

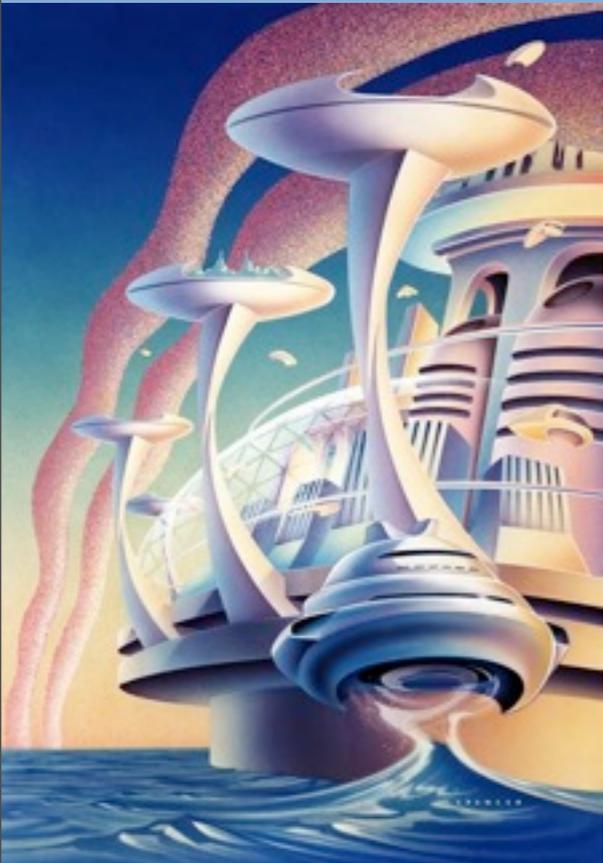
# Social Implications - I

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**mysteries of the region**

**History of Information**

April 23, 2013



# exam

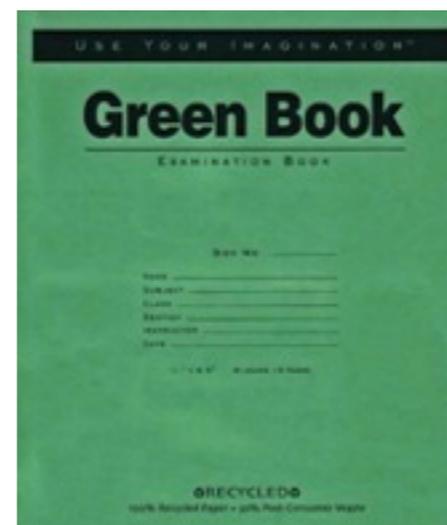
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## exam

May 15

11:30 - 2:30

155 Kroeber

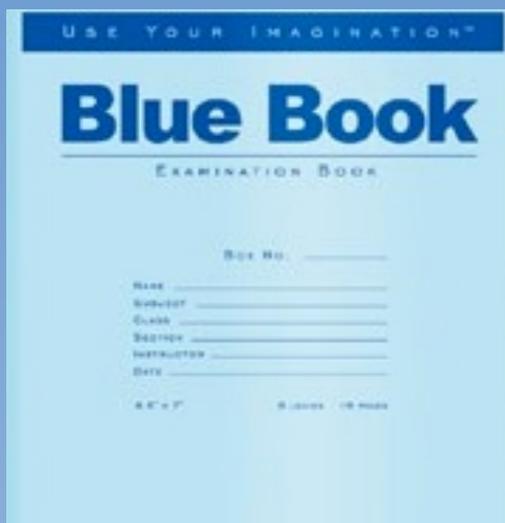


## study sessions

Tues May 7 & Thurs May 9 (reading week)

9:30-11:00

155 Kroeber





To begin, developers cannot sell ads in apps, collect user data for ads, share data with ad companies or distribute apps elsewhere. They cannot charge people to buy apps or virtual goods or services within them.

Many developers said they expected Google to eventually allow them to sell apps and ads. But Sarah Rotman Epps, an analyst at Forrester who studies wearable computing, said Google was smart to limit advertising at first.

aob

## good timing?

16 April 2013 Last updated at 10:38 ET

1.1K Share

# Google Glass: No advertising allowed, developers told

Developers working on apps for Google's smart glasses have been told they will not be allowed to place advertising within the device's display.

The newly-published terms and conditions for developers working on Glass also prohibit companies charging for apps.

The glasses, which have a five megapixel camera and voice-activated controls, have started to be shipped.



Google Glass is controlled using voice ac commands



# related news?

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your friends recommend.

## **Silicon Valley companies quietly try to kill Internet privacy bill**

**By Steven Harmon**  
**Bay Area News Group**

Posted: 04/20/2013 12:00:00 PM PDT

Updated: 04/21/2013 09:13:25 AM PDT

SACRAMENTO – Silicon Valley tech firms, banks and other powerful industries are mounting a quiet but forceful campaign to kill an Internet privacy bill that would give California consumers the right to know how their personal information is being used.

A recent letter signed by 15 companies and trade groups – including TechAmerica, which represents Google, Facebook, Microsoft and other technology companies – demanded that the measure's author, Assemblywoman Bonnie Lowenthal, D-Long Beach, drop her bill. They complain it would open up businesses to an avalanche of requests from individuals as well as costly lawsuits.

VIRTUAL COMMUNITY: HOMESTEADING ON THE ELECTRONIC FRONTIER

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no really good? Além disso, como ressaltou o linguista Geoffrey Nunberg

VIDA SOCIAL DA INFORMAÇÃO, A

by JOHN SEELY BROWN, PAUL DUGUID - *Computer* - 1899  
300 pages

Com base em suas experiências profissionais como cientista-chefe e pesquisador

Annual report of the American historical Association - Page 1

Historia - 1884  
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Annalee Saxenian, "In Search of Power: The Organization of Business Interests in Silicon Valley and Route 128," *Economy and Society* 18

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Darnton, Robert. 2000. "An Early Information Society: News and the Media in Eighteenth-Century Paris." *American Historical Review* 105.1.

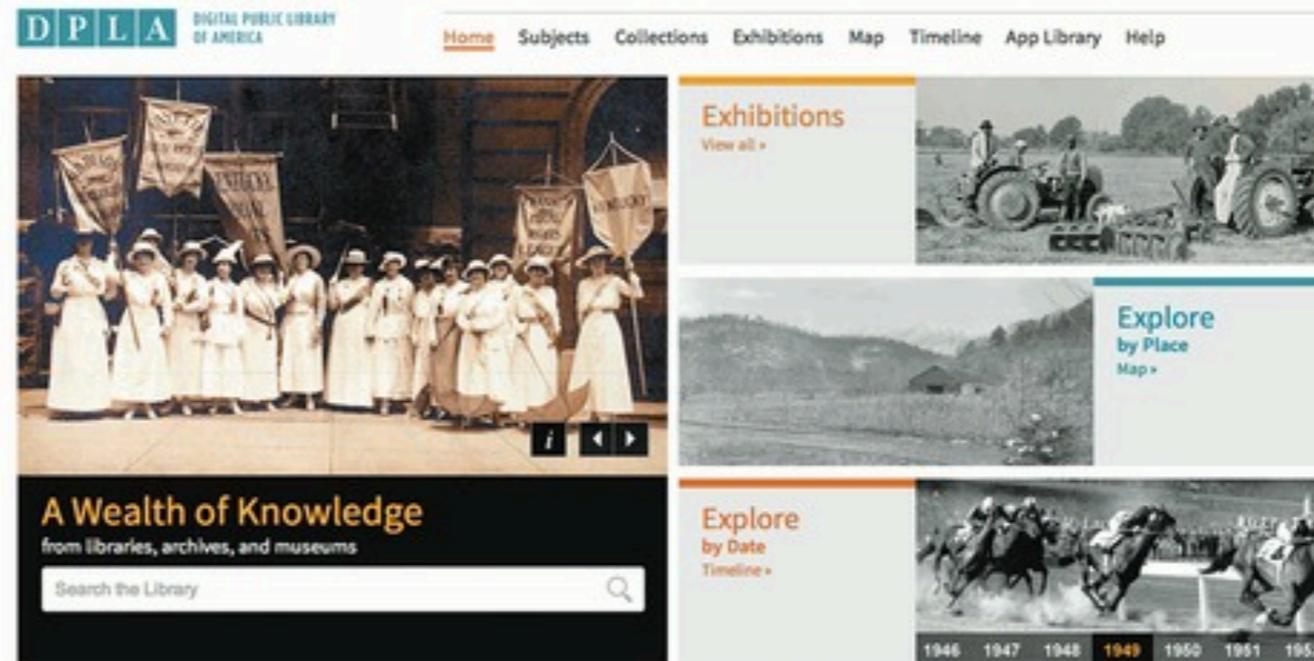
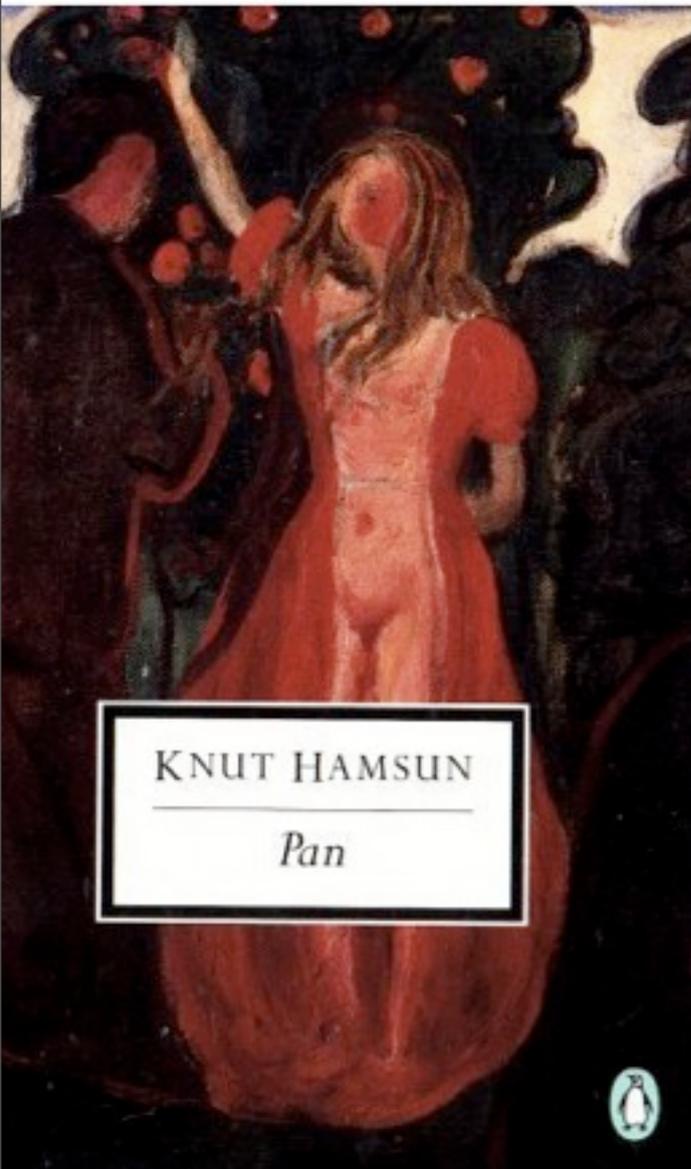
# The National Digital Public Library Is Launched!

