



talk among yourselves

assignment

McLuhan writes that "social life is totally threatened by the electric technology" [17] and that, where "print created individualism and nationalism" [19-20], the "electric implosion" [5] by "abolishing both space and time" [3] now "compels commitment and participation" [5] that will ultimately lead to us all living in an interconnected "global village" [111]. Williams, in response, asks whether it is "reasonable to describe any technology as a cause." [9]

Some see our "information age" as the result of another "implosion" beyond McLuhan's dreams. Does McLuhan's or Williams's argument best account for what got us here?



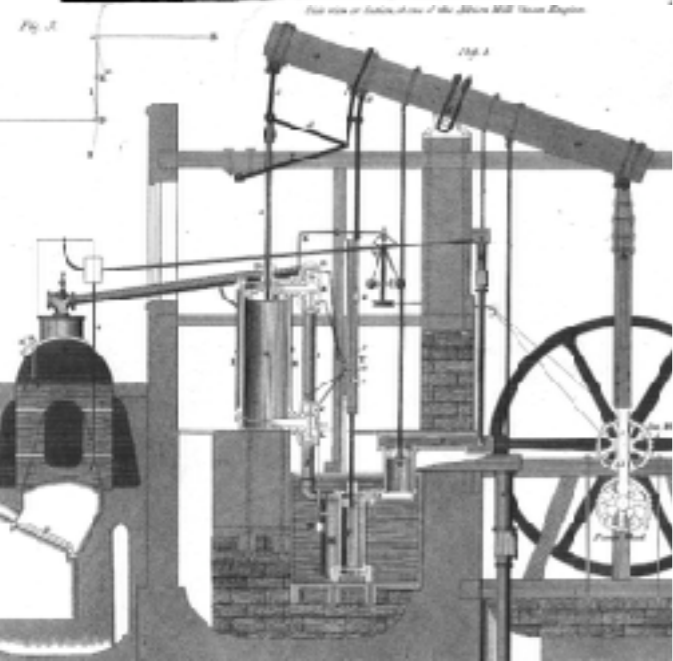
technological revolution

tools determined to change the world

Paul Duguid

history of information

January 24, 2017



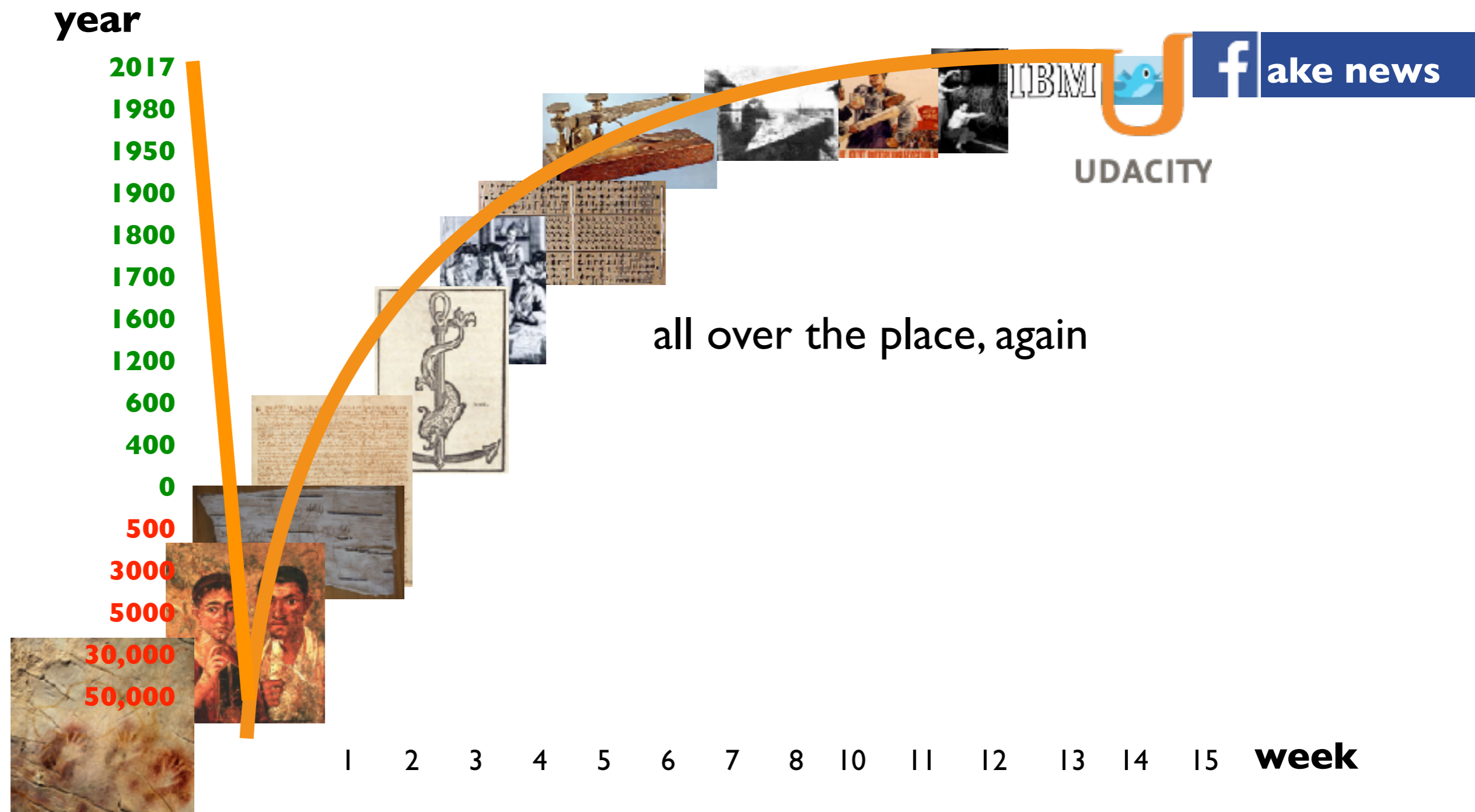
waitlist: sign in, do assignments, be patient

