Apple 1984 Super Bowl Commercial Introducing Macintosh Computer.
<https://www.youtube.com/watch?v=axSnW-ygU5g>
[https://en.wikipedia.org/wiki/1984_\(advertisement\)](https://en.wikipedia.org/wiki/1984_(advertisement))

MITS Altair 8800 demonstration
https://www.youtube.com/watch?v=vAhp_LzvSWk

... another demonstration of Altair by Bill Gates -
 Bill Gates talks about Microsoft and the Altair 8800 (1994)
<https://www.youtube.com/watch?v=pqAg0GJLPGk>

Vintage Computer MITS Altair 8800 Microcomputer One of the first SN21
<https://www.youtube.com/watch?v=fxCC0NZ7gLM>

M-DCPS Alumni Hall of Fame: Tribute to Henry Edward Roberts
<https://www.youtube.com/watch?v=8tJWuiEu3WA>

Ted Hoff Inventor of the Microprocessor
<https://www.youtube.com/watch?v=QsBclrwX-e0>

Interview with Ted Hoff
<https://youtu.be/YtqF2gUsiU4>
 (from - http://ethw.org/Ted_Hoff)

History of the Internet - 1980s and 1990s

Tu Oct 17, 2017

Reading / media / projects:

Please watch and read:

<https://youtu.be/pjQgSpKpRDE>

<http://dimenet.asc.upenn.edu/about/>

Extras:

Sandra González-Bailón, Decoding the Social World: Data Science and the Unintended Consequences of Communication, University of Pennsylvania

<https://youtu.be/o2y9hNwwiTM>

<http://dimenet.asc.upenn.edu/news/>

At about the 37 minute mark - vacuum tubes as amplifiers were made submersible in early 1950s

Transatlantic Cable - Documentary 2017 HD

<https://www.youtube.com/watch?v=0Llr8v9WVVA>

Week 5

History of the Information Technology - Genetic Revolution

Tu, Oct 24, 2017

Reading / media / projects:

For next week, could you please read the following -

A

Manuel Castells in Wikipedia

https://en.wikipedia.org/wiki/Manuel_Castells

(re his 1996 article "The Net and the Self: Working notes for a critical theory of the informational society," here's a reference -

<http://journals.sagepub.com/doi/pdf/10.1177/0308275X9601600103> - but it doesn't appear to be online.

B

ABBATE, J. (1999) INVENTING THE INTERNET (PART ONE) by Sue Greenwood

<https://suegreenwood.wordpress.com/2013/04/04/abbate-j-1999-inventing-the-internet-part-one/>

C

McKim, J. 2001. Review of Inventing the Internet by Janet Abbate. Canadian Journal of Communication, Vol. 26:1

<http://www.cjc-online.ca/index.php/journal/article/viewFile/1202/1149>

Do you know about Open Library ?

Janet Abbate's book is accessible there, for further details, if interested -

https://openlibrary.org/works/OL1989708W/Inventing_the_Internet

And do you know too about World Catalog - <https://www.worldcat.org/> - for further access to physical versions or a book near you, as well as online versions?

Projects:

In your upcoming Twitter profile, could you post a thesis of each of the 3 items above in one or two Twitter posts?

Extras -

Barbara van Schewick's Stanford profile re network neutrality - <https://twitter.com/vanschewick>

Week 6

Sociability, the Internet and Empirical Data in the mid-late 1990s: Communities and Individualization, Social Movements

Reading / media / projects:

Re the genetic revolution, check out this 1:35 second video about CRISPR gene editing software, from MIT and Harvard's Broad Institute -

<https://www.broadinstitute.org/what-broad/areas-focus/project-spotlight/questions-and-answers-about-crispr> - in regards to our conversation about the genetic revolution from a contemporary perspective. The great CRISPR talk I heard yesterday at Stanford by UC Berkeley's Jennifer Doudna, with a Harvard Ph.D., was about Cas9 CRISPR developments as well - re this video).

Here's a great article on Universal Basic Income by Scott Santens ... The Real Story of Automation Beginning with One Simple Chart: Robots are hiding in plain sight. It's time we stop ignoring them.