Robert Darnton

E-MAIL PRINT SHARE

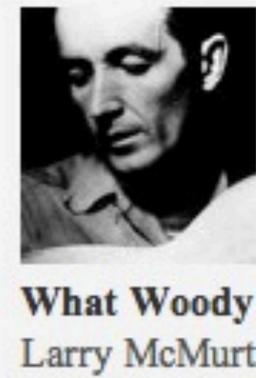
Read: **LATER**

aob



A detail from the preliminary model for the home page of the Digital Public Library of America's website, to be available at <http://dp.la/>

The Digital Public Library of America, to be launched on April 18, is a project to make the holdings of America's research libraries, archives, and museums available to all Americans—and eventually to everyone in the world—online and free of charge. How is that possible? In order to answer that question, I would like to describe the first steps and immediate future of the DPLA. But before going into detail, I think it important to stand back and take a broad view of how such an ambitious undertaking fits into the development of what we commonly call an information society.





# Facebook Provides Near-Real-Time PUE Data for Its Data Centers

by Mark Hachman | April 18, 2013

Twitter Facebook LinkedIn +1 25

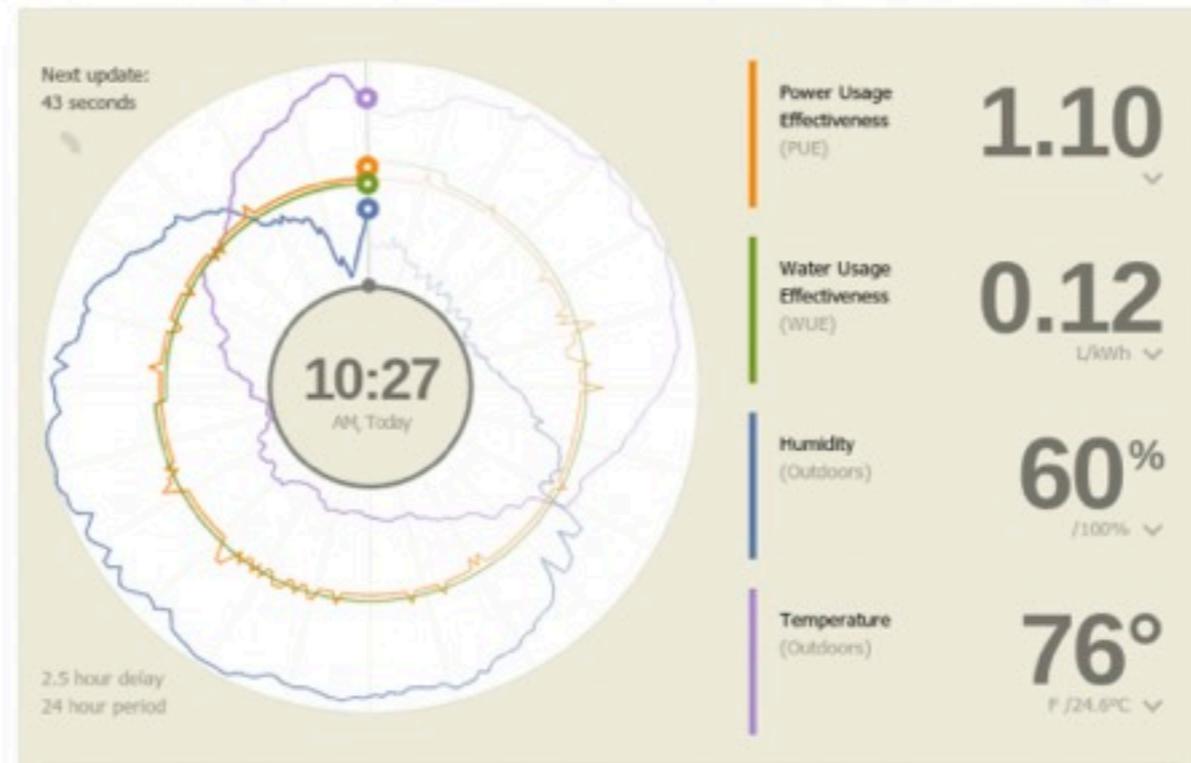
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Want to know how efficiently Facebook is consuming water and power? You can check for yourself now.

**SlashData**  
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Forest City, NC Data Center

Dashboard: PUE & WUE



### Slashdot Poll

I paid attention to news of the M

...

- Not at all
- Slightly
- More than slightly, but not obs
- Obsessively
- Is that a new long-lasting carar

Vote

Read the 189 comments

Voted on 14562 times.

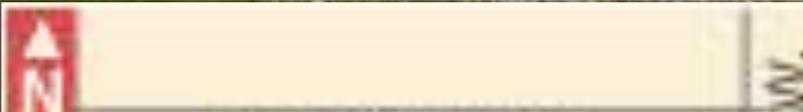


There's something mysterious happening in Iowa—a massive data center is going up, thought to be the home of a next-generation facility from Apple, Google, or another major provider.

The Planning and Zoning Commission of Altoona, a suburb of Des Moines, has approved a 25 percent bump in the proposed size of the three buildings scheduled for construction on the site. The mysterious company has expanded its building plans by nearly 300,000 square feet, for a total of 1.4 million square feet, [reported the Des Moines Register](#).

To put this so-called "Project Catapult" in context, Facebook's Prineville datacenter (as planned in 2010) totaled just over 300,000 square feet—even after the social network announced plans to double the facility's size. Apple's own facility in Prineville, which will be powered exclusively by renewable energy sources, will total about 338,000 square feet. And Apple's Maiden, N.C. facility, one of the largest privately owned data facilities, covers 500,000 square feet and cost about \$1 billion. Compare that to the

## Mysterious "Project Catapult" Grows Bigger



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# Facebook revealed as company behind \$1.5 billion Altoona project

Apr 19, 2013 | 0 Comments

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NOT at all

Slightly

More than

Obsessive

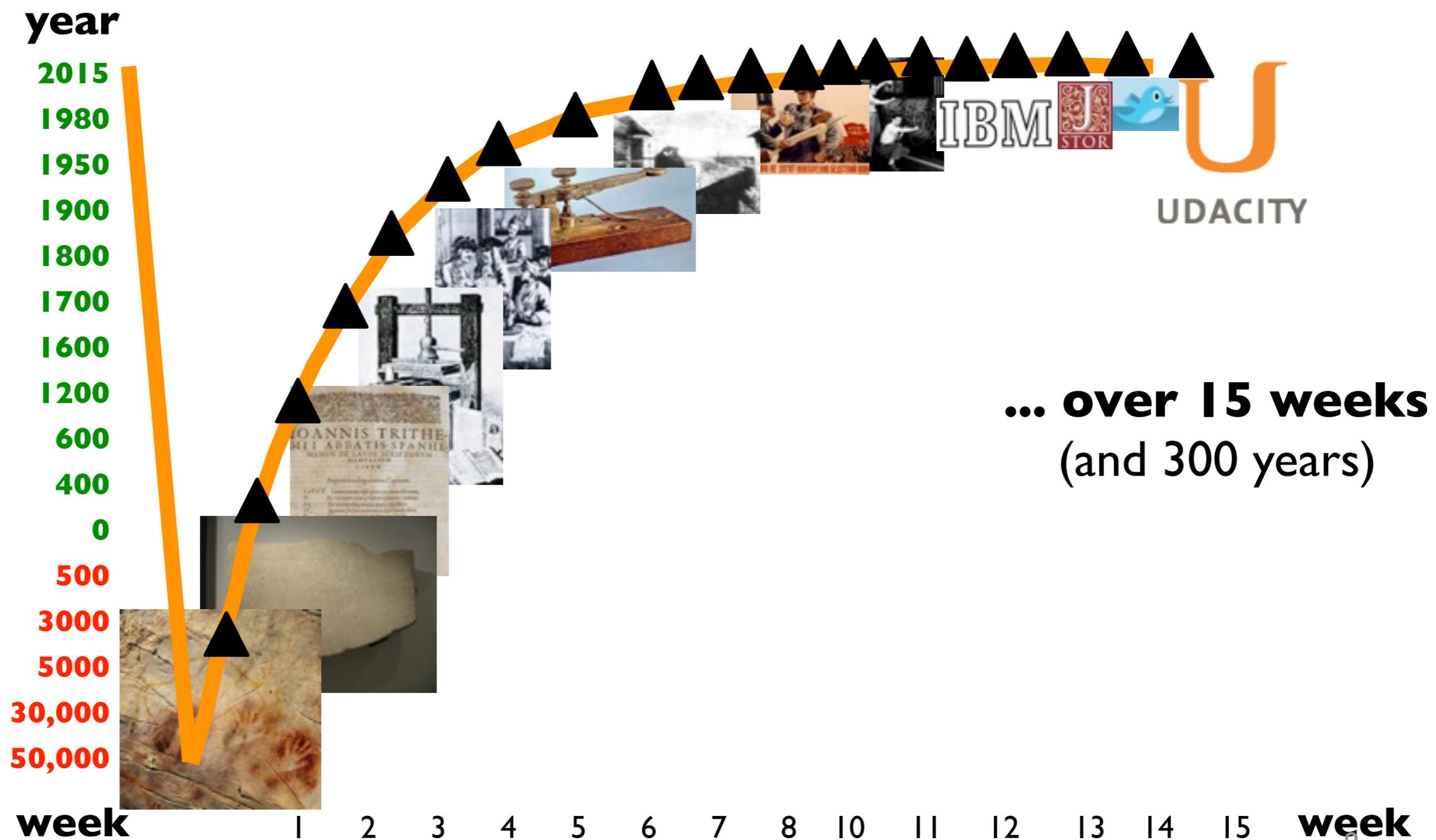
Is that a

[Read the 19](#)

Voted on 14



# looking back



# overview



a little learning

information  
issues

local  
problems

theory  
& data

Distance is dead

Location still matters

revolution  
at last

Dist & Loc work together

Saying the same thing

Not a revolution

Both miss the mark

social

implications I

# overview



a little learning

information  
issues

local  
problems

theory  
& data

revolution  
at last

social  
implications I

25-Hof113-SocImp-I 10

# "the *revolution* begins at last"

"This has been predicted before ..."





# 300 years (or 23 classes)

---

"Ye Gods, annihilate but space and time,  
And make two lovers happy."

1728





Claude Chappe  
(1763–1805)

# a single point

## revolutionary ideas

"The establishment of the telegraph is ... the best response to the publicists who think that France is too large to form a Republic. The telegraph shortens distances and, in a way, brings an immense population together at a single point."

--Claude Chappe, 1793



# Chapitre 1<sup>er</sup>

## Exposition.

Parvenu à la suite de travaux longs et pénibles, trouver, enfin, un art nouveau regardé comme impossible beaucoup de Savans, une route nouvelle va fournir devant les efforts de l'homme, les distances vont disparaître et les extrémités du Monde se rapprocher.

Je crois devoir <sup>Comme</sup> commémorer le résultat de mes travaux et les archiver, où l'industrie française, enregistrée par acte et ses découvertes, et publiés sous un et moyennant prenant un brevet d'invention pour authentiquer mes travaux et mes découvertes résultats.

Conduire les Ballons dans l'air a été proclamé possible; (Car on ne peut <sup>enlever</sup> considérer l'azote d'atmosphère de l'air comme un moyen de progression suffisant); Les efforts dirigés au des Ballons sphériques <sup>est</sup> impossible,

Duperron

Réaumur



Brevets d'Invention,  
de perfectionnement et d'importation,

octroyés par les Lois des 7 janvier et 25 mai 1791.