bCourses: bPatient, alert us to problems

assignments: coming up

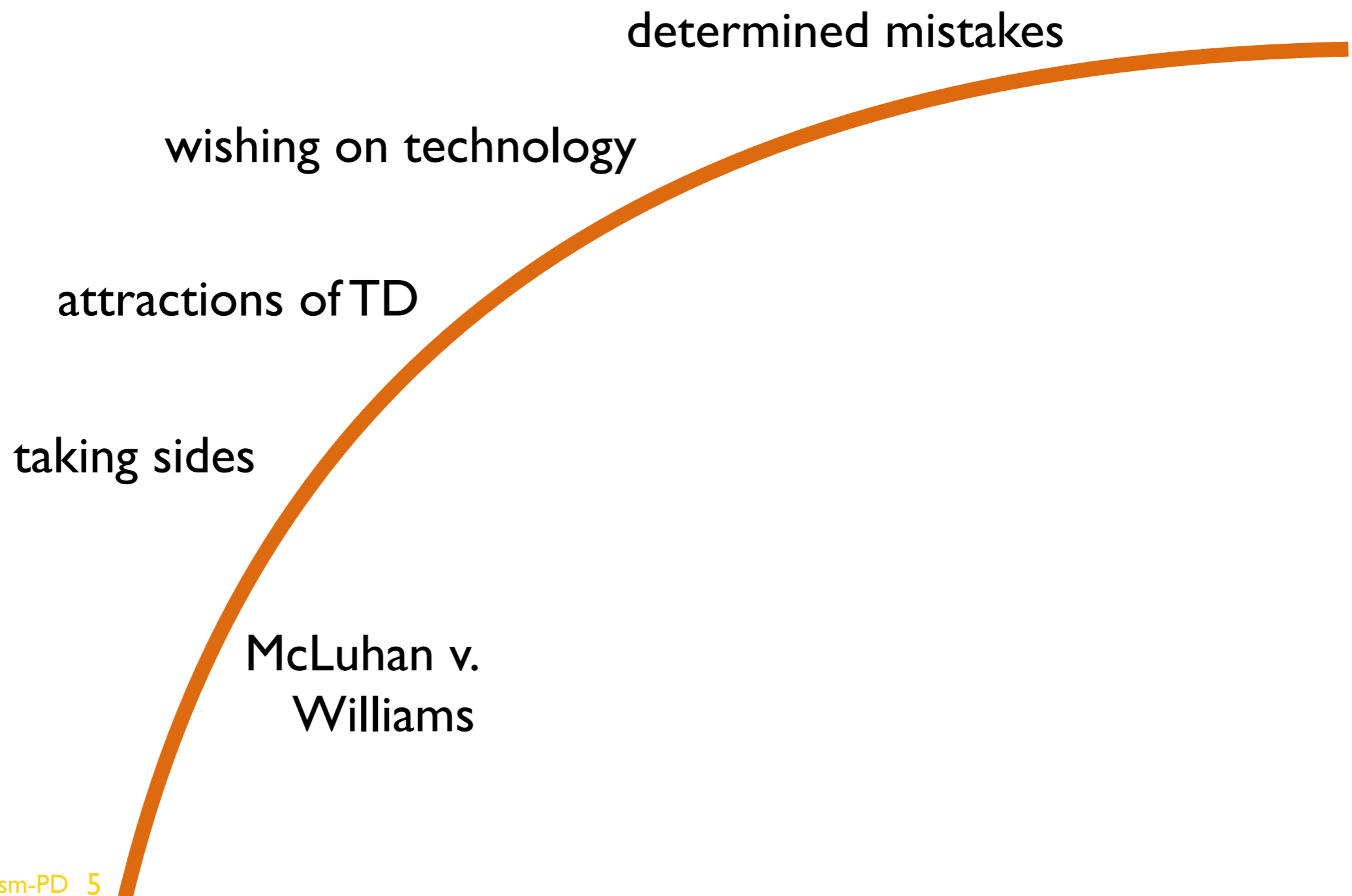
technological revolution

where are we today?



