

0. As Class Begins...

Orientation: How do we learn economics? Especially now with COVID-19?

- **Video:** Introduction <<https://github.com/braddelong/public-files/blob/master/video-module-0-intro-2020-05-14.mp4>> <<https://www.youtube.com/watch?v=AnSjX8ClAXQ>>

Readings:

- **Prefatory notes** on Matuschak & Dasgupta
- **Andy Matuschak:** *Why Books Don't Work* <<https://github.com/braddelong/public-files/blob/master/readings/article-matuschak-books.pdf>>
- **Partha Dasgupta:** *Economics: A Very Short Introduction* <<https://github.com/braddelong/public-files/blob/master/readings/book-dasgupta-economics.pdf>>
- **Quiz:** Check Your Comprehension: Dasgupta & Matuschak
- **Discuss:** Reaction to Readings for: 0. As Class Begins...

Lectures & q & a:

- **Slides with Audio:**
 - The educational process
 - Typical module activity flow
 - Dasgupta's take on how to do economics
 - Logistics
 - **Optional:** A liberal education
- **Zoom Session:** TBS (to be scheduled)

Problems & Interactions:

- **Do:** Introduction to Jupyter Notebooks
- **Discuss:** Takeaways from & Extensions of: 0. As Class Begins...

Addenda:

- **Text** for Lectures on: 0. As...
- **Learning Goals** for: 0. As...
- **Optional** Further Readings...



[Link](#)



[Link](#)

Al Karouyine, Fez, Morocco

Prefatory Note for Required Reading: Matuschak

The university got its start when books were expensive: really expensive. In the year 301, in the time of the Roman Emperor Diocletian, a scribe's copying cost of 25 X for 100 lines meant that a relatively short book by our standards cost as much as 100 days' work of an unskilled laborer. That's the same multiple of the pay of a minimum wage worker in California today as \$120,000.

Back then, gathering students in the same place along with a library was the only even faintly cost-effective way for them to read lots of books themselves, and listen to lots of books being read aloud (and commented on) by the lecturer.

But with Johann Gutenberg's movable type printing press in the 1400s books became really cheap. By the 1800s books cost 1/100 times as much on the minimum-wage scale as in 300: the equivalent of not \$120,000 but \$1,200. And today? My oh my! Especially if we count virtual books on our devices.

Yet the university, even though its fundamental reason for being was gone—you could now curl up with lots of good books anywhere, cheaply—not only survived: it flourished.

Why?

Andy Matuschak's *Why Books Don't Work* proposes an answer: Most people are bad at reading. Hence you have to gather them into a university and force them into its social networks and practices in order to make people do the things necessary for them to even do a half-assed job of learning from the books they might read.

Now some people are excellent readers on their own.

Consider Niccolo Machiavelli, living in the Italian city of Florence in the late 1400s, living in the very first generation when books were cheap enough that some people had personal libraries. When he entered his library, he wrote:

I take off my workday clothes, covered with mud and dirt, and put on the garments of court and palace. Fitted out appropriately, I step inside the venerable courts of the ancients, where, solicitously received by them, I nourish myself on that food that alone is mine and for which I was born; where I am unashamed to converse with them and to question them about the motives for their actions, and they, out of their human kindness, answer me. And for four hours at a time I feel no boredom, I forget all my troubles, I do not dread poverty, and I am not terrified by death...

For Machiavelli, reading a book was the same thing as having an active conversation. Just the thoughts and ideas that went through his mind as he read were linked into his memory and became part of his intellectual human capital.

But if you do not read actively, it simply does not work. Your brain is very good at dumping information that it concludes is trivial and useless.

And how does it assess what is trivial and useless? It decides anything that flashes before your eyes once, or twice, or three times, but that never gets hooked into your broader mental network of associations and ideas—that is what needs to be dumped.

The in-person university does a half assed job of turning its students into active readers, into active learners. It does only a half-assed job, however. It could be vastly improved (that is mostly what Matuschak's article is about). But that is a discussion for another day, as we no longer have the in-person university.

We have a mostly-online university. We need to make it do a better than quarter-assed job at assisting students to be active readers and active learners.

If it doesn't, then all you will be left with are books. And as Sokrates warned, for most people a book by itself is very inadequate as a teaching device:

[Written words.] said Theuth, "will make the Egyptians wiser and give them better memories... [and] wit".

Thamus replied: "O most ingenious Theuth... this discovery of yours will create forgetfulness in the learners' souls, because they will not use their memories; they will trust to the external written characters.... You give your disciples not truth, but only the semblance of truth; they will be hearers of many things and will have learned nothing; they will appear to be omniscient and will generally know nothing; they will be tiresome company, having the show of wisdom without the reality..."

Your task as you read **Matuschak** is to come up with a plan to make your educational experience this semester at least half-assed.

Greg Clark (2001): *Secret History of the Industrial Revolution* <<https://github.com;braddelong/public-files/blob/master/readings/article-clark-secret-history.pdf>>

Diocletian (301): *Edict on Maximum Prices* <<https://github.com;braddelong/public-files/blob/master/readings/article-diocletian-price-edict-kropff.pdf>>

Niccolo Machiavelli (1513): *Letter to Francesco Vettori* <<https://github.com;braddelong/public-files/blob/master/readings/letter-machiavelli-vettori.pdf>>

Andy Matuschak (2019): *Why Books Don't Work* <<https://github.com;braddelong/public-files/blob/master/readings/article-matuschak-books.pdf>>

Plato (-370): *Phaedrus* <<https://github.com;braddelong/public-files/blob/master/readings/book-plato-phaedrus.pdf>>

Prefatory Note for Required Reading: Dasgupta

In your lives so far you have certainly taken at least one course in economics—probably three or four. That probably means that you have been taught, as Betsey Stevenson and Justin Wolfers put it in their textbook, to use:

four core principles... The marginal principle: Ask ‘one more?’ instead of ‘how many?’ The cost-benefit principle: Compare the relevant costs and benefits. The opportunity cost principle.... The interdependence principle...