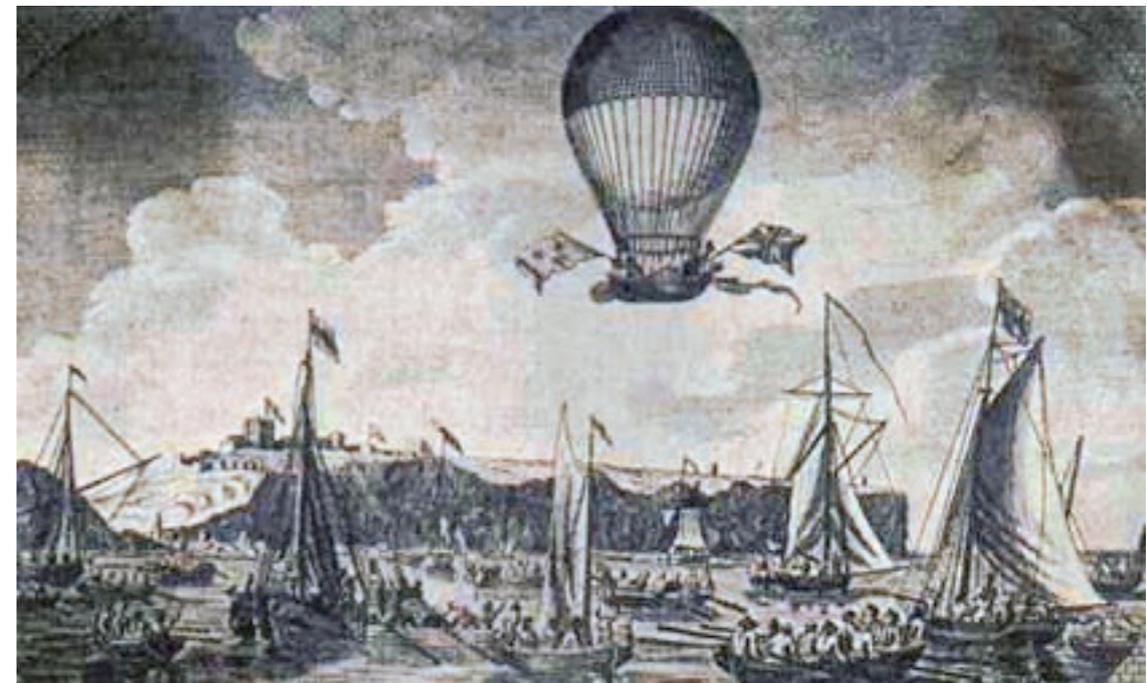
Certificat de demande d'un Brevet d'Invention  
de cinq ans décerné à M. Duperron (Fouquier) à Paris  
Département de la Seine

On la Requête de M. Duperron (Fouquier) soumise à la Convention Nationale le 20 Mars 1791, par laquelle il expose que, devant pour les droits de propriété temporaire accordés et garantis aux auteurs et inventeurs les découvertes et perfectionnements en tout genre d'industrie, il demande un Brevet d'Invention

de cinq ans, pour tout le contenu dans son acte de demande.

# disappearance

"Parvenu à la suite de travaux longs et pénibles à trouver, enfin, un art nouveau regardé comme impossible par beaucoup des Savans, une route nouvelle va fournir devant les efforts de l'homme, **les distances vont disparaître et les extrémités du Monde se rapprocher.**"





# one neighbourhood

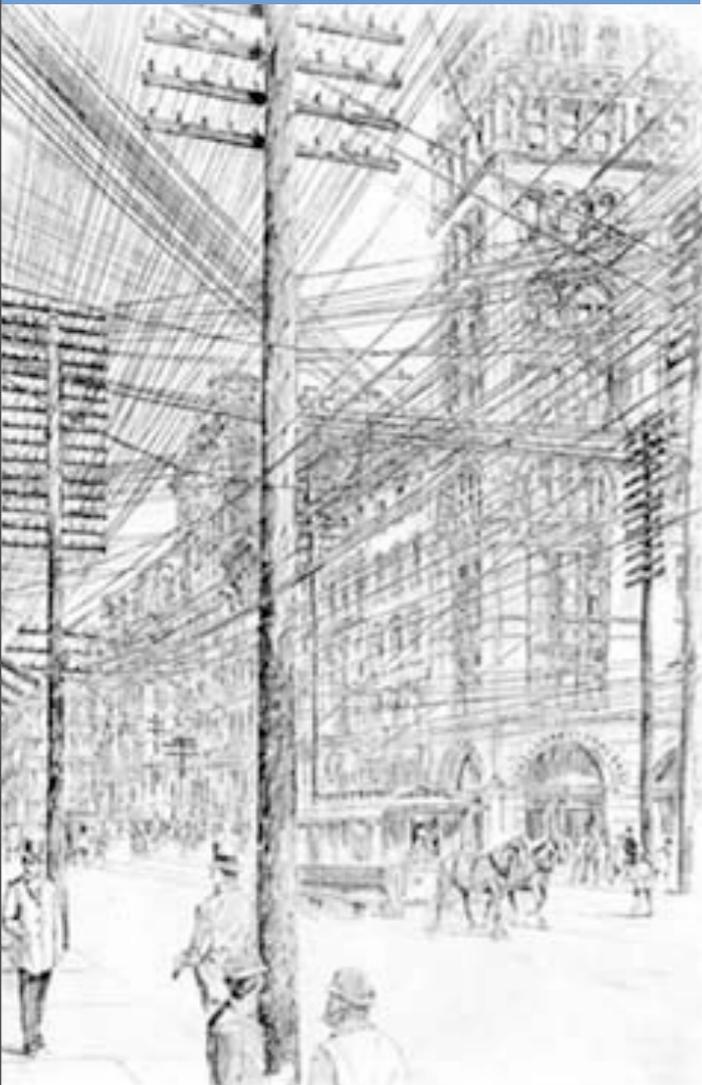
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"It is not visionary to suppose that it would not be long ere the whole surface of this country would be channelled for those nerves which are to diffuse, with the speed of thought, a knowledge of all that is occurring throughout the land; making one neighborhood of the while country."

Morse to Congress, 1838

# going global

---



"A line of telegraph ... from London to Kurrachee, and from thence to every part of India, ... intelligence and commands be daily and hourly communicated with the speed of lightening ... in this **virtual annihilation of time and space** in the communications between England and her distant possessions will be more than realised"

--*Blackwood's Edinburgh Magazine*, 1857

# still going

---

## sea to shining sea

"the almost complete annihilation of time and space between the distant antipodal points of the American continent ... produced by the construction of the Pacific Railroad"

-- John Wesley Clampitt,  
*Echoes from the Rocky Mountains*, 1888





"When the line-of-sight telegraph was invented, as well as the telegraph and the telephone, among other inventions, writers claimed that finally time and distance would come to an end.." --Melanie Cebula

## once again, one voice

---

"Someday we will build up a world telephone system, making necessary to all peoples the use of a common language or common understanding of languages, which will join all the people of the earth into one brotherhood. There will be heard throughout the earth a great voice coming out of the ether which will proclaim, 'Peace on earth, good will towards men.'"

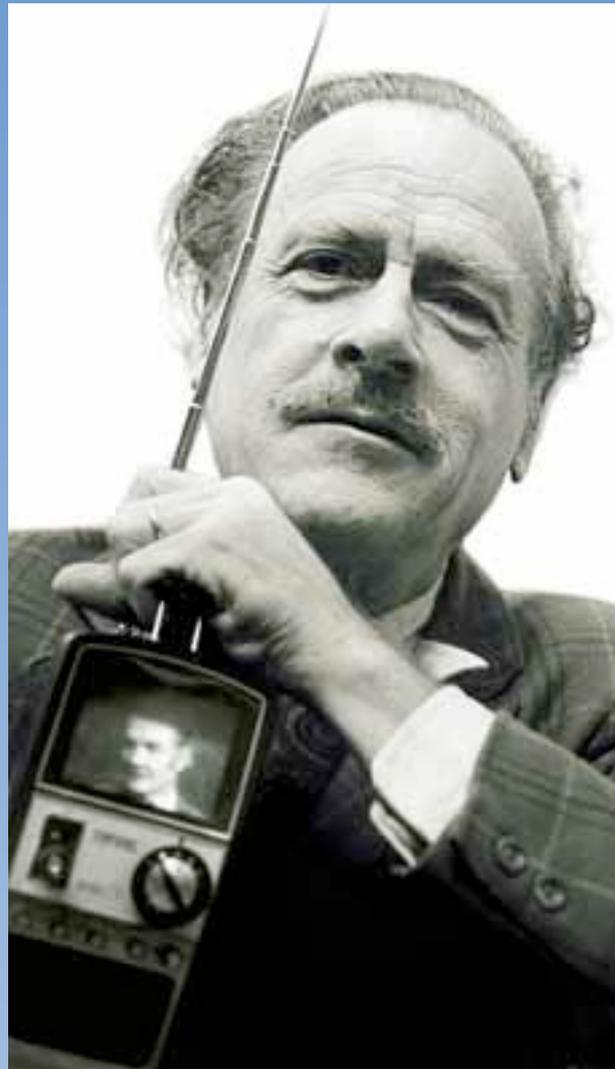
--John J. Carty, AT&T, 1891

"As much as ancient philosophers aren't usually my source of inspiration, Zeno's paradox (of distance) is really a good example of what I mean."

--Eric Lindholm

## global village

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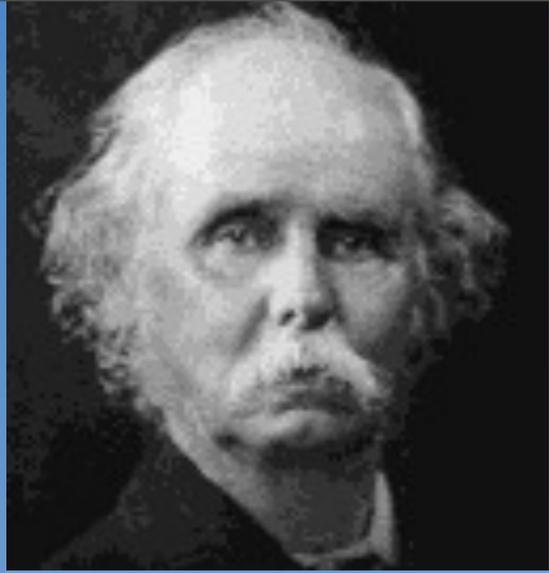
"Electric circuitry has overthrown the regime of 'time' and 'space' and pours upon us instantly and continuously concerns of all other men. It has reconstituted dialogue on a global scale. Its message is Total Change, ending psychic, social, economic, and political parochialism... Ours is a brand-new world of allatonceness. 'Time' has ceased, 'space' has vanished. **We now live in a *global village* ... a simultaneous happening.**"