<https://medium.com/basic-income/the-real-story-of-automation-beginning-with-one-simple-chart-8b95f9bad71b> ... (re avatar bots and robotics), as leisure potentially grows for many -

<https://twitter.com/maianilsson/status/925384667657732097> (and

<https://twitter.com/WorldUnivAndSch/status/923214091073679366> and

<https://twitter.com/WUaSPress/status/923210887137079296>)

And here's his Twitter - <https://twitter.com/scottisantens>

and Sandra González-Bailón's - <https://twitter.com/sgonzalezbailon>

and Abigail Harrison's - <https://twitter.com/AstronautAbby> and her aunt Tanya of Mars -

<https://twitter.com/tanyaofmars>

and the great social theorist Saskia Sassen's - <https://twitter.com/SaskiaSassen>

and, likewise, here's https://twitter.com/castells_manuel (albeit not Tweeting these days - like Stanford's Barbara van Schewick - <https://twitter.com/vanschewick> - recently)

Transistor Full Documentary

"Transistorized" (1999) <https://www.youtube.com/watch?v=U4XknGqr3Bo> (John Bardeen, William Shockley and Walter Brattain at Bell Labs)

Here's Stanford's Fred Terman - <https://www.youtube.com/watch?v=Jwk2Y4mi87w>

And here's Stanford's William Shockley - <https://www.youtube.com/watch?v=LWGVuoisDbI>

Please get too an avatar in SL and find your way to Harvard's virtual island (Berkman Island) - and let me know your avatar's name. My avatar in SL is Aphilo Aarde.

Could you please post the 3 main theses of Sandra González-Bailón's institute at UPenn for this week to your Twitter feed.

And could you please begin to come into conversation with World University and School, or the WUaS Press, or one of the other above Twitter feeds, but creating a Tweet or two responding to one of us - especially about a significant theme from the course and something you might like to explore more fully via a kind of research project?

And please let me know when you've Tweeted the theses of the articles from last week.

I've added much of this to the Syllabus -

<https://docs.google.com/document/d/1IO6tsS87AjQUXLXmYJGgGzzbWzXMvPCUIlyynQ381b3A/edit?usp=sharing>

How's your weekly communication going with Larry and re your MIT OCW "Energy Decisions, Markets, and Policies"

<https://ocw.mit.edu/courses/sloan-school-of-management/15-031j-energy-decisions-markets-and-policies-spring-2012/> course?

Cheers, Scott

Week 7

The New Media and the Culture of Real Virtuality

Here's the "Steve Jobs and Bill Gates' Interview (Full Video in 2007+) -

<https://www.youtube.com/watch?v=L1pA1LqXqXo> (accessible from here too -

<https://scott-macleod.blogspot.com/2017/11/peak-district-bill-gates-and-steve-jobs.html> . Please begin to read the "global university" label here -

<https://scott-macleod.blogspot.com/search/label/global%20university>). What explicitly is visionary about Gates and Jobs' thinking here in terms of innovation ideas from "Society, Information Technology, and the Global University"?

In addition to watching the video for next week, and exploring writing the very brief theses from previous weeks, please add what you write to any of your web sites (keeping in mind conversation generation and knowledge-sharing with others over time, and perhaps how you'd like to focus a specific social media idea-sharing in a specific way ...) ...

- Tanya Tomato ...<https://plus.google.com/113901572106378599975>

- Tanya Bergamot - <https://plus.google.com/114952144582851182406> - or your web site

- Tanya Tomato website <http://www.tanyatomato.com/search/label/Information%20Technology> - or your

- Tanya Tomato Twitter - https://twitter.com/tanya_tomato -

- Avatar name in SL - Tanya Bergamot

why don't you explore taking some of the themes of the course thus far (of your choosing) and apply them in a brief paragraph (3-5 sentences) to the questions implicit in your airplane Twitter post "Airplane Mode: In the summer of America's flying discontent, tensions are mounting long before check-in <https://www.nbcnews.com/specials/airplane-mode> ... via ... " -

https://twitter.com/tanya_tomato/status/925894281260253185 ?

For next week, please formulate the question that you respond to in writing (... is it something like "How could the quality of airplane travel improve for all people, and tensions thus disappear?" In my thinking (which you may not share), for example, I'd hypothesize that SW may have the beginning successful thinking in response to this issue and even in busy times and in busiest airports - and as a culture - so then how to extend this - even as a management question? (I see SW's culture as being hippy-informed in response to the modernity, but that this culture may have changed too in recent years from its beginnings). But you might generate very different thinking based on your ethnographic / cultural approach working on board, etc.