Betsey and Justin promise us that “these four core principles form a simple but powerful framework for making even the most mundane decisions...” and claim that their book will show “the unity and power of the economic approach”, and by “learning to apply these core ideas to any new economic question they face... [students] will naturally come to ‘think like an economist’...”

But why would one want to think like an economist? What is thinking like an economist—rather than like a sociologist (looking for the webs of human connections and common belief), a political scientist (looking at power and at authority both given and taken), or a historian (looking at origins and development)? One wants to think like an economist because it is an especially useful way of thinking about the economy. What, then, is the economy? And why is “thinking like an economist”—marginal, interdependence, benefit-cost, and opportunity cost calculations—a good way of understanding it?

Partha Dasgupta provides the best short answer to those two linked questions, and in the process of doing so provides the best introduction to economics, that I have seen. His book is a game theorist's short introduction to economics. It focus on: individual goals, individual opportunities and constraints, individual incentives, strategies, exchange, trust, and equilibrium outcomes.

It is, of course, greatly concerned with wealth and poverty—that is, after all, the point of the discipline of economics: it is an inquiry into nature and causes of the wealth of nations. You won't find in Dasgupta's book lots of practice figuring out how price and quantity change in response to demand shocks or calculating multipliers. What you will find is the logic and rationale for why figuring out how price and quantity change in response to demand shocks or calculating multipliers is a worthwhile thing to do.

It is worth getting into your frontal brain lobes what an economy is and what thinking like an economist is because of what we are going to do this semester. We are going to study the growth of the human economy. And we are going to do so by thinking like economists.

So I want you, before class begins, to read Partha Dasgupta's book: *Economics: A Very Short Introduction*

And I don't want you to just skim it. If you do, you will then forget it—and you will have wasted an hour and a half. The problem is that our brains are very good at forgetting irrelevant information. And our brains take information that we do not find ourselves using and reusing to be irrelevant—to be thrown out so that we can focus on information relevant to the continued life and reproductive success of the East African Plains Ape. The things that we remember are things that we think about over and over again in our inner monologue. So as you read this book I want you to do what I do. I am rarely just reading: I am generally also analyzing, compressing, synthesizing, and summarizing. I am taking notes—but very brief, synthesizing and summarizing notes. And I am generally asking myself questions—and then answering them.

To get you started, let me outline the preface for you:

- Dasgupta begins by stating that he will attempt in this book to provide:
 - An account of how economists reason
 - Examples of how that reasoning can be applied to (some of) the most urgent problems humanity faces today
- He is going to contrast two lives:
 - The life of "Becky"—the daughter of a Chicago lawyer
 - The life of "Desta"—the daughter of an Ethiopian farmer couple
- One way to view economics is that it is an attempt to answer the question "what do humans need to do to be rich?"
- Cf.: Adam Smith (1776): *An Inquiry into the Nature and Causes of the Wealth of Nations*
- But some people are not rich—for example, Desta—and three centuries ago, back before Adam Smith's day, very, very few people were what we would call "not desperately poor"

So let me ask you: What answers does Partha Dasgupta propose to the questions of how humans can be wealthy—and why, in history and today, many humans have not grasped the opportunity? Are his answers right? How do "economists think"? And how does "how economists think" make you trust or distrust the answers that Dasgupta comes up with?

J. Bradford DeLong (2020): *Reading Notes* <<https://github.com/braddejong/public-files/blob/master/book-dasgupta-reading-note-text.pdf>> <<https://github.com/braddejong/public-files/blob/master/book-dasgupta-reading-note.pdf>> <<https://github.com/braddejong/public-files/blob/master/book-dasgupta-reading-note.pptx>>

Partha Dasgupta (2007): *Economics: A Very Short Introduction* <<https://github.com/braddejong/public-files/blob/master/readings/book-dasgupta-economics.pdf>>

Adam Smith (1776): *An Inquiry into the Nature and Causes of the Wealth of Nations* <<https://github.com/braddejong/public-files/blob/master/readings/book-smith-wealth.pdf>>

Quiz: Check Your Comprehension of the Required Readings

Questions to answer, & then think about more deeply:

Matuschak:

1. How does Matuschak think lectures are better than books?
2. How does Matuschak think lectures are worse than books?
3. What does Matuschak claim that good readers do when they read books?
4. Why don't people buy textbooks in order to learn subjects when they are not concurrently taking a related course?
5. How does Matuschak believe that books should be redesigned—or replaced—in order to help people think more deeply?

Dasgupta:

6. Sustainability: Why have we been able to successfully capture and use 40% of the photosynthesis on earth without already severely disrupting our planet?
7. Political & Social Welfare: What are T.H. Marshall's "three revolutions", & what importance do they have in Dasgupta's argument?
8. Households: Why do we think that Africa's population is likely to grow much faster than India's population over the next fifty years?
9. Mechanism Design: Why did Friedrich von Hayek deserve his Nobel Prize? How, notwithstanding von Hayek's Nobel Prize, can central planning add to societal well-being?
10. Human Cooperation: What are the principal advantages of building your economic network on the basis of "weak ties"?