--Mcluhan et al., *Medium is the Massage*, 1967

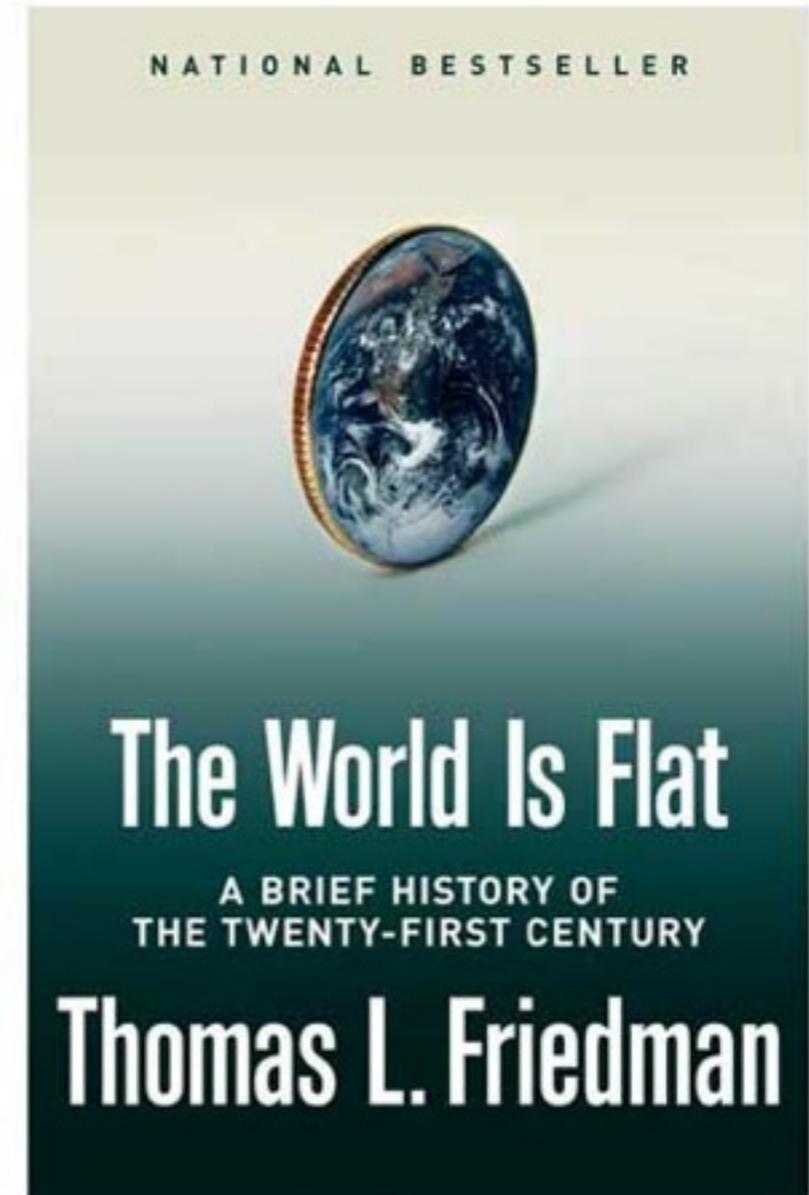
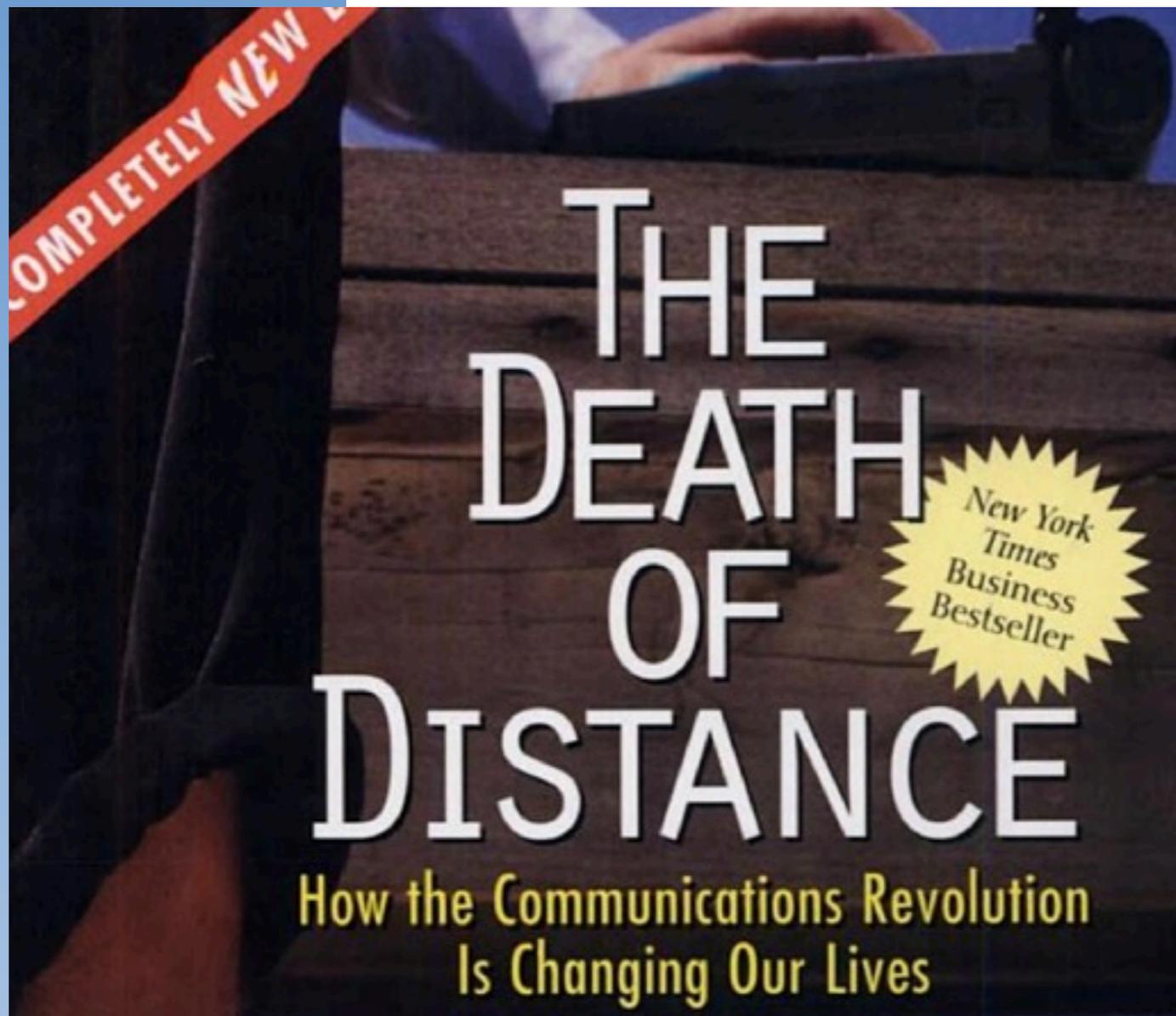
# "the *revolution* begins at last"

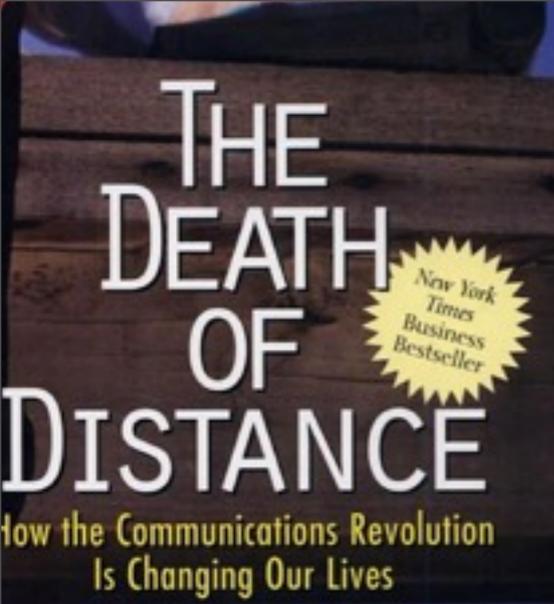
"This has been predicted before; the difference now is that it is actually starting to happen"





which century?





# trendspotting

1. **The Death of Distance.** Distance will no longer decide the cost of communicating electronically. Indeed, once investment has been made in a communications network, in buying a computer or telephone, or in setting up a Web site, the additional cost of sending or receiving an extra piece of information will be virtually zero.
2. **The Fate of Location.** Companies will be free to locate many screen-based activities wherever they can find the best bargain on skills and productivity. Developing countries will increasingly perform on-line services – including monitoring security screens, inputting data from forms, running help-lines, and writing software code – and sell them to the rich industrial countries that generally produce such services domestically.
3. **Improved Connections.** Most people on earth will eventually have access to networks that are all interactive and broadband. The Internet will continue to exist in its present form, but will also carry many other services, including telephone and television.
4. **Increased Mobility.** Every form of communication will be available for mobile or remote use.
5. **More Customized Networks.** The huge capacity of networks will enable individuals to order “content for one”: that is, individual consumers will receive (or send) exactly what they want to receive (or send), when and where they want it.
6. **A Deluge of Information.** Because people’s capacity to absorb new information will not increase, they will need filters to sift, process, and edit it.
7. **Increased Value of Brand.** Companies will want ways to push their information ahead of their competitors’. One of the most effective will be branding. What’s hot – whether a product, a personality, a sporting event, or the latest financial data – will attract the greatest rewards.
8. **More Minnows, More Giants.** Many of the costs of starting a new business will fall and companies will more easily buy in services. So small companies will start up more readily, offering services that, in the past, only giants had the scale and scope to provide. If they can back creativity with competence and speed, they will compete effectively with larger firms. At the same time, communication amplifies the strength of brands and the power of networks. In industries where networks matter, concentration will increase.
9. **More Competition.** More companies and customers will have access to accurate price information. In addition, some entry barriers will fall. The result will be greater competition in many markets, resulting in “profitless prosperity”: it will be easier to find buyers, but harder to make fat margins.

## The future according to Mr Google

Eric Schmidt is worth \$8.2bn, he runs one of the most powerful companies in the world – and he knows what you're going to do next. Google's executive chairman tells all



Alan Rusbridger  
The Guardian, Friday 12 April 2013  
[Jump to comments \(67\)](#)



Eric Schmidt: 'I would prefer to not spread and democratise the ability to fight war to every single human being' Photograph: Christopher Lane for the Guardian

# going to happen fast

"What I meet, over and over again, as I travel around, is that the essential human condition is optimistic – in every one of these places. They may or may not have reasonable governments, but the people are the same as us...

"It's [the world coming online] going to happen very fast. It's going to happen in countries which don't have the same principles that we in America have from the British legal system – around law and privacy and those sorts of things. All sorts of crazy stuff is going to happen. Human societies can't change that fast without both good and negative implications." --Eric Schmidt

# overview



a little learning

information  
issues

local  
problems

theory  
& data

revolution  
at last

social  
implications I

# assignment

---

Distance is dead	12%
Location still matters	28%
D&L work together	24%
Saying the same	20%
Not a revolution	12%
Both miss the mark	2%

"I don't think that Marshal's claims for localization hold true in this day and age.

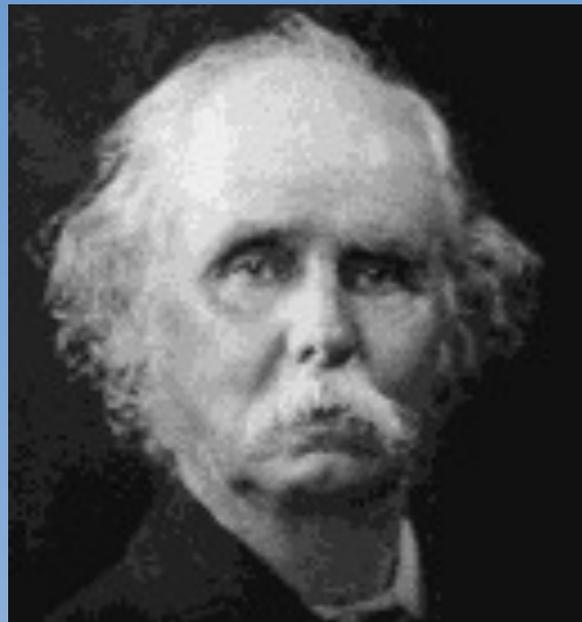
--Hurshal Patel

## principled explanation?

---

"Every cheapening of the means of communication, every new facility for the free interchange of ideas ... alters the action of the forces which tend to localize industries."