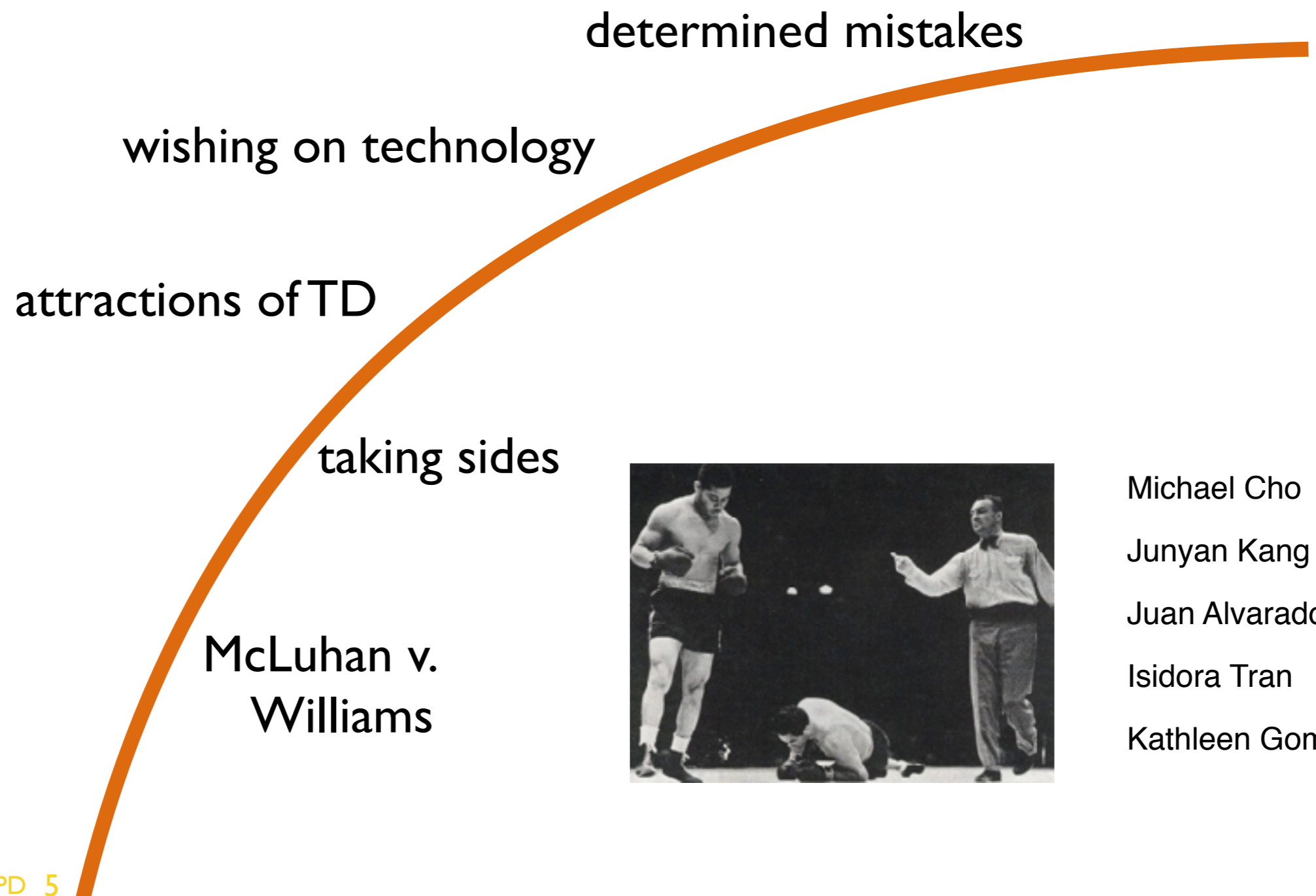
technological
revolution

today's route



technological
revolution

today's route



Michael Cho
Junyan Kang
Juan Alvarado
Isidora Tran
Kathleen Gomez



McLuhan - 1964

Marshall McLuhan
1911-1980

"very large structural changes in human outlook ...

"totally new environment ... the new electric Age of Information"

"Each new technology creates an environment ...

"abolishing both space and time ...

"final phase of the extensions of man...

"a single consciousness ...

"Global Village"



wherever it goes

determinism at its clearest

"The railway ... created totally new kinds of city This happened whether the railway functioned in a tropical or a northern environment, and is quite independent of freight or content."

"The spiritual and cultural reservations that the oriental peoples may have toward our technology will avail them not at all. The effects of technology do not occur at the level of opinions or concepts, but alter sense ratios or patterns of perception steadily and without any resistance."



Williams - 1974

Raymond Williams
1921–1988

coming up:
communications
image
broadcast

the invention of television

"The invention of television was no single event ... electricity ... telegraphy ... photography... moving images ... radio ... broadcast ...

"centralisation of political power

"mobile, diffused society ...

"military, commerce, the press ...

"periods of crisis ..."



Williams

what's wrong with determinism?

"ratifies the society and culture we have now all other causes, all that men ordinarily see as history, are at once reduced to effects [cp Whig History]

"what are elsewhere seen as effects ... excluded as irrelevant

"gives the gloss of avant-garde theory to ... existing interests."



determinist or symptomatic?

Television was invented ...

- (i) ... altered all preceding media
- (ii)... altered ... institutions and ... social relations
- (iii)... altered our basic perceptions of reality
- (iv)... with other factors ... altered our societies

Discovered as a possibility, television ...

- (v)... had unforeseen consequences
- (vi)... selected for investment to meet the needs of ... society
- (vii)... selected ... new and profitable phase of consumer society

Television became available ...