Meet with you in SL next week for the last half of the class? What's your avatars name

How again is your weekly communication going with Larry and re your MIT OCW "Energy Decisions, Markets, and Policies"

<https://ocw.mit.edu/courses/sloan-school-of-management/15-031j-energy-decisions-markets-and-policies-spring-2012/> course? (I enjoyed hearing Richard Schmalensee yesterday talk at Stanford).

Reading / media / projects:

Week 8

Here's Robots building a 3D bridge - <https://twitter.com/ValaAfshar/status/930467758663458816> - and how I'm engaging this for ACTUAL-VIRTUAL Harbin Project - <https://twitter.com/HarbinBook/status/930511447552954368> - which will also become a STEM and ethnographic field site, as well as classroom.

By the way, a "program" is a series of coded software instructions to control the operation of a computer (or other machine), where a computer is an input-output device. So an airplane and a car are not yet computers in this sense. (And per this information technology revolution course, airplanes and cars also have microelectronics, telecommunications, and genes in them). But when avatar bots (like in SL/OpenSim) as programs with agency - kinds of free will - start to inhabit and control our smartphones, and begin also to inhabit virtual airplanes and virtual flying cars (think "the Jetsons") - and actually too - we'll have new definitions of airplanes and cars as computers.

(Orwell's book "Nineteen Eighty-Four" was written in 1949, not the 1930s - https://en.wikipedia.org/wiki/Nineteen_Eighty-Four).

Here's a 3D machinima piece by Bernhard Drax on persistence of place in a virtual world per Tom Boellstorff (CoAiSL < >@HarbinBook) https://www.youtube.com/watch?v=T8GYs_9PjFs ... "Our Digital Selves" [Drax 2018] - <https://twitter.com/scottmacleod/status/921873401827835904> .

More about an Universal Basic Income & Finland ... re WUaS plans to facilitate a cryptocurrency in all ~200 countries' official languages with an UBI for all 7.5 billion people <https://scott-macleod.blogspot.com/2017/11/daucus-carota-in-developing-law-schools.html>

Again, how is your weekly communication going with Larry and re your MIT OCW "Energy Decisions, Markets, and Policies" <https://ocw.mit.edu/courses/sloan-school-of-management/15-031j-energy-decisions-markets-and-policies-spring-2012/> course? (I again enjoyed hearing Dick Schmalensee's talk at Stanford but won't share my notes with you at this point). Enjoyed hearing about your team work with this climate simulation.

For next week, please get Second Life up and working if you can. And please catch up on the past projects from this course as well - via email perhaps instead of posting to social media.

Also, for a final course project, I'd like to ask you to write a five page research paper (perhaps in Google Docs), and begin to think through what you'd like to inquire about in this paper for next week - which we'll then talk about and focus further, drawing on the innovative thinking and ideas of this course re the information technology revolution. So, for next week, could you please write a tentative opening paragraph, with a research question, a thesis (e.g. "I want to argue that ... " "I want to suggest that ...") and 3 main points that you might like to "argue" further in the paper.

Here's the great day-long MIT Media Lab "Forbidden Research" conference in video from last year - <https://www.media.mit.edu/events/forbidden/overview> . The research by MIT's Kevin Esvelt in genetics and CRISPR, - <http://opentranscripts.org/transcript/messing-with-nature-genetics/> - and possibly that by Harvard Prof George Church, and Stanford Prof Megan Palmer, could be of particular interest to you.

Here, too, is my recent correspondence with MIT Prof. Dick Schmalensee - <http://scott-macleod.blogspot.com/2017/11/pinus-palustris-near-term-policy.html> - and where I mention you taking his course at World University and School.

Some further definitions re - Society, Information Technology, and the Global University ... <http://worlduniversityandschool.org/InfoTechNetworkSocGlobalUniv.html> - ... While society can mean - "the aggregate of people living together in a more or less ordered community" - for Castells it further refers to "social, political, economic and cultural changes caused by the spread of networked, digital information and communications technologies," with intellectual origins for Castells going back to "social theorists such as Georg Simmel who analyzed the effect of modernization and industrial capitalism on complex patterns of affiliation, organization, production and experience" (https://en.wikipedia.org/wiki/Network_society).