QUIZ URL: <<https://bcourses.berkeley.edu/courses/1493152/quizzes/2309098/>>



184 words

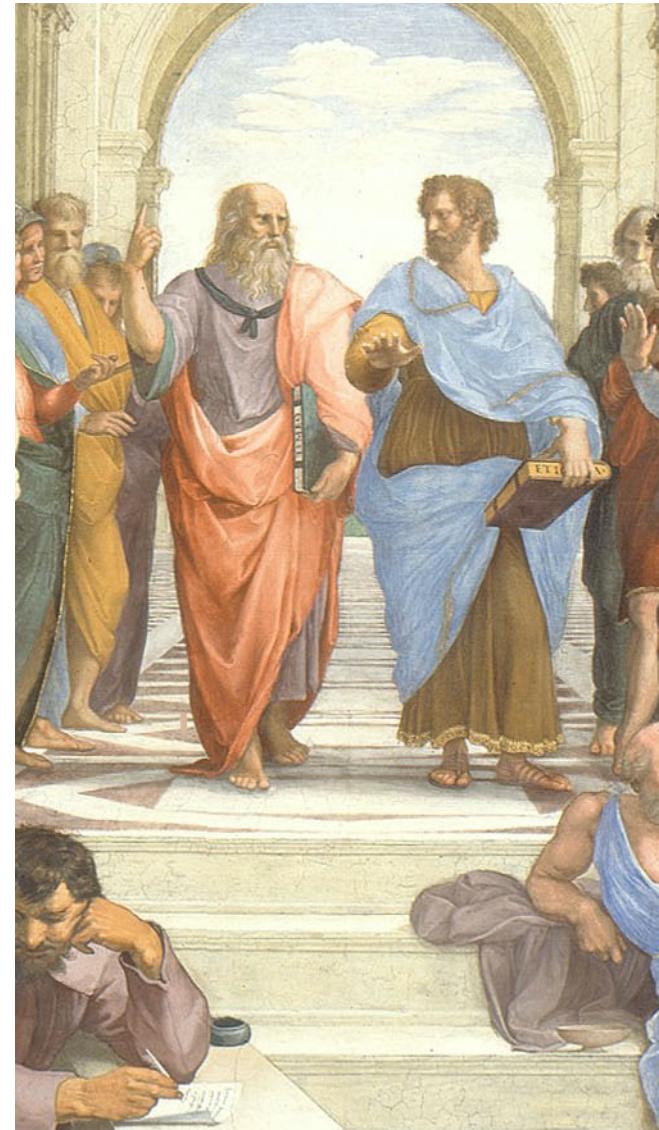
Discuss: Matuschak & Dasgupta

Let me start this discussion off by asking four questions:

1. Suppose we accept everything Andy Matuschak says: what does his argument tell us about how this course ought to be run?
2. What things that Andy Matuschak says should we reject?
3. What do you think is the most notable conclusion Partha Dasgupta reaches about the nature and causes of the wealth of nations?
4. Suppose we accept everything Partha Dasgupta says: what does his argument tell us about how this course ought to be run?

As before, for full credit for this discussion, provide at least two substantive contributions to the discussion, of which at most one should be a direct response to one of my questions. We want you to talk to & react to one another here...

THREADED DISCUSSION URL: <https://bcourses.berkeley.edu/courses/1493152/discussion_topics/5774300>



Lecture: Sokrates vs. Machiavelli on the Educational Process



Machiavelli:

I... put on the garments of court and palace... step inside the venerable courts of the ancients, where, solicitously received by them, I nourish myself on that food that alone is mine and for which I was born; where I am unashamed to converse with them and to question them about the motives for their actions, and they, out of their human kindness, answer me. And for four hours at a time I feel no boredom, I forget all my troubles, I do not dread poverty, and I am not terrified by death...

Sokrates:

The creations of the painter have the attitude of life, and yet if you ask them a question they preserve a solemn silence.... [Words] once written down they are tumbled about anywhere among those who may or may not understand them, and know not to whom they should reply, to whom not... and they cannot protect or defend themselves.... Would a husbandman... take the seeds... and in sober seriousness plant them during the heat of summer?... The serious pursuit of the dialectician... finding a congenial soul, by the help of science sows and plants therein words which are able to help themselves... and have in them a seed which others brought up in different soils render immortal, making the possessors of it happy to the utmost extent of human happiness...



3:00 of audio in this slide; 9:30 in this slide

Our Difficult Task

How do we duplicate—online—the “active learning” components that the in-person university does as a matter of course?:

- MOOCs did not cut it...
- The people who could learn from MOOCs are the Machiavellis—the people who turn their books into sub-Turing class instantiations of the books’ authors, and have conversations with them
- Thus a MOOC, for those who could learn effectively from it, was little better than and a lot more expensive than a book
- We need a plan for those of you—which is most of us—who are not Machiavellis, but rather like Sokrates’s students
 - People who really need a tutorial...
 - A professor, a GSI, a roommate, a classmate, a study group...



2:45 audio

Why Do Books “Reply” to Niccolo but Not to Sokrates?

Your professors are—often—not good guides:

- We are genuinely world-class at this: if we were not, we would not be here, doing what we do...
- We are very good at learning from books, curled up in a chair...
- We are very good at sitting in front of a screen, issuing commands and looking at the numbers that come back, in order to try to grasp in our minds the multi-dimensional shape of a dataset...
- And for us it is largely *unconscious*...
- If this is going to work for you, you need to do consciously what we do largely unconsciously
- Universities are good settings for that to happen
- But at a university like Berkeley, the “active learning” component happens largely by accident, as a byproduct of the formal educational process of large classes, lectures, & exams