- (viii)... exploited cultural and psychological inadequacy
- (ix)... served and exploited new needs



what *not*

coming up 2/14:
literacy

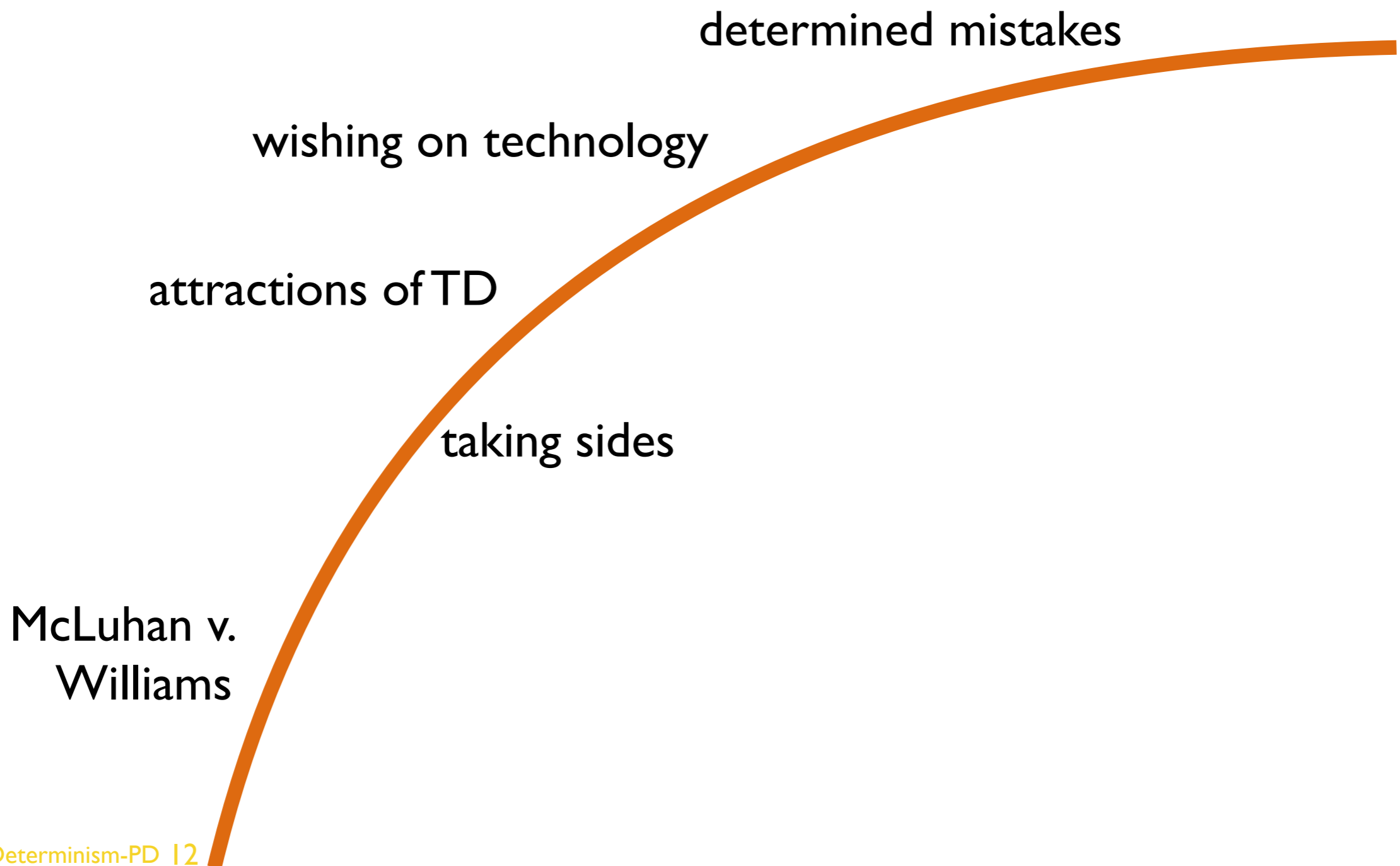
"technology is **not** marginal but central ...

"while we have to **reject** technological determinism ... we must be careful **not** to substitute .. .the notion of a determined technology ...

"Literacy has shown similar complications ... There was no way to teach a man to read the Bible which did not also enable him to read the radical press. A controlled intention became an uncontrolled effect."

technological
revolution

overview



I believe that internet forums provide proof that McLuhan is correct in his assumptions ...