And information for Castells is related "to data and knowledge" - <https://en.wikipedia.org/wiki/Information> - and "where its creation, distribution, use, integration and manipulation is a significant economic, political, and cultural activity" (https://en.wikipedia.org/wiki/Information_society).

Reading / media / projects:

Week 9

Here are three resources on the Blockchain ledger, which could unglamorously be as significant technologies re this "Society, Information Technology, and the Global University" course (<http://worlduniversityandschool.org/InfoTechNetworkSocGlobalUniv.html>) as computing, microelectronics, and telecommunications, as well as the genetic engineering revolution (as the four main technological focuses of this course)

Re

Blockchain ledger resources (about which you'll find more, undoubtedly)

1

"Anonymized Health Token (AHT)" - <https://www.youtube.com/watch?v=AeoYOyqOZ00> (and I've engaged this video a bit here - <http://scott-macleod.blogspot.com/2017/10/gloriosa-genus-stanford-medicine-grand.html> - and in one or two other blog posts - all re online Medical Schools with the blockchain ledger for health data ... and here's a post from 2015 focusing on the Blockchain - <http://scott-macleod.blogspot.com/2015/12/sand-dollar-in-big-picture-of-planning.html> - with some Wikipedia definitions)

2

"Blockchain - The New Technology of Trust" - <http://www.goldmansachs.com/our-thinking/pages/blockchain/> (about which I posted here - <http://scott-macleod.blogspot.com/2017/10/cirque-of-towers-wind-river-range.html> - in October)

3

"Blockchain for Business - An Introduction to Hyperledger Technologies: A primer to blockchain and distributed ledger technologies. Learn how to start building blockchain applications with Hyperledger frameworks" - an edX course <https://www.edx.org/course/blockchain-business-introduction-linuxfoundationx-lfs171x>

Re

Eudaimonics' related article and re Gates and Jobs - <https://eand.co/techs-biggest-challenge-yet-8156486fd022> - re the Steve Jobs' and Bill Gates' video interview only in some ways (Jobs is barefoot in this picture :)

And here's my "Eudaimonia (personal flourishing) is 'Flow' and Bliss" - <http://scottmacleod.com/EudaimoniaFlow.htm> - which I mentioned relatedly.

Concerning next week's class and your riffing with an introductory paragraph to your 5 page research paper, I could see specifically inquiring about how the Blockchain will be revolutionary within the context of the course, then how it might articulate with a cryptocurrency not only for financial exchanges - re the economy side of this course - but also for health data which will complicate things, but also as part of an Universal Basic Income, where "universal" could be said to have a societal aspect to it (per this course), and re major WUaS Universities in all ~200 countries' official languages - https://wiki.worlduniversityandschool.org/wiki/Nation_States - with law schools, law students, and computer science Ph.D. students to do all the coding of the blockchain ledger. "I want to argue / suggest that the blockchain ledger represents a further paradigm shift in the information age ... " is the kind of thesis I think is helpful in writing an academic paper, because it allows one to back this up with points / paragraphs / and evidence, say in 3-5 further paragraphs. But your research question may inform your argument in a very different way. And a good thesis (Castells' thinking is full of theses / arguments which are disputable) could be argued against ... or the evidence / points you back up your argument with, could support a very different thesis too - which makes for the art of writing a social science / economics/business paper. In some ways I'm looking for a well-reasoned (re logic questions) paper (and there are some 3-4 page papers here - <http://scottmacleod.com/papers.htm> - which I wrote at UCSB some years ago, which are closely reasoned, some of which I could share with you, if that would be helpful, re the kind of paper I in this course am looking for).

Thanks for including me in your communication today with Larry about your Energy course ... hope you can keep the weekly communication with him going flourishingly, and generative.