2:15 audio

Read with *Intent*

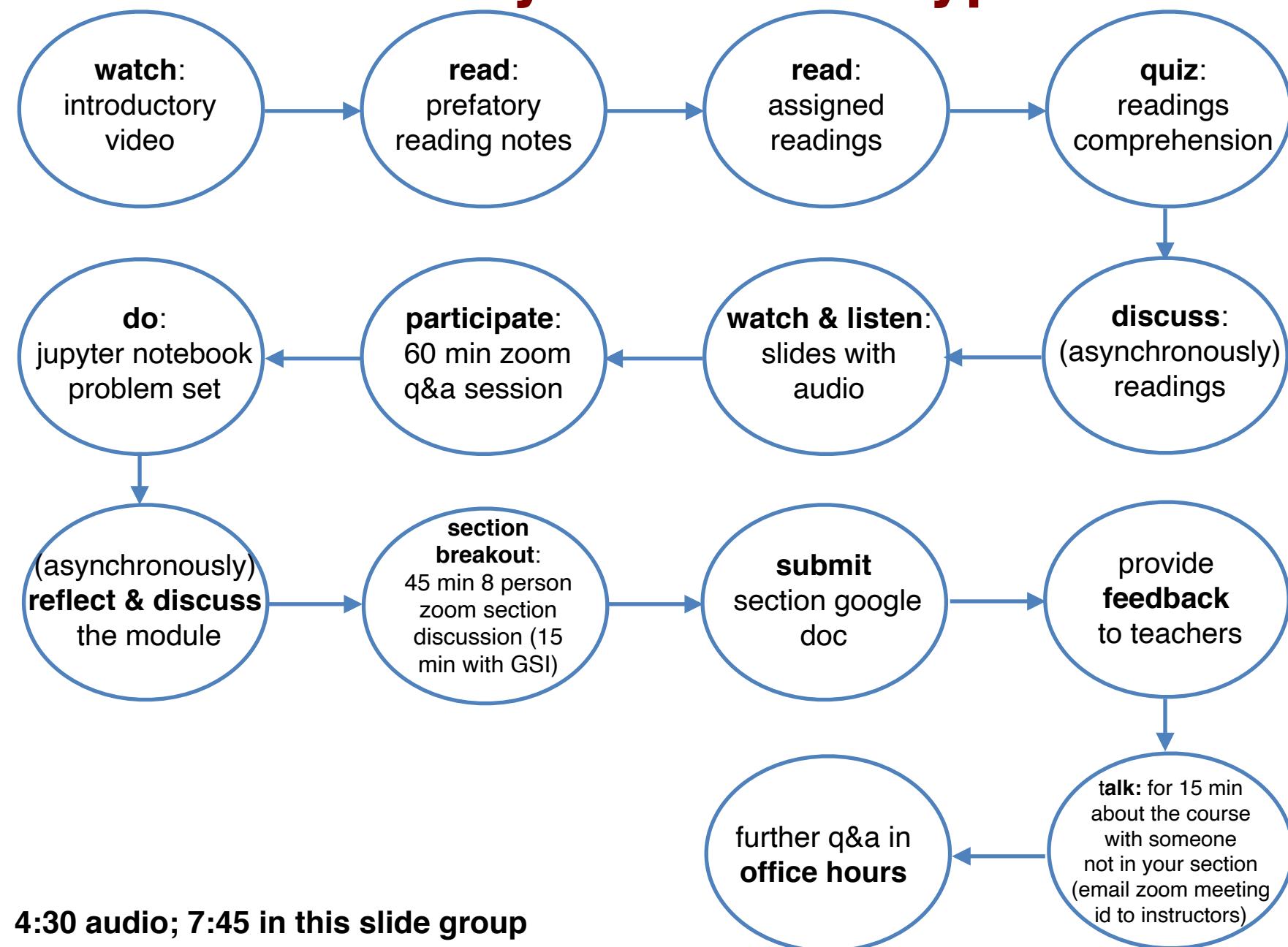
If you just skim, say, Dasgupta:
Economics: A Very Short Introduction:

- You will then forget it—and you will have wasted an hour and a half
- Our brains are very good at forgetting irrelevant information
- And information we do not use and reuse is irrelevant
- I want you to do what I do:
 - I am rarely just reading.
 - I am generally also analyzing, compressing, synthesizing, and summarizing.
 - I am taking notes—but very brief, synthesizing and summarizing notes.
 - And I am generally asking myself questions—and then answering them.



1:30 audio

Lecture: Activity Flow for a Typical Module

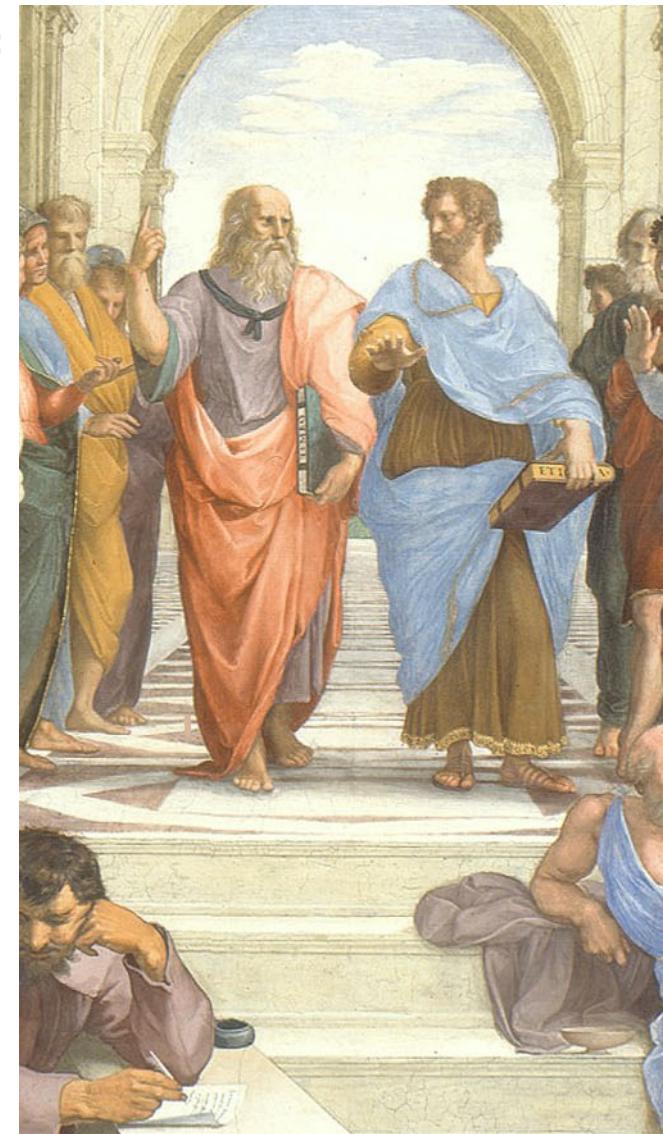


Timings: For Each Module

Aspirations for the weekly timings of the pieces of this course:

- All times P[D|S]T...
- 0 hr: Fr 17:00: freeze all online teaching materials for the module.
- Fr 17:00-Su 23:59: students do readings, take quiz, discuss (asynchronously) readings (with instructors chiming in on the threads); closes at 54 hr.
- Mo 00:00-Tu 15:00: students watch & listen to slides-with-audio-lectures.
- 72 hr: Tu 15:30: zoom q&a session
- Tu 17:00-Fr 17:00: students discuss (asynchronously) the module; closes at 168 hr.
- We times various: students participate in 15 min 8 person zoom section sessions
- We 17:00-Su 23:59: students do jupyter notebook problem set; closes at 199 hr;
- Th 15:30: I will try to hold LeConte 4 for (socially-distanced) in-person office hours on the current module; 142.5 hr
- Fr 17:00-Su 23:59: students provide feedback to instructors; closes at 199 hr.
- Mo 00:00-Tu 23:59: instructors grade & assess discussion threads, zoom participation, and jupyter notebooks; closes at 271 hr.
- Next Fr 12:00-23:59: students review module
- Four weeks later Fr 12:00-23:59: students re-review module

Question: Where in this staggered process are things likely to go wrong?