Marshall McLuhan might be inclined to agree that ...
However, I argue, as I think Raymond Williams would, that

assignment

answer the prompt

use both sources

cite

quotations, page numbers, references

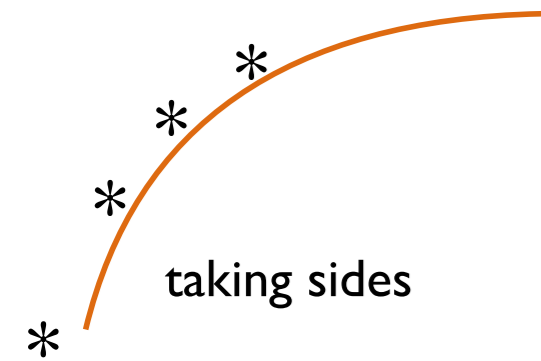
wordcount ~200 words

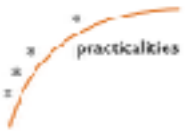
proofread Williams, William's, MacLuahn, MuLuhan

"McLuhan's claim that the "message is the medium"

"The median is the message"

deadline —bCourses is unrelenting





in sum

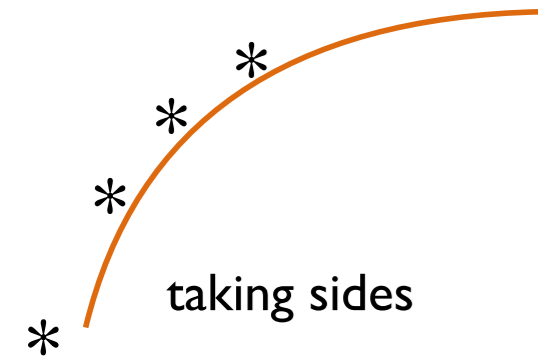
reading assignments:

- c. 100 words
- due Sunday @ 5
- ATQ—don't just give a synopsis
- include all readings listed for that assignment
- support arguments with quotations and page numbers
- give citations for sources other than the required readings
- come to class ready to defend your position

assignment

McLuhan writes that "social life is totally threatened by the electric technology" [17] and that, where "print created individualism and nationalism" [19-20], the "electric implosion" [5] by "abolishing both space and time" [3] now "compels commitment and participation" [5] that will ultimately lead to us all living in an interconnected "global village" [111]. Williams, in response, asks whether it is "reasonable to describe any technology as a cause." [9]

Some see our "information age" as the result of another "implosion" beyond McLuhan's dreams. Does McLuhan's or Williams's argument best account for what got us here?