I just came across this "Detailed JRC report on blockchain in education" - [http://publications.jrc.ec.europa.eu/repository/bitstream/JRC108255/jrc108255_blockchain_in_education\(1\).pdf](http://publications.jrc.ec.europa.eu/repository/bitstream/JRC108255/jrc108255_blockchain_in_education(1).pdf) - on Rebecca Ferguson's Twitter profile - <https://twitter.com/R3beccaF/status/933992068824879104> - coincidentally. It's relevant to getting a glimpse how the blockchain ledger will work re a cryptocurrency, and even re WUaS's plans for all 7.5 billion people and an UBI building out of ~200 countries' official languages (and indeed people in all 7,099 living languages re WUaS wiki schools for open teaching and learning in these). WUaS's planned online degrees of a Bachelor, Ph.D., law, M.D. and I.B. in all 200 countries' languages also is relevant here. I wonder how even this edX course on the blockchain - <https://www.edx.org/course/blockchain-business-introduction-linuxfoundationx-lfs171x> - could be used to code - in conjunction with all edX courses - for the education blockchain ledger, - and at WUaS and thus provide further structure re this report's first recommendation re " the development of 'open' blockchain implementations, and enshrine the principles of a) Recipient Ownership; b) Vendor Independence; and c) Decentralised Verification, then these terms will need to be defined in terms of educational records" (Grech and Camilleri 2017:107). Tweeted about this here - <https://twitter.com/WorldUnivAndSch/status/934123659307786240> .

And re the openness and trust issues the blockchain ledger gives rise to, I found this -
<https://twitter.com/kelflanagan/status/932353462741778433>

Grech, Alexander and Anthony F. Camilleri. Edited by Andreia Inamorato dos Santos. 2017.
 Blockchain in Education. Seville, Spain: Joint Research Centre (JRC)

Planning for all 7.5 BILLION PEOPLE for registration/matriculation+ and re a cryptocurrency with blockchain ledger, how best to further organize in every nation state online
https://wiki.worlduniversityandschool.org/wiki/Nation_States ... You_at_World_University
http://worlduniversity.wikia.com/wiki/You_at_World_University ... in all 7,099 living languages?
<https://twitter.com/WorldUnivAndSch/status/932666422433521664> -

in which I replied to Prof Kelly Flanagan's Tweet:

A domain for each student (#DoOO) each with a Personal #API (#PAPI) with a personal Learner Record Store (#LRS) may be the answer to #GDPR. Each student owns their own data and explicitly shares it with an educational institution as desired.

<https://twitter.com/kelflanagan/status/932353462741778433>

Re openness & trust issues the blockchain ledger gives rise to>
<https://twitter.com/kelflanagan/status/932353462741778433> ... & re WUaS's planning for 7.5 BILLION PEOPLE for registration/matriculation+ & re a cryptocurrency w blockchain ledger
https://wiki.worlduniversityandschool.org/wiki/Nation_States ... You_at_World_University
http://worlduniversity.wikia.com/wiki/You_at_World_University ... -
<https://twitter.com/WorldUnivAndSch/status/934126717165125632>

Wanted to share this great Bitcoin / Blockchain article with you - This is the best, hype-free and most accessible explanation I've seen of how blockchains work, written for a general audience.



Terrific work (with animated emojis) by @_tessr -

<https://medium.com/@tessr/making-money-530d2bb2b8f7> ... (per Dario Taroborelli, a head a Wikipedia - <https://twitter.com/ReaderMeter/status/934828716445679616>)

... I've gathered together many related blockchain Tweets here today -
<https://twitter.com/WorldUnivAndSch> (Will add this too to the Syllabus)

How's riffing with your paper's opening paragraph coming? Would love to see on your blog/website tomorrow a paragraph with a research question, your initial thesis/argument, 3 main points, and a conclusion ...

Hi Scott,

Lots of fun investigating bitcoin et al. this week. I don't mind learning all that I have, but I've decided (and hope this is ok) to focus on CRISPR and genetic engineering, specifically in relation to crop production and biofuels. Here is an outline of the potential paper.

<http://www.tanyatomato.com/2017/11/112417-potential-paper.html>

Thanks,
Tanya

Thanks ... so in a sense with a much more significant information/knowledge side to to the technology, re the information technology revolution in the title of this course.

2. The Internet Society: Social history of the Internet. The cultures of the Internet. Virtual communities and sociability online. Social movements, political conflicts, and the Internet.