Timings: For the Semester

Notes on the timing of the semester:

- First as-class-begins module online materials frozen Fr Aug 21
- As-class-begins (optional, recorded) zoom q&a session Tu Aug 25
- First required class zoom sessions We Aug 26
- Last class day: Fr Dec 4—15 full weeks
- RRR week: Fr Dec 4-Fr Dec 11
- Final papers due: Fr Dec 18

Question: What else should we be asking people to do, in addition to weekly participation in the threaded discussions, weekly problem sets, & a final paper?



Bob Rubin's Question

Something I have always found very useful:

- Ever since I first heard it back in 1993:
- What, at the end of the semester, will we wish we had done today?

Proposed answers:

1. I will need to hear three at the start of the zoom q&a session...



1:00 audio

Lecture: Dasgupta on Doing Economics

Why would one want to “think like an economist”?:

- What is “thinking like an economist”?:
 - Cost-benefit
 - Opportunity cost
 - System equilibrium
 - Marginality
- This turns out to be useful for thinking about the *economy*:
 - (Other things too: but mostly the *economy*)



Sir Partha Sarathi Dasgupta, FRS, FBA (born 17 November 1942) is Frank Ramsey Professor Emeritus of Economics at the University of Cambridge, Fellow of St John's College, Cambridge, and Visiting Professor at the New College of the Humanities, London. He was born in Dhaka, present-day Bangladesh

What Is the *Economy*?

And why is thinking like an economist the best way to analyze it?:

- These are the questions Dasgupta sets out to answer by example in his book
- It is a game theorist's introduction to economics
- The book won't teach you how to calculate price and quantity changes in response to demand shocks.
- The book will teach you why figuring out price and quantity changes is a worthwhile thing to do.
- This is worth getting into your frontal brain lobes:
 - We are going to spend the semester studying the growth of the human economy
 - And we are going to do so by thinking like economists.
- Anthology intelligence; division of labor, mechanism design; societal calculating machine



2:45 audio

Questions

Preface

- How different do you think the lives of Becky and Desta are?
- How would you go about explaining why the lives of Becky and Desta are different?
- How would an economist go about explaining why the lives of Becky and Desta are different?
- What are the costs and benefits of thinking like an economist?
- What kind of person would start an analysis by asking: "What are the costs and benefits of thinking like an economist?"

Prologue

- Why does Becky's household live outside of Chicago and earn money by having the father work all day outside of the house doing transactions processing rather than, say, living 100 miles further west and growing corn in DeKalb County?
- How different would Becky's life be if her father (and mother) were corn-growing farmers in DeKalb County?
- Why did they choose to become suburban Chicago yuppies?
- Why does Desta's household live in rural Ethiopia and grow their own corn rather than, say, living in Addis Ababa and earn money by having the father work all day outside of the house doing transactions processing?
- How different would Desta's life be if her father were an Addis Ababa lawyer?
- Why did they choose to become rural Ethiopian subsistence farmers?

Macroeconomic history

- In the long sweep of human history, is Becky very lucky, lucky, unlucky, or very unlucky?
- In the long sweep of human history, is Desta very lucky, lucky, unlucky, or very unlucky?
- How much richer is the world today than it was in the long centuries from 5000 BC to 1800?
- How much richer are the world's rich today than the world's poor today?
- What would count as an explanation of this divergence across space and time—that is, what kinds of things would count as "causes" and make you happy that you understood what was going on?
- How many useful "hierarchies of causation" can you imagine here?

Trust:

- About what fraction of our wealth is the result of—or, perhaps, is enabled by—our collective ability to engage in a very large distribution of labor (rather than requiring that each extended household be close to self-sufficient)?
- What are the possible ways of creating the "trust" needed for a small-scale—within the village or within the herding band, say—distribution of labor?
- What are the possible ways of creating the "trust" needed for a large-scale division of labor?
- What, in the world we see around us, turn out to be the most important ways of creating the "trust" needed to maintain a large-scale division of labor?

Questions II

Communities:

- Suppose that we have the norm (or the strategy) that a failure to share in any case leads to the end of the sharing relationship forever. How much of a large-scale social distribution of labor can be supported by tied engagements of this type?
- What are the advantages to having an economic network built out of "weak ties"?
- What are the difficulties in creating and maintaining an economic network built out of "weak ties"?

Sustainable Development:

- Why are we destroying our fisheries? Why are we rapidly using up our atmosphere's capacity to absorb carbon dioxide without substantial increases in temperature? Why is such a large chunk of our population potentially short of fresh water?
- Why have we been able to successfully capture and use 40% of the photosynthesis on earth without already severely disrupting our planet?
- How have we managed to become so much more numerous and rich since 1800 without rapidly-rising prices of pretty much all natural resources?

Science and Technology as Institutions:

- Given that knowledge is non-rival—if I teach it to you, I don't have any less of it than I did before—what justification could there possibly be for charging people for access to knowledge and its uses?
- If people weren't allowed to charge others for access to knowledge and its uses, would there be any reason to think that society would be putting a properly-large share of our resources into creating and disseminating knowledge?
- Why can contests and the rule of priority be good ways to spur the creation and dissemination of knowledge?
- How well do contests and the rule of priority fit with a private-property market economy?

Markets:

- How is having access to an ideal market the same as or different from having an economic network of ties (strong or weak) extending over the entire world?
- In what sense is what Dasgupta calls an "ideal market" ideal?
- Why did Friedrich von Hayek deserve his Nobel Prize?
- How can a central planner nevertheless add value for society, even though Friedrich von Hayek did deserve his Nobel Prize?
- Why should we worry about each of the four kinds of market failure that Dasgupta sees: distributional, free-riding, market power, and macroeconomic?