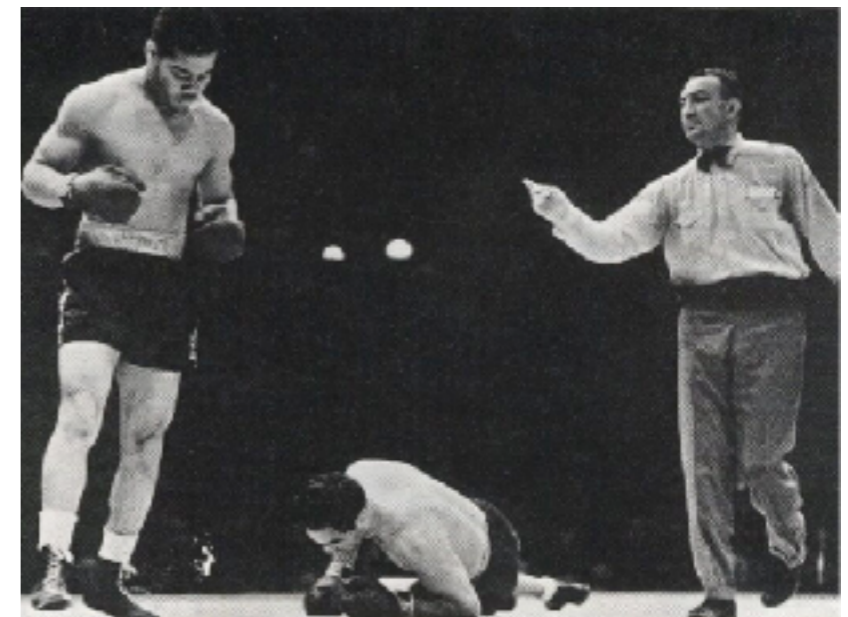


divide and conquer

McLuhan -- it's the medium that does it **19%**

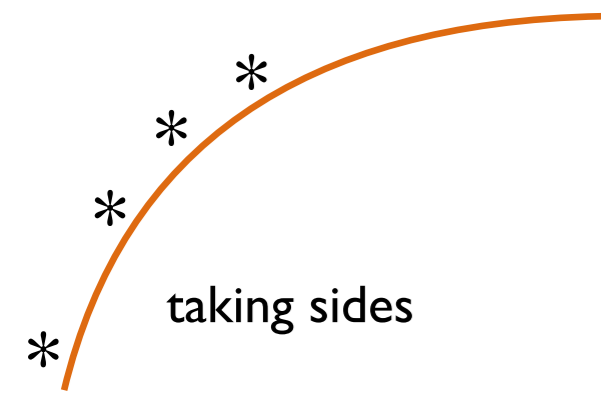
Williams -- no it's not **71%**

Michael Cho
Junyan Kang
Juan Alvarado
Isidora Tran
Kathleen Gomez



other --

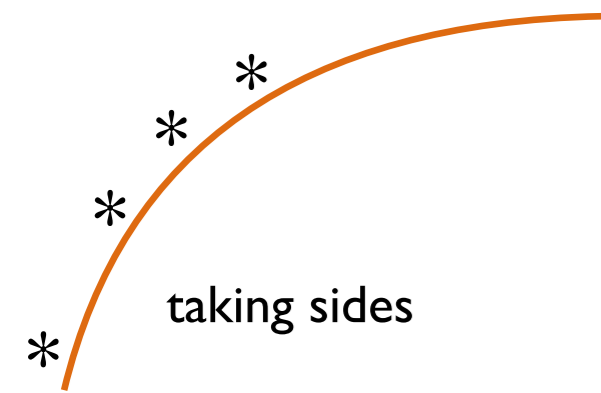
neither 9% both 2%



vote for Mac

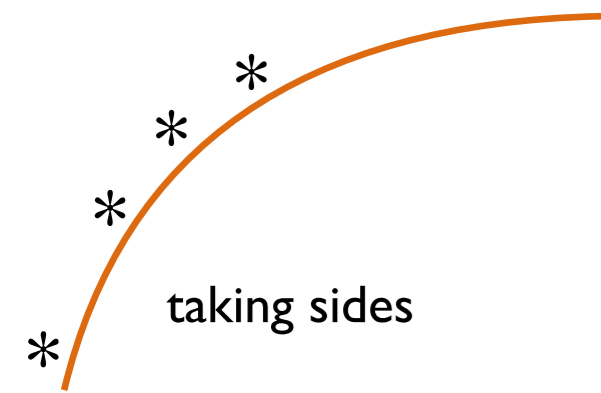
While Williams provides good points as he cautions against describing technology as the cause for the extensive social change described by McLuhan, it is still apparent that the current age of information is so different from our past that technology must be a cause. Williams uses the example of motion pictures, stating that even after their development “their application was characteristically in the margin of established social forms” [18] until they were adapted into the already established industry of theatre [18]. However, it is easy to see in current society that the use of motion picture technology has transcended its pre-established forms to be used in all aspects of society—computer displays, electronic billboard advertisements, information screens, etc. On an average day, not just does one never think about the presence of the LED screen on a smartphone, the average American also takes for granted the instantaneous notifications from a News application alerting us to breaking news in a foreign country because as McLuhan says “our central nervous system is technologically extended to involve us in the whole of mankind” [4].