Week 10

I looked up "crispr and algae biofuels" and "blockchain and biofuels" and found the following possibly helpful resources. What are you finding in these regards?

crispr and algae biofuels

-

<https://geneticliteracyproject.org/2017/06/21/crispr-edited-algae-high-biofuel-yield-created-exxonmobil-craig-venters-synthetic-genomics/>

- <https://www.wired.com/story/synthetic-genomics-genetically-engineered-algae-might-fuel-the-future/>

- <https://www.nature.com/articles/srep24951>

And I think the blockchain ledger might still be very germane and helpful for supporting your emerging CRISPR gene editing / energy-related thesis for your paper.

blockchain and biofuels

-

<https://www.greentechmedia.com/articles/read/the-energy-blockchain-could-bitcoin-be-a-catalyst-for-the-distributed-grid#gs.YcwU0M4>

-

<https://www.greentechmedia.com/articles/read/new-entrants-fuel-energy-blockchain-ecosystem-growth#gs.7L7RUW8>

Theses/ arguments usually contain a "because ... " in them. E.g. "I want to argue/suggest explicitly that ... because ... " And research questions typically develop with a very specific focus ... (editing a specific locus on a gene ... because it might work well with the emergent energy blockchain specifically for airline fuels etc). It's the explicit and specificity that help generatively focus interesting writing and ideas.

In developing / riffing with a rough draft of your 5 page research paper for next week, I'll seek to come into conversation a bit further with this - <http://www.tanyatomato.com/2017/11/112417-potential-paper.html> - in these regards, as well.

Here are beginning related WUaS Subjects -

<http://worlduniversity.wikia.com/wiki/Genetics>

http://worlduniversity.wikia.com/wiki/Energy_Courses

http://worlduniversity.wikia.com/wiki/Energy_Technologies

Check out the MIT OCW here, and in terms of other possible resources for your paper.

Cheers,
Scott

https://wiki.worlduniversityandschool.org/wiki/Nation_States

Week 11

Here's Vint Cerf talking about much of what we talked about today re the beginning of the Internet, in a complementary way, with more and different details:

<https://www.smithsonianmag.com/videos/category/innovation/vint-cerf-internet-is-evolving-a-glimpse-at/>

And here's the Lego of DNA I mentioned -

<https://twitter.com/legomics/status/503203769627074561>

And here's Steve Crocker, whom I referred to as another founder of the internet -
MEET THE MAN WHO INVENTED THE INSTRUCTIONS FOR THE INTERNET
<https://www.wired.com/2012/05/steve-crocker/>

ISOC 2012 HOF: Steve Crocker
<https://www.youtube.com/watch?v=2uu5Sq4l5ew>

And here's Paul Baran -
Paul Baran - Early RAND Work in Distributed Networks and Packet Switching, 1960 1965
<https://www.youtube.com/watch?v=7er6E9i1y5l>

And here's a guide to blockchain and energy -
<https://www.greentechmedia.com/articles/read/a-guide-to-blockchain-and-energy#gs.izZNzvY>

And here's a different perspective from the Princeton post by the head of the Environmental Defense Fund (not an alumnus) I mentioned re Global Warming -
<https://twitter.com/Princeton/status/935342558942826498> .

Looking forward to your 5 page paper "riffing" draft next week, about which it would be great also to talk about in terms of specifics. And for the final version, could you possibly please read it to Youtube on video and also post a final written draft in writing to your web site - for the last day of this course on Tues. Dec 19th? And would you please post a reference to your written paper to the wiki subject page(s) at World University and School where you'd like -
<http://worlduniversity.wikia.com/wiki/Subjects> ? Thank you!

Cheers,
Scott

Hi Tanya,
Just a few further clarifications related to remarkable developments in the IT Revolution and re <http://worlduniversityandschool.org/InfoTechNetworkSocGlobalUniv.html> (which I'm also adding to the syllabus here) -

A robot is a machine capable of carrying out a complex series of actions automatically, especially one programmable by a computer ...

And the internet of things is "the interconnection via the Internet of computing devices embedded in everyday objects, enabling them to send and receive data." Combine the IoT with the blockchain aka distributed ledger technology. ""Distributed Ledger Technology," is about to change all aspects of digital business and according to some such as Don Tapscott, blockchain is a bigger deal than the Internet. Combine blockchain and IoT and you have two bigger deals than the Internet who need each other for numerous reasons we explain in this IoT blockchain overview." <https://www.i-scoop.eu/blockchain-distributed-ledger-technology/blockchain-iot/>

Cheers, Scott

Week 12

Week 13

Week 14

The Culture of Real Virtuality

Informational Politics and the Network State and The New World Disorder: War and Peace in the Age of the Internet

Reading / media / projects:

Week 11

Information technology, International relations, Warfare, and Noopolitik (cont.)