--Alfred Marshall,  
*Principles of Economics*, 1920



Alfred Marshall  
1842-1924

"Despite the enormous innovation in areas like online collaboration, industries still maintain centralized HQs because IT still does not allow the efficient management of firms if they are geographically dispersed." --Sebastian Delgado

# management problems

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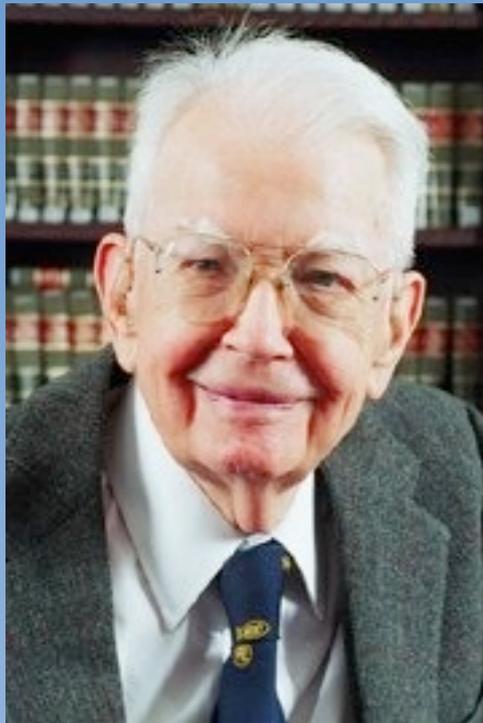
## **economic explanations**

make or buy

hierarchy or market

*decided by*

transaction costs vs management costs



Ronald Coase  
1910

# the Troubridge rule?

---

"Human behavior disrupts the best laid organizational plans and thwarts the cleanness of the logical relationships found in the structure"

--William Scott,  
"Organization Theory" 1951

"Whenever I see a fellow look as if he was thinking, I say that's mutiny".



# the nature of the firm

---



Ronald Coase  
1910

"Changes like the telephone and the telegraph which tend to reduce the cost of organising spatially will tend to increase the size of the firm. All changes which improve managerial technique will tend to increase the size of the firm."

--Ronald Coase,  
"The Nature of the Firm," 1937



# local work

## High-Tech Factories Built to Be Engines of Innovation

SCHENECTADY, N.Y. — The Obama administration has long heralded the potential of American factories to offer good, stable middle-class jobs in an economy that desperately needs them. But experts say there might be another advantage to expanding manufacturing in the United States: a more innovative economy.

### Add to Portfolio

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Heather Ainsworth for The New York Times  
G.E. workers on a battery assembly

A growing chorus of economists, engineers and business leaders are warning that the evisceration of the manufacturing work force over the last 30 years might not have scarred just Detroit and the Rust Belt. It might have dimmed the country's capacity to innovate and stunted the prospects for long-term growth.

“In sector after sector, we’ve lost our innovation edge because we don’t produce goods here anymore,” said Mitzi Montoya, dean of the college of technology and innovation at Arizona State University.

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## inside out?

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DECEMBER 2012

### The Insourcing Boom

After years of offshore production, General Electric is moving much of its far-flung appliance-manufacturing operations back home. It is not alone. An exploration of the startling, sustainable, just-getting-started return of industry to the United States.

CHARLES FISHMAN | NOV 28 2012, 8:51 PM ET

So a funny thing happened to the GeoSpring on the way from the cheap Chinese factory to the expensive Kentucky factory: The material cost went down. The labor required to make it went down. The quality went up. Even the energy efficiency went up.

GE wasn't just able to hold the retail sticker to the "China price." It beat that price by nearly 20 percent. The China-made GeoSpring retailed for \$1,599. The Louisville-made GeoSpring retails for \$1,299.

# Work at Home Jobs Becoming More Common

9:34 AM ET | By: Chad Brooks, BusinessNewsDaily Contributor

In 2010, 13.4 million people worked at least one day at home per week—an increase of over 4 million people (35 percent) in the last decade.



## here or there?

### percentage of home workers in population

1960	1970	1980	1990	1999	2005	2010
0.025	0.013	0.010	0.014	0.034	0.039	0.043

## Bits

### trend?

FEBRUARY 25, 2013, 1:41 PM | 198 Comments

## Will Yahoo Increase Productivity by Banning People From Working at Home?

By CLAIRE CAIN MILLER

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When Marissa Mayer swooped into Yahoo last year, she tried to make it a more desirable place to work, adding perks like free food and smartphones.

But for some employees, that spirit changed last week, when the company issued a new policy requiring all employees to report to work at Yahoo offices and not remotely, according to [a report](#) published by All Things D, a tech blog. In a memo, the company said it wanted to increase collaboration and momentum.

25-Hofl13-SocImp-1

# Behold the Computer Revolution

By PETER T. WHITE National Geographic Staff

Illustrations by National Geographic Photographers  
BRUCE DALE and EMORY KRISTOF

**M**Y WIFE IS MAD AT COMPUTERS. "Those awful machines," she calls them. "How they mess up our credit card accounts! Imagine sending a bill for \$232.24 every month for four months after you've paid it!"

But I'm not mad. That mixup was settled after five months; and we never did feel as computer-harassed as some Americans, notably the Kansan repeatedly reminded that his department store bill was "overdue in the amount of \$00.00." At last he too managed to pacify the computer—with a check for \$00.00.

In a way, though, my wife is right. After a year of looking closely at computers—at what they are doing all over the country, what they are likely to do before long, and what their effects are expected to be upon us all and upon our descendants—I must say that these machines are indeed awful, in just about every sense the dictionaries assign to that word: inspiring dread, appalling, objectionable; solemnly impressive; commanding reverential fear or profound respect; sublimely majestic.

In the end I found my own ways of



At the consoles of such electronic wonders as this IBM 370, man achieves the power to master information on a scale that profoundly influences the course of science, business, government—even the arts. © N.G.S.

593

"Perhaps someday the desk worker fed up with traffic jams in the city will do his job at a computer input-output station at home: If he wants to see documents from company files, he punches his keyboard and they appear on his display screen. ... To dictate a letter, he punches up his secretary, at her office desk or at her terminal in her home. She'll type it on her keyboard—and the text will emerge in the downtown office, to go into the files and into the mail. Or she'll send electronic impulses directly to the company addressed—into their computer....

--National Geographic, 1970



## constant roles

# overview



revolution  
at last

theory  
& data

local  
problems

information  
issues

a little learning

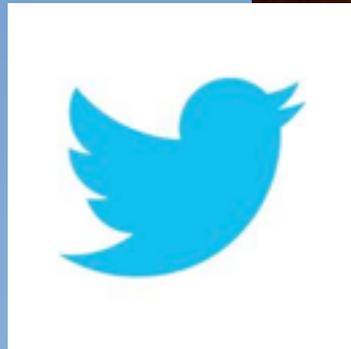
social  
implications I



# more complications

---

**if distance is dead ...**



**... why are they here?**

# bringing it all back home?

---

"Look at silicon valley, look at shopping malls, look at recruiting at college campuses - employees, customers, and employees alike still benefit from localization, even if there are other options afar." --Kathryn Bender

"The reverse of this can be observed through the de facto localization of the software industry in the Silicon Valley. ... people still flock from around the world to work at some of the prestigious software companies located in Northern California and even people who wish to begin startups seek to learn from the culture and experience that is to be found in the area." --Asif Dhanani

"It is no accident that high-tech start-ups are concentrated in areas like the Silicon Valley which have a high density of college-educated professionals." --Devan Lai

"Firstly, talent and ideas are much like resources and are still bound by the physical limitations of space" --Wook Lee

"Every cheapening of the means of communication, every new facility for the free interchange of ideas ... alters the action of the forces which tend to localize industries."

--Alfred Marshall,  
*Principles of Economics*, 1920

at the centre ...

... of cheapening communication



10. **Increased Value of Niches.** The power of the computer to search, identify, and classify people according to similar needs and tastes will create sustainable markets for many niche products. One of the most valuable improvements will be in the ability of people to locate things that have hitherto been hard to find: from friends with similar tastes to specialized services.
11. **Communities of Practice.** The horizontal bonds among people performing the same job or speaking the same language in different parts of the world will strengthen. Common interests, experiences, and pursuits, rather than proximity, will bind communities together.
12. **The Loose-Knit Corporation.** Culture and communications networks, rather than rigid management structures, will hold companies together. Vertically integrated companies that do the costs of dealing with arm's-length suppliers and partners. Alliances will bond companies together at many levels.
13. **Openness as a Strategy.** Loyalty, trust, and open communications will reshape the nature of supplier and customer contacts. Suppliers will draw directly on their customers' databases, working as closely and seamlessly as an in-house supplier does now. Customers will be able to manage and track their orders through the production process.
14. **Manufacturers as Service Providers.** Companies will tailor their products more precisely to a customer's tastes and needs. Some will retain lasting links with their products: car companies, for instance, will continue electronically to track, monitor, and learn about their vehicles throughout the product's life cycle. New opportunities to build links with customers will emerge as a result.
15. **The Inversion of Home and Office.** The line between home and work will blur. People will increasingly work from home and shop from work. The office will become a place for the social aspects of work such as networking, brainstorming, lunching, and gossiping. More people will work on the move: from their cars, from hotel rooms, from airport departure lounges. Home design will change: new homes will routinely have home offices.
16. **The Proliferation of Ideas.** New ideas and information will travel faster to the remotest corners of the world. Developing countries will acquire more rapidly access to the industrial world's knowledge and ideas. That will help many developing countries to grow more quickly and even to narrow the gap with the rich world.
17. **The Decline of National Authority.** Governments will find national legislation and censorship inadequate for regulating the global flow of information.
18. **Loss of Privacy.** Protecting privacy will be difficult, as it was in the villages of past centuries. Governments and companies will easily monitor people's movements. Machines will recognize physical attributes such as a voice or fingerprint. Civil libertarians will worry, but others will rationalize the loss as a fair exchange for the reduction of crime, including fraud and illegal immigration. In the electronic village, there will be little true privacy – and little unsolved crime.
19. **A Global Premium for Skills.** Pay differentials will continue to widen, as companies fight for the scarce talents of well educated workers. Managerial and professional jobs will be less vulnerable to competition from automation than jobs requiring relatively little skill. In addition, the Internet enhances the value of creative use of information. On-line recruitment will make the job market more global and efficient. As a result, highly skilled people will earn broadly similar amounts, wherever they live in the world.
20. **Rebirth of Cities.** As individuals spend less time in the office and more time working from home or on the road, cities will change from concentrations of office employment to centers of entertainment and culture. They will become places where people congregate to visit museums and galleries, attend live performances of all kinds, participate in civic events, and dine in good restaurants. Some poor countries will use low-cost communications to stem the flight from the countryside by providing rural areas with better medical services, jobs, education, and entertainment.

playing both ways? ...

# overview



a little learning

information  
issues

local  
problems

theory  
& data

revolution  
at last

social  
implications I

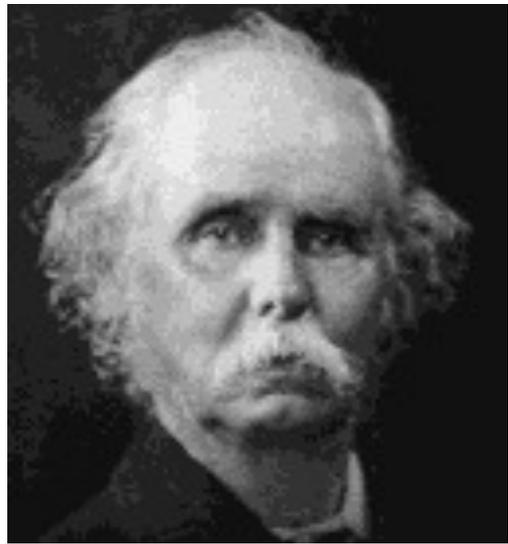


# diffuse information

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"The accumulation of many large manufacturing establishments in the same district has a tendency to bring together purchasers or their agents from great distances, and thus to cause the institution of a public mart or exchange. **This contributes to diffuse information** relative to the supply of raw materials, and the state of demand for their produce, with which it is necessary manufacturers should be well acquainted. The very circumstance of collecting periodically, at one place, a large number both of those who supply the market and of those who require its produce, tends strongly to check the accidental fluctuations to which a small market is always subject, as well as to render the average of the prices much more uniform."