Questions III

Households and Firms:

- Where have all the women gone?
- Why do we think that Africa's population is likely to grow much faster than India's population over the next fifty years?
- How does Desta's household react to the fact that GEICO does not sell insurance policies in their neighborhood?
- How does Becky's family react to the fact that they can borrow from Umpqua Bank and invest in the Vanguard Funds—rather than having to deal with the local moneylender?
- Why does Becky's world have large-scale firms?
- Why does Becky's world have joint-stock limited-liability companies?
- Why does Becky's world have tradable financial assets?

Social Welfare and Democratic Government:

- What are T.H. Marshall's "three revolutions"?
- Why is each of them important?
- How does a government based on T.H. Marshall's "three revolutions" tend to promote a prosperous market economy?
- Does a prosperous market economy tend to promote T.H. Marshall's "Three Revolutions"—and if it does, does it promote them all?

Epilogue:

- What distinction does Dasgupta draw between problems and challenges?
- Which—problems or challenges—is better suited for analysis with the tools of economics?
- What, after finishing this book, do you now think the most important tools of economics are?

Lecture: Logistics

Syllabus & course policies:

In the usual bCourses place: <<https://bcourses.berkeley.edu/courses/1493152/assignments/syllabus>>

Required readings for the course:

Principally: **J. Bradford DeLong** (2020): *Slouching Towards Utopia?: An Economic History of the Long 20th Century*

And also: **Partha Dasgupta** (2007): *Economics: A Very Short Introduction* <<https://delong.typepad.com/files/dasgupta-economics.pdf>>

Barry Eichengreen (2008): *Globalizing Capital: A Short History of the World Monetary System* <<https://delong.typepad.com/files/eichengreen-globalizing.pdf>>

Robert Skidelsky (2010): *Keynes: A Very Short Introduction* <<https://delong.typepad.com/files/skidelsky-keynes.pdf>>

Robert Allen (2011): *Global Economic History: A Very Short Introduction* <<https://delong.typepad.com/files/allen-geh.pdf>> <<https://www.icloud.com/pages/0jK0cjqqw-D4wRayNOo87pLYw>>

Plus: **Andy Matuschak** (2019): *Why Books Don't Work*

Grading:

Quizes: 0

Discussion threads: $30 \times 2 = 60$ (0, 1, 2, 3)

Problem sets: $15 \times 4 = 60$ (0, 1, 2, 4, 5)

Zoom breakout & other participation: 20

Final paper: 60



Grading

Haas:

Mean elective grade: about 3.5

- That seems reasonable: B+/A-

Grading:

Quizzes:	0
Discussion threads:	$30 \times 2 = 60$ (0, 1, 2, 3)
Problem sets:	$15 \times 4 = 60$ (0, 1, 2, 4, 5)
Zoom breakout & other participation:	20
Final paper:	60

Points to letter grades:

The way it works is this:

- We form our holistic assessment of the degree of effort and accomplishment of the class as a whole,
- largely but not exclusively based on the scores people receive on assignments.
- That assessment then sets the grade distribution.
- We then take the assignment scores, adjust them for notable participation-based assistance in helping others learn, and rank all of you students.
 - By effort & achievement.
 - Thus there is not a strict curve:
 - someone else doing better does not lower your grade.
 - In fact, it is the opposite—your helping someone else do better raises the average grade and, to the extent that we notice, directly raises yours as well.
 - But there is also not a rigid set of numerical cutoffs you will be able to count on
- Oral exams for edge cases...



Zoom Q&A Session: Module: As Class Begins...: On How to Accomplish Online Economics Education

Time: Tu Aug 25 15:30 PDT. Zoom URL: TBA.

Questions:

1. What, at the end of the semester, will we wish we had done today in terms of structuring this course? (I want three suggestions.)
2. We know of Sokrates's uneasiness about *books* as opposed to in-person teaching only because Plato wrote a... book; how did Plato write his book in an attempt to get around Sokrates's objections to the idea of teaching via making people read books?
3. How does Andy Matuschak hope to build websites—and author books—that will be easy to read well?
 - Even by people who are not (or not yet) good active readers
 - How are we to train you to become good active readers?
4. What does Partha Dasgupta think “thinking like an economist” is?
5. How is it different from what you were taught in Econ 1? How is it the same?
6. Is his *Economics: A Very Short Introduction* properly titled? Should it instead have been called: *The Economy: A Very Short Introduction*?
7. In the way of assignments for this course, what else should we be asking people to do, in addition to weekly participation in the threaded discussions, weekly problem sets, & a final paper?
8. Where in the staggered module flow process we instructors have set up are things likely to go wrong?



Music for Entering Cyberspace: "DIGITAL CHILDREN" by @Krale <<https://www.youtube.com/watch?v=goks2xcpH0o>>



80 min zoom q&a session (starts 15:30 PDT Berkeley time—i.e. 15:40)

Problem Set 0. Jupyter Notebook...