Reading / media / projects:

Week 11

The New World Disorder: Identity

Reading / media / projects:

Week 12

Identity (cont.), and Challenges Ahead for the Future of the Internet and the Network Society

Reading / media / projects:

Week 13

The Informational City: Information Technology and Spatial Transformation

Week 14

The New Economy: Technology and Productivity

Reading / media / projects:

Week 15

The Digital Divide

Reading / media / projects:

Week 16

Presentations

Reading / media / projects:

Final Project due

READINGS / MEDIA

(in development)

(Numbers refer to the topics in the program)

0. Claude S. Fischer "Studying technology and Social Life," in M. Castells (editor) "High technology, space, and society," Beverly Hills, CA: Sage Publications, 1985, pages 284-300

1. Manuel Castells, "The Rise of the Network Society," 2 nd edition, Oxford: Blackwell, 2000, chapter 1: "The Information Technology Revolution," pp.28- 76

2. a) Janet Abbate "Inventing the Internet," Cambridge: MIT Press, 1999, pages 1-6, 44-81, and 181-220.

b) Eric S. Raymond "The cathedral & the bazaar. Musings on Linux and open source by an accidental revolutionary," Sebastopol, Ca: O'Reilly, 1999, pages 7 - 78.

c) Barry Wellman and Milena Gulia "Net-Surfers don't ride alone: virtual communities as communities," on Barry Wellman (editor) "Networks in the global village," Boulder, Colorado: Westview Press, pp. 331-366

3. a) Manuel Castells "Information technology and global capitalism" in Will Hutton and Anthony Giddens "On the edge. Living in global capitalism," London: Jonathan Cape and New York: The New Press, 2000, pages 52-74 b) David Held et al "Global Transformations," Stanford: Stanford University Press, 1999, pages 189-282.

4. a) Manuel Castells "End of Millennium," Oxford: Blackwell, 2nd edition, 2000, chapter 2 "The rise of the fourth world," pages 68-82 and 128-152

b) U.S. Department of Commerce, National Telecommunications and Information Administration "Failing through the net: toward digital inclusion. A report on American's access to technology tools," Washington DC: October 2000 (the whole report minus the methodology appendix)

c) David Bolt and Ray Crawford "Digital Divide. Computers and Our Children's Future," New York: TV Books, pages 23-71

d) Manuel Castells "Information technology and global development," keynote address to the Economic and Social Council of the United Nations, May 12, 2000 (text provided in class - available on-line from the United Nations).

5. Martin Carnoy "Sustaining the new economy. Work, family and community in the Information Age," Cambridge: Harvard University Press, 2000, pages 14- 104

6. a) Juliet Webster "Shaping Women's Work. Gender, Employment and Information Technology," Harlow: Longman, 1996, pages 33-1 10, and 176- 192

b) Martin Carnoy "Sustaining the new economy," pages 105 -151. 7. a) William J. Mitchell "E-topia," Cambridge: MIT Press, pp. 31-68

b) James O.Wheeler, Yuko Aoyama, and Barney Warf "City space, industrial space and cyberspace" in Wheeler, Aoyama and Warf (eds.) "Cities in the telecommunications age," New York: Routledge, 2000, pages 3-17

c) Andrew Gillespie and Ronald Richardson "Teleworking and the city: Myths of workplace transcendence and travel reduction," in Wheeler, Aoyama and Warf (eds) "Cities in the telecommunications age," 2000, pages 228-248

8. a) Bruce M. Owen "The Internet challenge to television," Cambridge: Harvard University Press, 1999, pages 197-333.

b). William Dutton "Society on the line. Information politics in the digital age," New York: Oxford University Press, 1999, chapter 10: "Wiring the global village: shaping access to audiences," pages 257-277

9. Manuel Castells, "The power of identity," Oxford: Blackwell, 1997, chapter 5 "A powerless state?," pages 244-276 and 299-308, and chapter 6 "Informational politics and the crisis of democracy," pages 309-353.

10. John Arquilia and David Ronfeldt "The emergence of noopolitik. Toward and American Information Strategy," Santa Monica, CA: Rand Corporation, 1999 (whole book, 89 pages).

Conclusion: Anthony Giddens "Runaway world," New York: Routledge, 2000 (whole book, 100 pages). (This is recommended reading, not required)