--Charles Babbage



# more than information?

---

"When an industry has thus chosen a locality for itself, it is likely to stay there long: so great are the advantages which people following the same skilled trade get from near neighbourhood to one another. **The mysteries of the trade become no mysteries;** but are as it were in the air, and children learn many of them unconsciously. Good work is rightly appreciated, inventions and improvements in machinery, in processes and the general organization of the business have their merits promptly discussed: if one man starts a new idea, it is taken up by others and combined with suggestions of their own; and thus it becomes the source of further new ideas. And presently subsidiary trades grow up in the neighbourhood, supplying it with implements and materials, organizing its traffic, and in many ways conducing to the economy of its material."



# working knowledge ...

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**... moves in mysterious ways**

the "sticky" or "leaky" problem

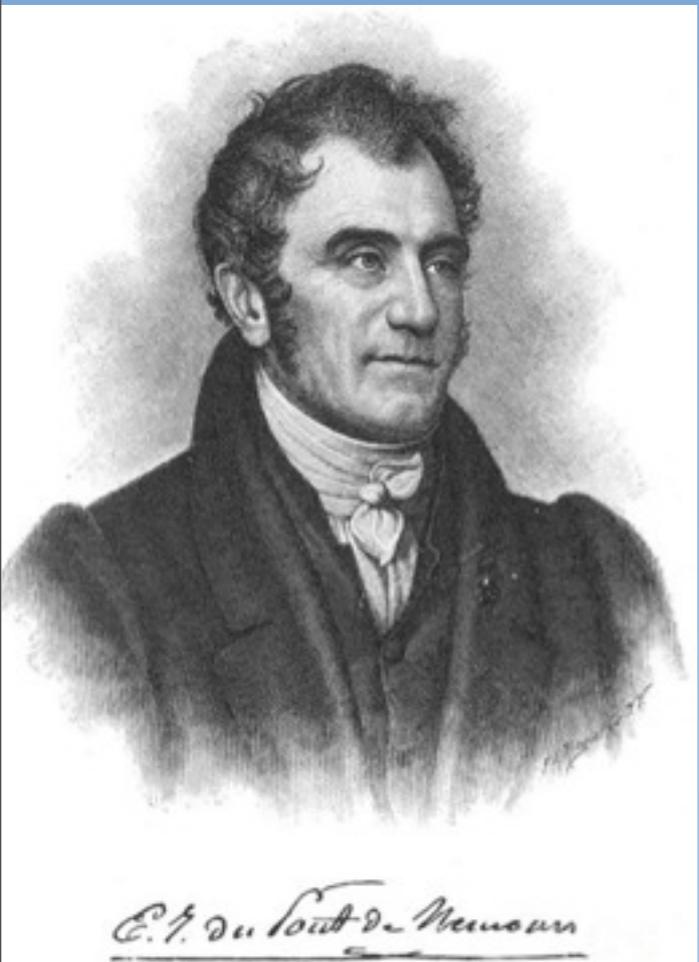
"If only HP Knew what HP knows ..."

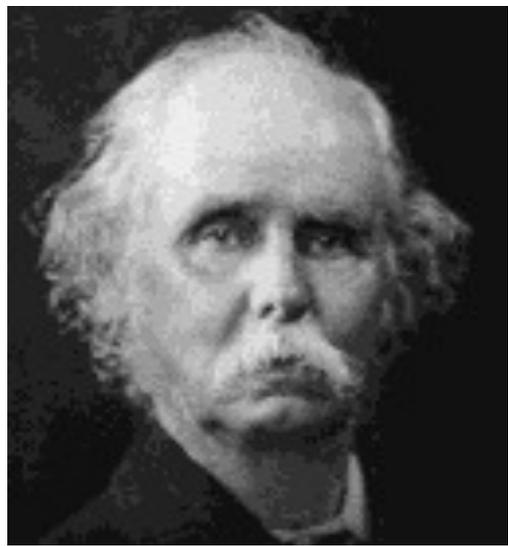
Lew Platt, CEO Hewlett-Packard

**trade secrets and enticement**

du Pont's battles

Catherine Fisk, *Working Knowledge*, 2009





# what moves?

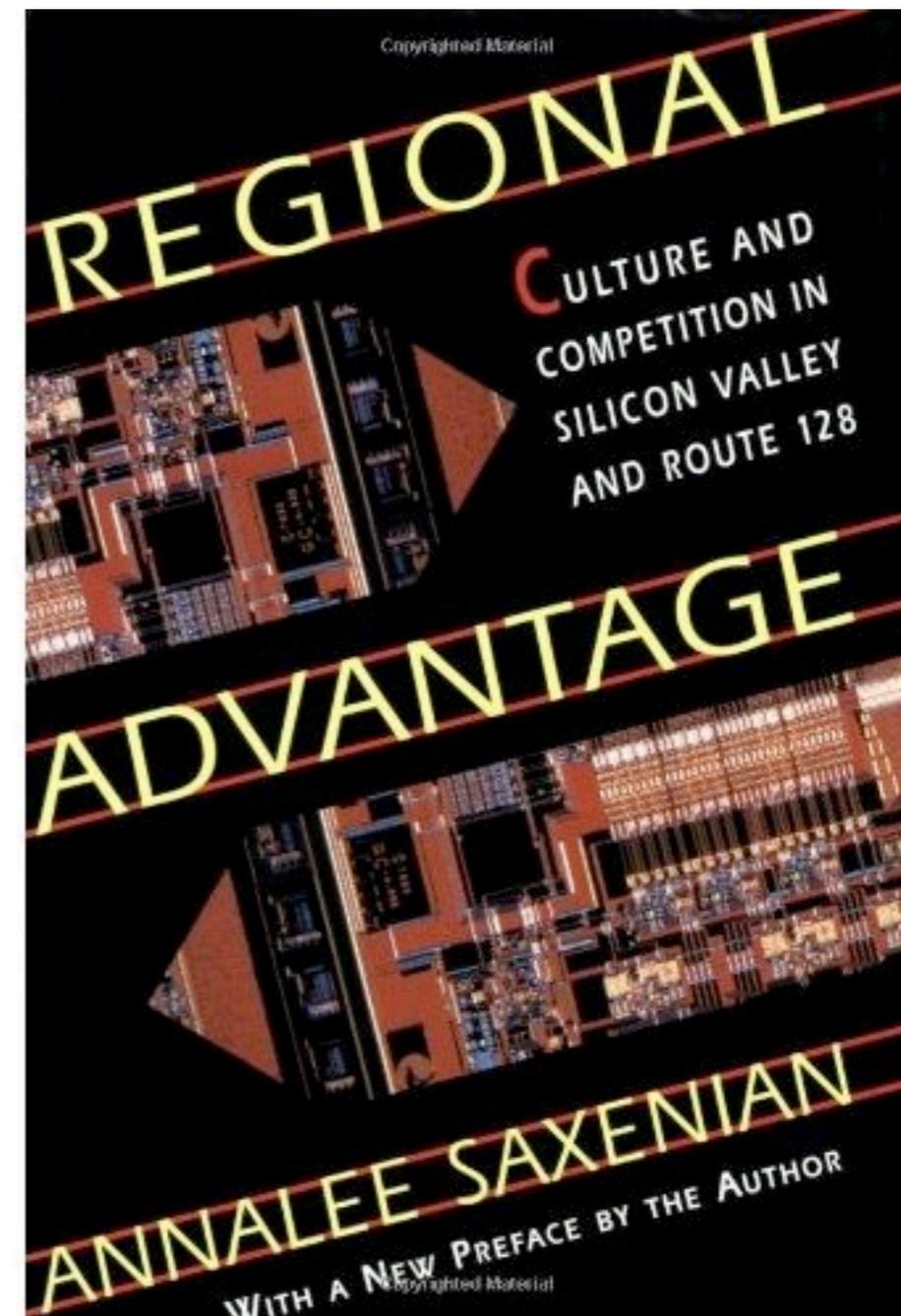
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## goods or people?

Every cheapening of the means of communication ... alters the action of the forces which tend to localize industries. Speaking generally we must say that a lowering of tariffs, or of freights for the transport of goods, tends to make each locality buy more largely from a distance what it requires; and thus tends to concentrate particular industries in special localities: but on the other hand everything that increases people's readiness to migrate from one place to another tends to bring skilled artisans to ply their crafts near to the consumers who will purchase their wares. **These two opposing tendencies** are well illustrated by the recent history of the English people.