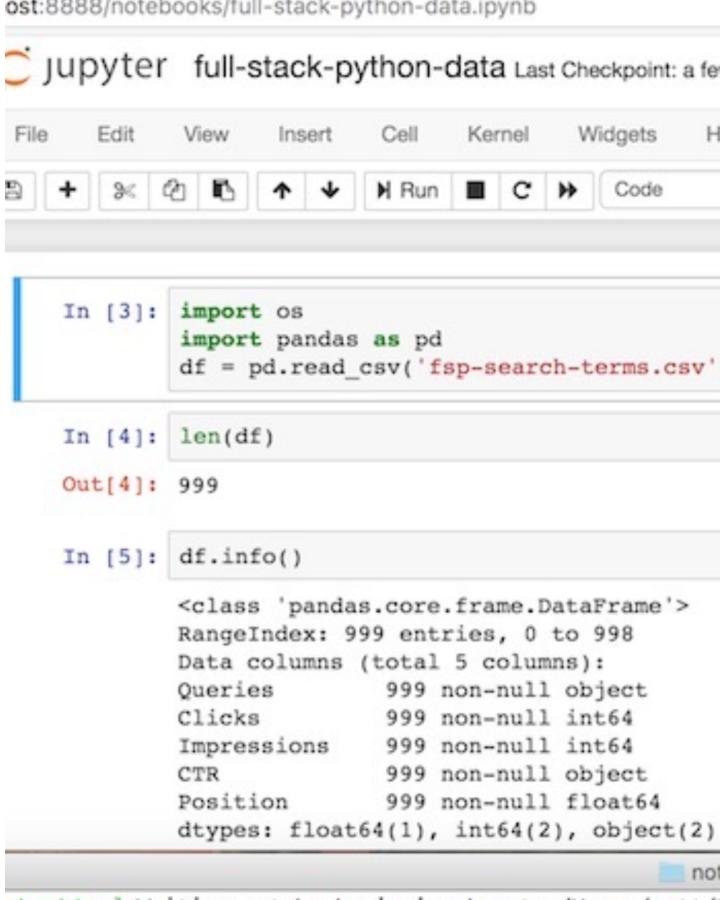
JUPYTER NOTEBOOK URL:

<<http://datahub.berkeley.edu/user-redirect/interact?account=braddelong&repo=lecture-support-2020&branch=master&path=ps00.ipynb>>

Click on (or copy and paste in your browser URL/search field) the link above, and page through the interactive jupyter notebook document, following the instructions...

With what looks to be a permanent and long-run partial moving-online of the university, the already important topic of “data science” seems likely to become even more foundational.

Hence this first problem set tries to provide you with an introduction—to “data science”, and to the framework we will be using for problem sets that we hope will make things much easier for you and for us...



The screenshot shows a Jupyter Notebook interface with the following details:

- Title Bar:** localhost:8888/notebooks/full-stack-python-data.ipynb
- Toolbar:** File, Edit, View, Insert, Cell, Kernel, Widgets, Help
- Cell Buttons:** New, Run, Stop, Cell, Kernel, Help, Code
- In [3]:**

```
import os
import pandas as pd
df = pd.read_csv('fsp-search-terms.csv')
```
- In [4]:**

```
len(df)
```
- Out[4]:** 999
- In [5]:**

```
df.info()
```

Output:
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 999 entries, 0 to 998
Data columns (total 5 columns):
 Queries 999 non-null object
 Clicks 999 non-null int64
 Impressions 999 non-null int64
 CTR 999 non-null object
 Position 999 non-null float64
 dtypes: float64(1), int64(2), object(2)
- Log Output:** (scrolling log)
ebookApp] Writing notebook-signing key to /Users/matt/ebookApp] Notebook full-stack-python-data.ipynb is not ebookApp] Kernel started: dbe3576e-7faf-4b1b-aef1-fff3ebookApp] Adapting to protocol v5.1 for kernel dbe3576ebookApp] Saving file at /full-stack-python-data.ipynb ebookApp] Notebook full-stack-python-data.ipynb is not ebookApp] Saving file at /full-stack-python-data.ipynb ebookApp] Notebook full-stack-python-data.ipynb is not

Catch Our Breath...

- Ask a couple of questions?
- Make a couple of comments?
- Any more readings to recommend?

Notes:

- C.P. Snow (1959): *The Two Cultures & the Scientific Revolution* <<https://github.com/braddelong/public-files/blob/master/readings/book-snow-two-cultures.pdf>>: ‘A good many times I have been present at gatherings of people who, by the standards of the traditional culture, are thought highly educated and who have with considerable gusto been expressing their incredulity at the illiteracy of scientists. Once or twice I have been provoked and have asked the company how many of them could describe the Second Law of Thermodynamics. The response was cold: it was also negative. Yet I was asking something which is the scientific equivalent of: Have you read a work of Shakespeare’s? I now believe that if I had asked an even simpler question – such as, What do you mean by mass, or acceleration, which is the scientific equivalent of saying, Can you read? – not more than one in ten of the highly educated would have felt that I was speaking the same language. So the great edifice of modern physics goes up, and the majority of the cleverest people in the western world have about as much insight into it as their neolithic ancestors would have had...’
- Fernando Perez (2018): *When Jupyter Becomes Pervasive at a University* <<https://www.youtube.com/watch?v=Wd6a3JIFH0s>>: ‘In 2018, UC Berkeley launched a new major in data science, anchored by two core courses that are the fastest-growing in the history of the university. Fernando Pérez discusses the program and explains how the core courses, which now reach roughly 40% of the campus population, are extending data science into specific domains that cover virtually all disciplinary areas of the campus...’



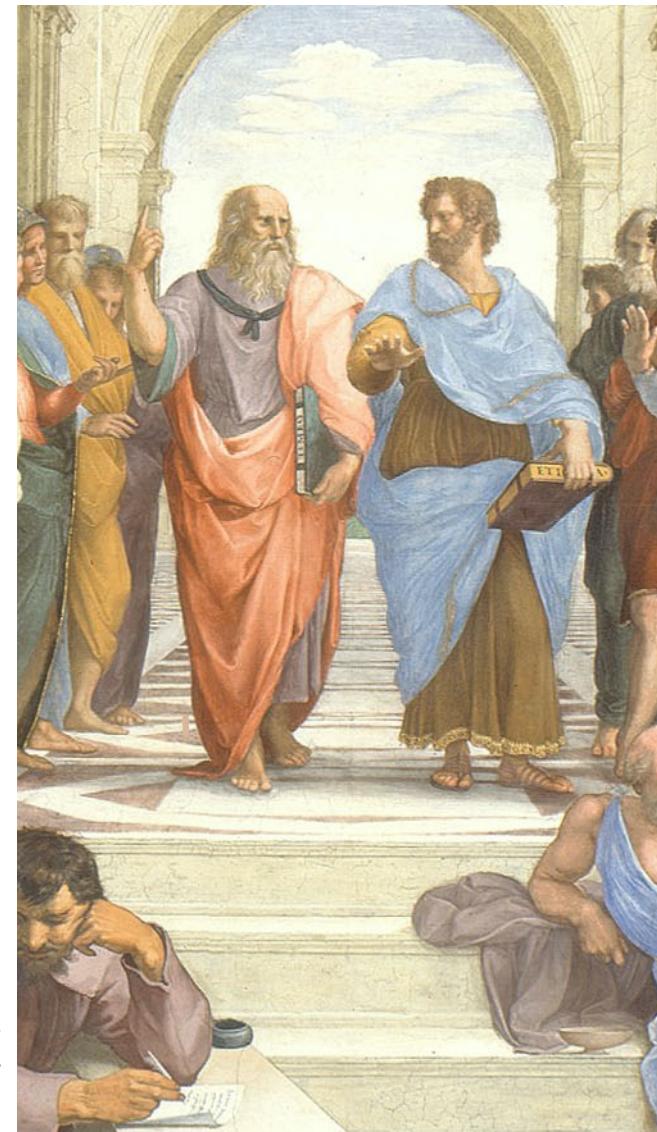
Discuss: As Class Begins... Module...

Let me start this discussion off by asking three questions:

1. Did the “Introduction to Jupyter Notebooks” assignment “work” for you?
2. What are our chances of making this course a fully worthwhile educational experience for you? What is the most essential thing to make sure we accomplish?
3. What important pieces of history is this economics-centered course likely to overlook? How is that going to make this course less worthwhile than an ideal course would be?

As before, for full credit for this discussion, provide at least two substantive contributions to the discussion, of which at most one should be a direct response to one of my questions. We want you to talk to & react to one another here...

THREADED DISCUSSION URL: <https://bcourses.berkeley.edu/courses/1493152/discussion_topics/5774299/>



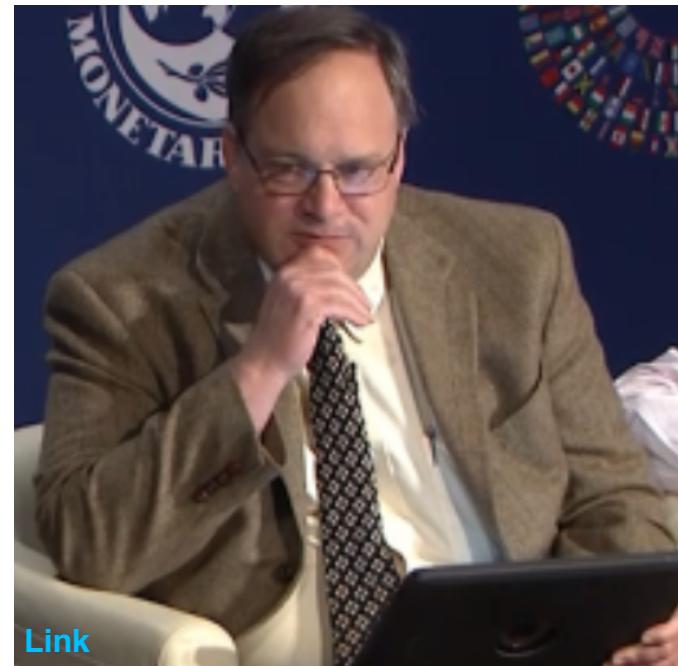
Learning Goals for: Module 0. As Class Begins...

Six primary:

1. To be able to outline how a typical week's module of this course will work
2. To be able to outline why we have chosen this course structure in our attempt to provide a better-than-3rd-class online education here
3. To critique, in an informed way, our structural choices
4. To be able to outline what “thinking like an economist” is good for
5. To be able to outline course requirements and resources
6. To be able to successfully complete a jupyter notebook problem set

Six secondary:

7. To explain to classmates why the instructors chose **Andy Matuschak**: *Why Books Don't Work* as the first required reading for this course.
8. To be able to suggest an alternative first reading that, in their informed opinion, might have been a better choice given the aims of this course and this module
9. To explain to classmates why the instructors chose **Partha Dasgupta**: *Economics: A Very Short Introduction* as the second required reading for this course.
10. To be able to suggest an alternative second reading that, in their informed opinion, might have been a better choice given the aims of this course and this module
11. To formulate a plan for how to get the most educational juice out of this—very odd —semester
12. To have communicated with the instructors with respect to potential obstacles—financial, technological, or otherwise—to fully participating in all the activities of this course



[Link](#)



[Link](#)

Al Karaouine, Fez, Morocco

240 words

Catch Our Breath...

- Ask a couple of questions?
- Make a couple of comments?
- Any more readings to recommend?



U.C. Berkeley: Economics 115: Fall 2020

The World Economy in the

Long 20th Century: 1870-2016

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last revised: 2020-05-23

for delivery: 2020-08-29

Fall 2020 instantiation: <<https://bcourses.berkeley.edu/courses/1493152>>

On github: <<https://github.com;braddelong/public-files/blob/master/econ-115-master.pptx>>

Master file: <<https://www.icloud.com/keynote/0oWNqxKlrwJZn8H1UbIfG-LBg>>

Modules

Notionally: a sixteen week semester—the last week being review, & the first week getting off to a somewhat ragged start...

0. As class begins... <<<https://www.icloud.com/keynote/0FVJH3UuqPuq91KpU0jRc1vRQ>>
1. Themes
2. Growth & globalization 1870-1914
3. Empire & underdevelopment: 1870-1914
4. World War I & failed reconstruction: 1907-1929
5. The Great Depression: 1925-1941
6. Alternatives to the ‘classical liberal’ order: 1870-2016
7. World War II & cold war: 1933-1989
8. 30 glorious years in the global north: 1945-1975
9. False (& true) starts to development in the global south: 1911-1990
10. The neoliberal turn: 1980-2005
11. Hyperglobalization & infotech: 1955-2016
12. The great recession & secular stagnation: 2005-2016
13. East Asia’s rise: 1870-2016
14. Ending the long 20th century: 2005-2016
15. Conclusion: looking back & looking forward: -3000-3000



[Link](#)



[Link](#)

Al Karaouine, Fez, Morocco