# local "mysteries"

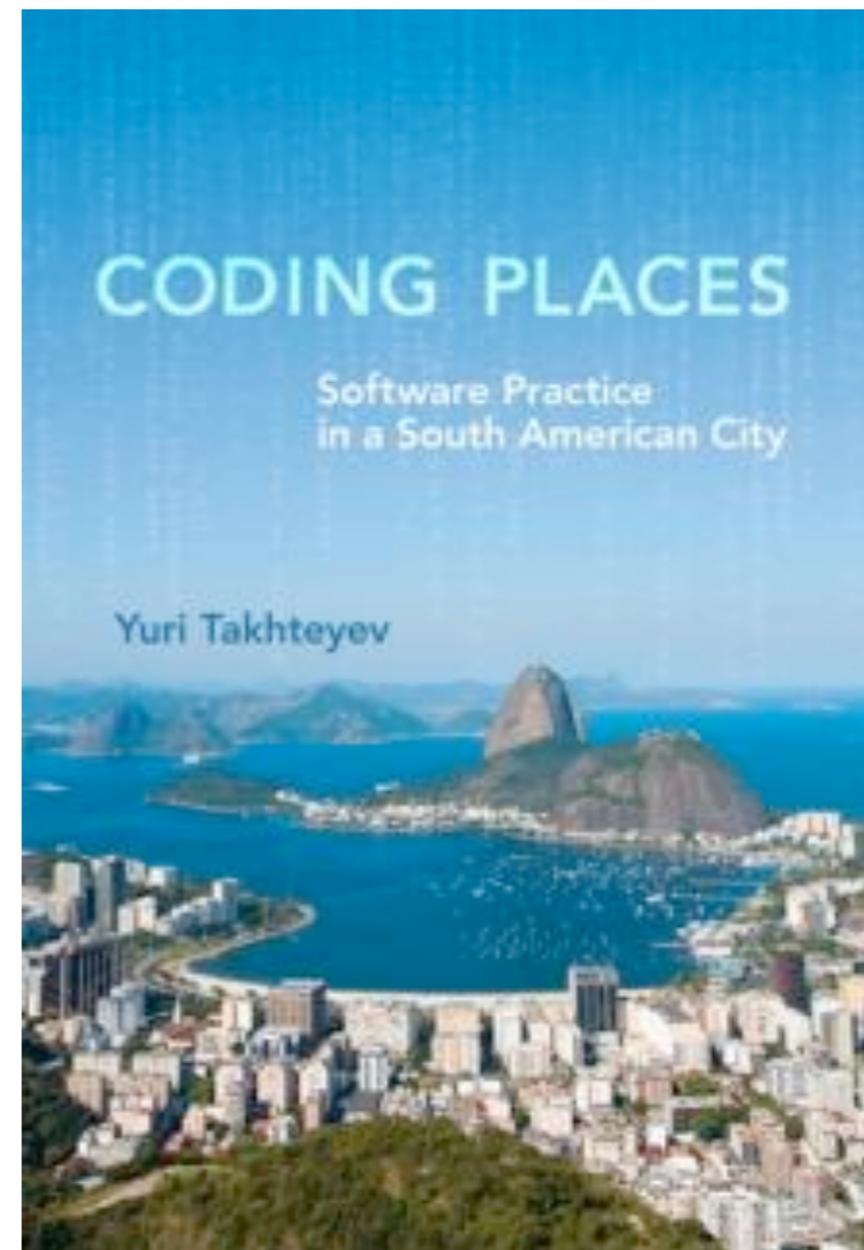
**east vs west**



# distant mysteries

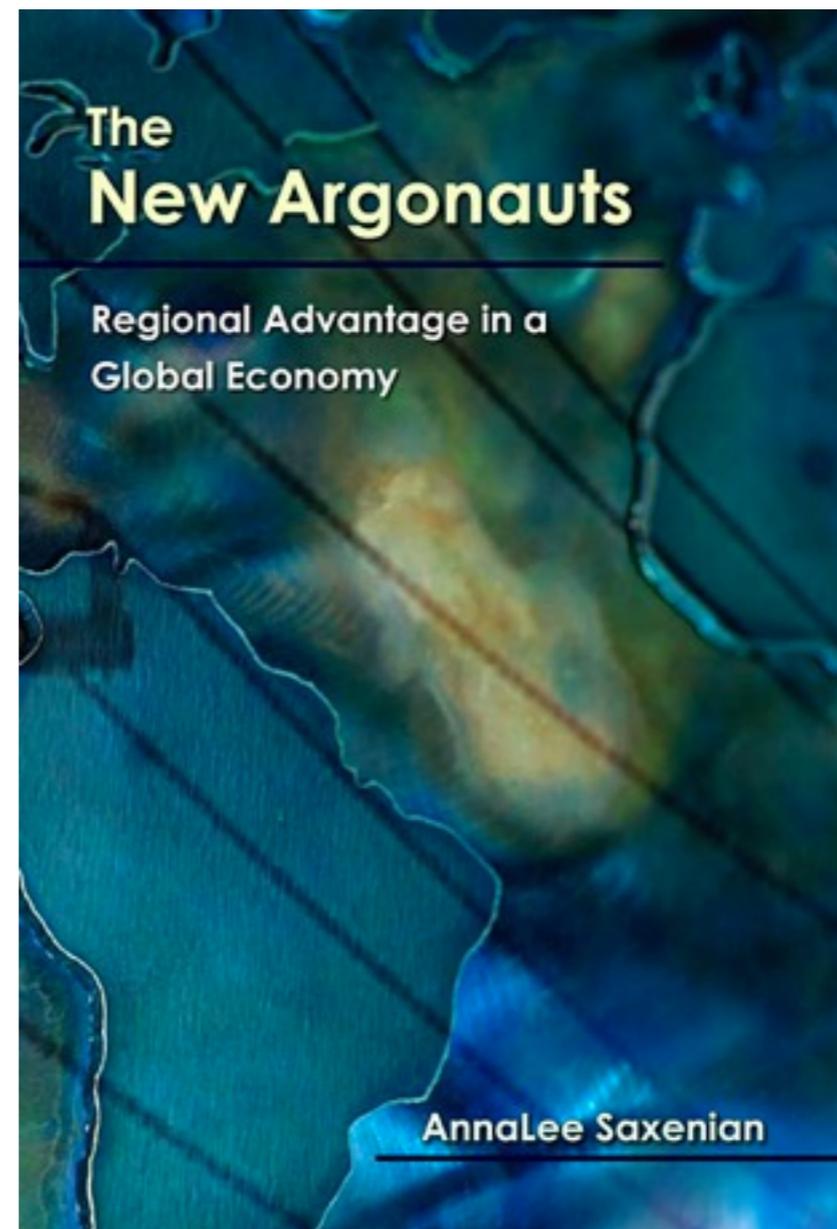
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## north v south

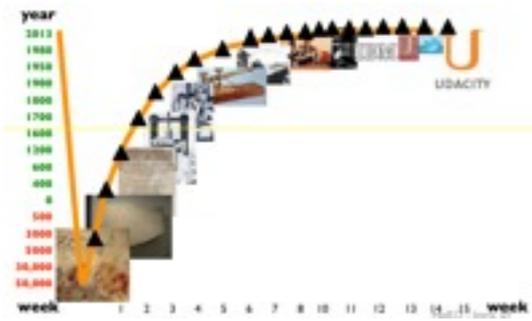


# spreading the word

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# overview



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information  
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implications I

"[For Marshall] globalization, and the concomitant rise of machine labor, is accompanied by shifts in the labor market that favor local industries and services (see his discussion on the increase in government labor, education, domestic services, etc).

--Mondee Lu

# that's why they are here

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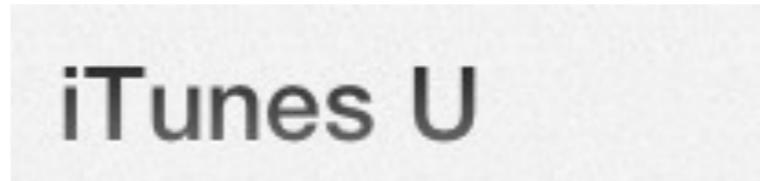
UNIVERSITY OF TORONTO



TU Delft



KHAN  
ACADEMY



# FIVE DOLLAR MOVIES PROPHESED

D. W. Griffith Says They Are Sure to Come with the Remarkable Advance in Film Productions.

## birth of an idea?

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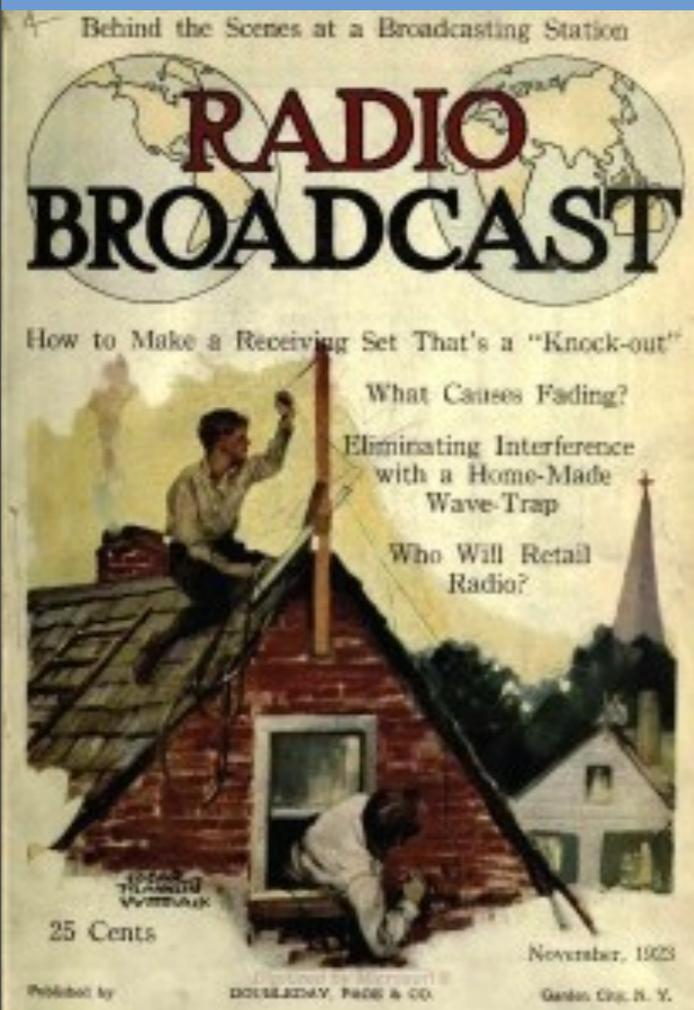
"The time will come, and in less than ten years, when children in the public schools will be taught practically everything by moving pictures. Certainly they will never be obliged to read history again ... everything except the three Rs, the arts, and probably the mental sciences can be taught this way-- physiology, chemistry, biology, botany, physics, and history in all its branches."

--D.W. Griffith, *New York Times*, 1915

# alternatives?

"The people's University of the Air will have a greater student body than all of our universities put together."

--Alfred N Goldsmith, RCA,  
*Radio Broadcast* 1922





Vicesimus Knox  
1752-1821

## going back

"But though books are easily procured, yet, even in **this age of information**, there are thousands in the lower classes that cannot read. Besides, it is a well-known truth, that the same precepts inculcated by a living instructor, adorned by a proper oratory, enforced by a serious and authoritative manner, produce a powerful effect, not to be experienced in solitary retirement."

-- Vicesimus Knox,  
*Essays Moral and Literary*, 1778



## second thoughts?

---

"[The] general tendency of those institutions [ie universities] is rather favourable to the diffusion of ignorance, idleness, vice, and infidelity

"... an education ... depends not on local circumstances, but ... may be pursued in any place, where tutors and books are not deficient.

"... as books are now multiplied, and men able to afford instruction dispersed all over the kingdom, it is evident that the principal cause of establishing universities in an age when both books and instructors were scarce, no longer subsists. Let them therefore be reformed, and rendered really useful to the community or let them be deserted."

# distant antecedents?

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## **university extension**

19c London to the world

## **Open University (1969)**

early morning television

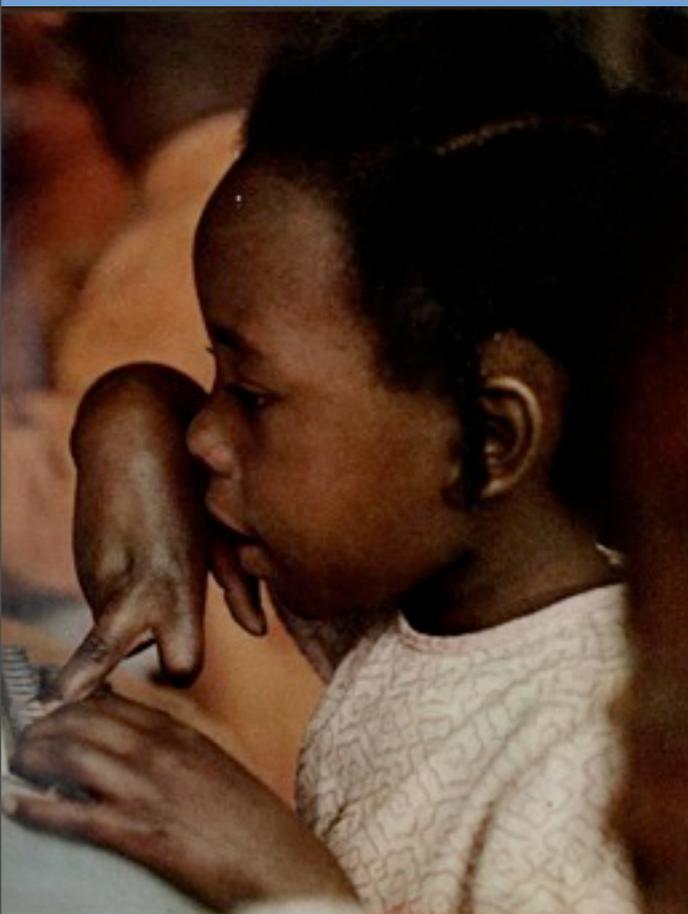
# going digital

## PLATO

(Programmed Logic for Automated Teaching Operations)

"One can predict that in a few more years, millions of schoolchildren will have the personal services of a tutor as well-informed as Aristotle."

--Patrick Suppes,  
*Scientific American*, 1966.



locates her file, reviews her performance, and picks up with the day's practice problems. Work done, it grades the assignment and bids a printed "GOOD-BYE, STELLA." Computer practice not only speeds the rate of learning, but also frees the teacher to explain new concepts. Launched as an experiment by the Federal Government three years ago, computer instruction has been enthusiastically adopted by the McComb school system as part of its curriculum.

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"The people's University of the Air will have a greater student body than all of our universities put together." --RCA, 1932

going global

## the "mega universities"

(John Daniels)

Indira Gandhi (New Delhi) : 3.5 million

Allama Iqbal (Islamabad) : 1.8 million

Islamic Azad (Tehran) : 1.5 million

Andolou University (Turkey): 1.04 million

Bangladesh National: 800,000

Allama Iqbal Open University  
\* Anadolu University  
\* Athabasca University  
\* Bangladesh Open University  
\* China Central Radio & TV University  
\* City College of San Francisco  
\* Fern University in Hagen  
\* Indira Gandhi National Open University  
\* Indonesian Open Learning University  
\* Instituto Tecnológico Autónomo de México  
\* Payame Noor University  
\* Korea National Open University  
\* Sukhothai Thammathirat Open University  
\* The Open University, U.K.  
\* Universidad Nacional de Educación a Distancia  
\* University of Maryland University College  
\* University of South Africa  
\* University of Phoenix  
\* Universidad Nacional Autónoma de México  
\* Shanghai TV University

## "open" again

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- \* University of Michigan
- \* University of Notre Dame
- \* University of Utah
- \* University of Wisconsin- Eau Claire
- \* Utah State University
- \* Utah Valley State College
- \* Weber State University
- \* Western Governors University
- \* Wheelock College

# Questioning Clay Shirky

December 6, 2012 - 3:00am

By **Aaron Bady**

Clay Shirky is a big thinker, and I read him because he's consistently worth reading. But he's not always right - and his thinking (and the flaws in it) is typical of the unquestioning enthusiasm of many thinkers today about technology and higher education. In his recent piece on "**Napster, Udacity, and the Academy,**" for example, Shirky is not only guardedly optimistic about the ways that MOOCs and online education will transform higher education, but he takes for granted that they will, that there is no alternative. Just as inevitably as digital sharing turned the music industry on its head, he predicts that the same will be with digital teaching. And as predictably as he anticipates that "we" in academe will stick our heads in the sand and deny the inevitable - as the music industry did with Napster - he will "screw this up as badly as the music people did." This is a theme shared by many in the "disruption" school of thought about higher education.

# doubts

OPINION

## Two Cheers for Web U!



# other alternatives

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# more alternatives

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**History of Information**  
Posted by English I at 6:07 PM

# small planet?



**Grandfather:**  
Well, I finally finished my  
doctoral thesis.



**Woman:**  
Way to go, Gramps.



**Grandfather:**  
Did my research at  
Indiana University.

**Woman:**  
Indiana?



**Grandfather:**  
Yup. IBM took the  
school's library...and  
digitized it. So I could  
access it over the Internet.

*She cocks her ear to take  
this all in.*



**Grandfather:**  
You know... It's a great time  
to be alive.



**Tag:**  
IBM. Solutions for  
a small planet.

# forgotten factors?

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## **institutions vs technologies**

libraries vs ebooks

## **kinds of distance**

geographical

social

## **disciplines or discipline?**

Stephen Cameron, "The nonequivalence of high school equivalents," 1993

## **signalling**

January 8, 2012

## 'Badges' Earned Online Pose Challenge to Traditional College Diplomas



Photo illustration by Bob McGrath for The Chronicle

[Enlarge Image](#)

By Jeffrey R. Young

The spread of a seemingly playful alternative to traditional diplomas, inspired by Boy Scout achievement patches and video-game power-ups, suggests that the standard certification system no longer works in today's fast-changing job market.

Educational upstarts across the Web are adopting systems of "badges" to certify skills and abilities. If scouting focuses on outdoorsy skills like tying knots, these badges denote

areas employers might look for, like mentorship or digital video editing. Many of the new digital badges are easy to attain—intentionally so—to keep students motivated, while others signal mastery of fine-grained skills that are not formally recognized in a traditional classroom.

At the free online-education provider Khan Academy, for instance, students get a "Great Listener" badge for watching 30 minutes of videos from its collection of thousands of short educational clips. With enough of those badges, paired with badges earned for passing standardized tests administered on the site, users can earn the distinction of "Master of Algebra" or other "Challenge



Nullius in Verba?

# going closed?

Let us consider the matter in this way: If the wise man or any other man wants to distinguish the true physician from the false, how will he proceed?

.... He will consider whether what [the physician] says is true, and whether what he does is right, in relation to health and disease?

... But can any one attain the knowledge of either unless he have a knowledge of medicine?

... No one at all, it would seem, except the physician can have this knowledge; and therefore not the wise man; he would have to be a physician as well as a wise man.

--Plato, *Charmides*

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### George Akerlof Wins Nobel Prize in Economics

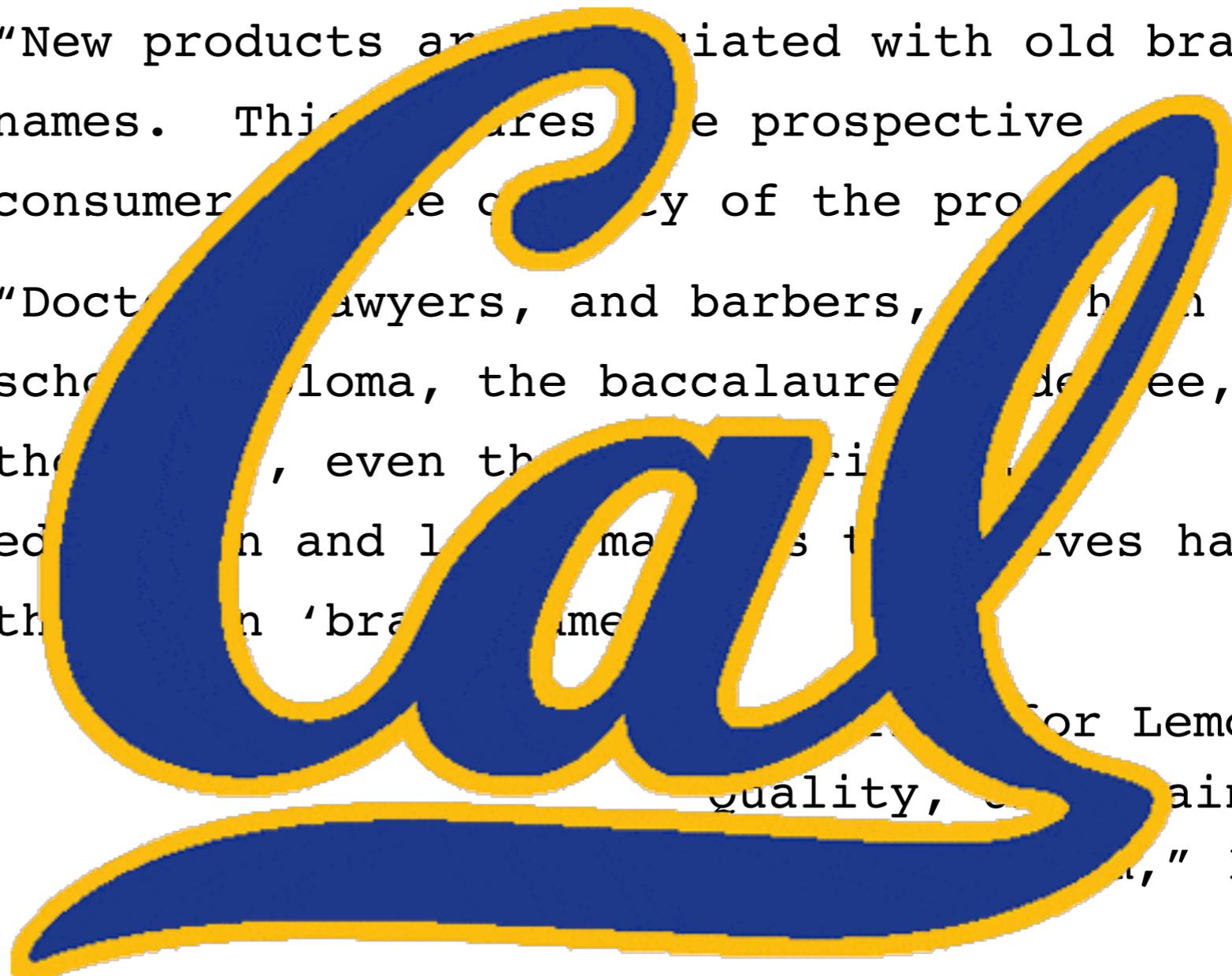
Nobel coverage: [Slide Show](#) | [Downloadable photos](#) | [Interview videos](#) | [Prize lecture video](#) | [Interview with fellow laureates video](#) | [Related information](#)

**BERKELEY** — George A. Akerlof, an economics professor at the University of California, Berkeley, was named the 2001 co-winner of the Nobel Prize in economic sciences today (10/10/01). It is the second consecutive year in which the Nobel has gone to a UC Berkeley economist.

# still local?

"New products are associated with old brand names. This assures the prospective consumer the quality of the product."

"Doctors, lawyers, and barbers, high school diploma, the baccalaureate degree, the Ph.D., even the Ph.D. in education and law make us think we have the same 'brand name' quality."



For Lemons: quality, quantity, and uncertainty," 1970

# before you graduate

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## 25 Apr: Big Data

Guest Lecture: Doug Cutting

Required Readings:

- Halevy, Alon, Peter Norvig and Fernando Pereira. 2009. “The Unreasonable Effectiveness of Data.” *IEEE Intelligent Systems*, March-April.
- Friedman, Uri. 2012. “Big Data: A Short History.” *Foreign Policy*, November.
- “The Petabyte Age: Because More Isn’t Just More — More Is Different,” Special number of *Wired Magazine*, June 23, 2008. See in particular Chris Anderson, “The End of Theory: The Data Deluge Makes the Scientific Method Obsolete.”

# next week

30 Apr:

## Social Implications of the Internet (Part 2)

### Required Readings

- boyd, danah. (Forthcoming). “White Flight in Networked Publics? How Race and Class Shaped American Teen Engagement with MySpace and Facebook.” In *Digital Race Anthology* (Eds. Lisa Nakamura and Peter Chow-White). Routledge.
- Smith, Zadie. “Generation Why,” (review of *The Social Network* and *You Are Not a Gadget*, by Jason Lanier) *The New York Review of Books*, Nov. 25, 2010.
- Sunstein, Cass R. 2007. “The Polarization of Extremes.” *The Chronicle Review*, Dec. 14.

# assignment (due Sunday 4/28)

---

**boyd writes:** "In some senses, the division in the perception and use of MySpace and Facebook seems obvious given that we know that online environments are a reflection of everyday life. Yet, the fact that such statements are controversial highlights a widespread techno-utopian belief that the internet will once and for all eradicate inequality and social divisions."

In a different context, **Zadie Smith writes:** "Shouldn't we struggle against Facebook? ... Poking, because that's what shy boys do to girls they are scared to talk to. Preoccupied with personal trivia, because Mark Zuckerberg thinks the exchange of personal trivia is what "friendship" is. A Mark Zuckerberg Production indeed! We were going to live online. It was going to be extraordinary. Yet what kind of living is this? Step back from your Facebook Wall for a moment: Doesn't it, suddenly, look a little ridiculous? Your life in this format?"

On the whole, would you say that your social networking experience is more like an extension of your everyday life, as boyd suggests, or that it's a bleached or distorted version of it? Make specific reference to Boyd and or Smith's arguments.