—Michael Cho



compelled commitment

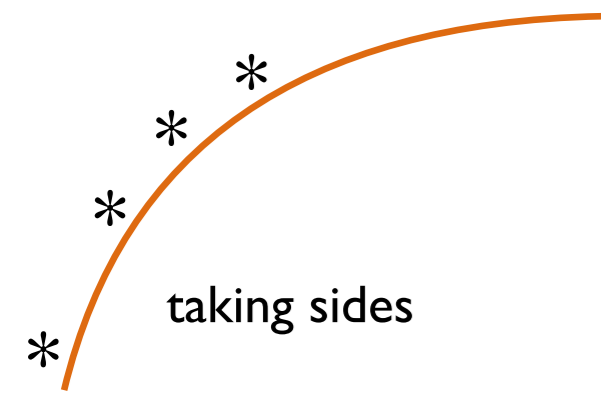
Despite McLuhan's vague definition of media, which is often mixed with technology, he argues that "the medium is the message." For example, he describes the importance of trains and railways is that they "accelerated and enlarged the scale of previous human functions, creating totally new kinds of cities and new kinds of work and leisure," rather than the freight they deliver (McLuhan 8). Williams might argue that trains and steam engines, invented in the mechanical age, were outcome of people's increasing need for production and efficiency. However trains and railways allow more rapid exchange of information and railway system itself involves complicated information, which ultimately raises people's awareness of the increasing amount of information and thus foreshadows the information age. Furthermore McLuhan's theory also resonates with the earlier assumption, but in a different perspective. McLuhan argues that radio, telegraph, telephone and TV, as media, "compel commitment and participation, quite regardless of any point of view." (McLuhan 5) By compelling commitment and participation, those modern media not only deliver huge amount of information, but also forcibly spread the notion of information age. Indeed when Knox first used the phrase "age of information" in 1778, people would hardly agree as very few people had such awareness. In contrast, since modern media have already "configured the awareness and experience of each one of us," the notion of information age is therefore widely accepted (McLuhan 21). —Junyan Kang



vote for Willie

... Although technology has shaped the way a society functions, from the work force to the way we communicate, the "abolishing of both time and space" has not been driven by "technological implosion" as much as it has been driven by society's will to progress. Williams continues to describe technology "as it were a by-product of a social process," (5.) This "Age of Information" in which we currently live is a product of social innovation, not technology's effect on society. Williams brings awareness to the acceptance of instant transmission as 'social fact,' and remains critically aware "that virtually all such transmissions [are] at once selected and controlled by existing social authorities" (121.) Williams is cognizant of society's authority over technology, in this case instant transmission.

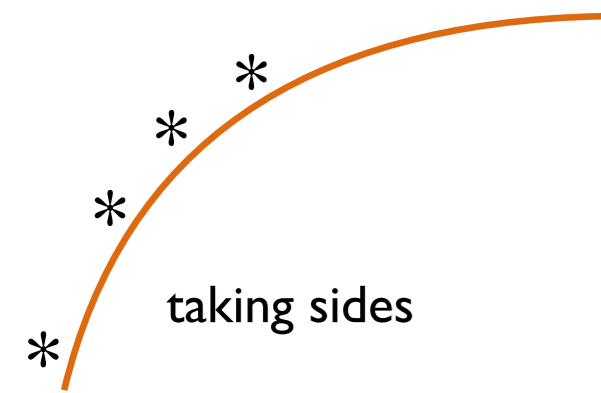
—Juan Alvarado



cat or classified

By detailing the history of technologies that preceded the television, Williams asserts that a medium does not change society in the form of a silo (11). Changes in society “created new needs but also new possibilities, and [TV] was the intrinsic outcome” (11). If a primary medium in an information age is online communication, for example, William’s argument defeats McLuhan’s in that Williams would acknowledge the role of human intent in shaping the medium. If McLuhan were to assess online communication, he would argue that whether you sent a cat GIF or a classified document to the recipient is irrelevant – what matters is the medium itself, that you’re able to transcend borders and communicate with another human being (18). This argument collapses because online communication was irrelevant to society until it was useful enough for the typical middle class worker.

—Isidora Tran

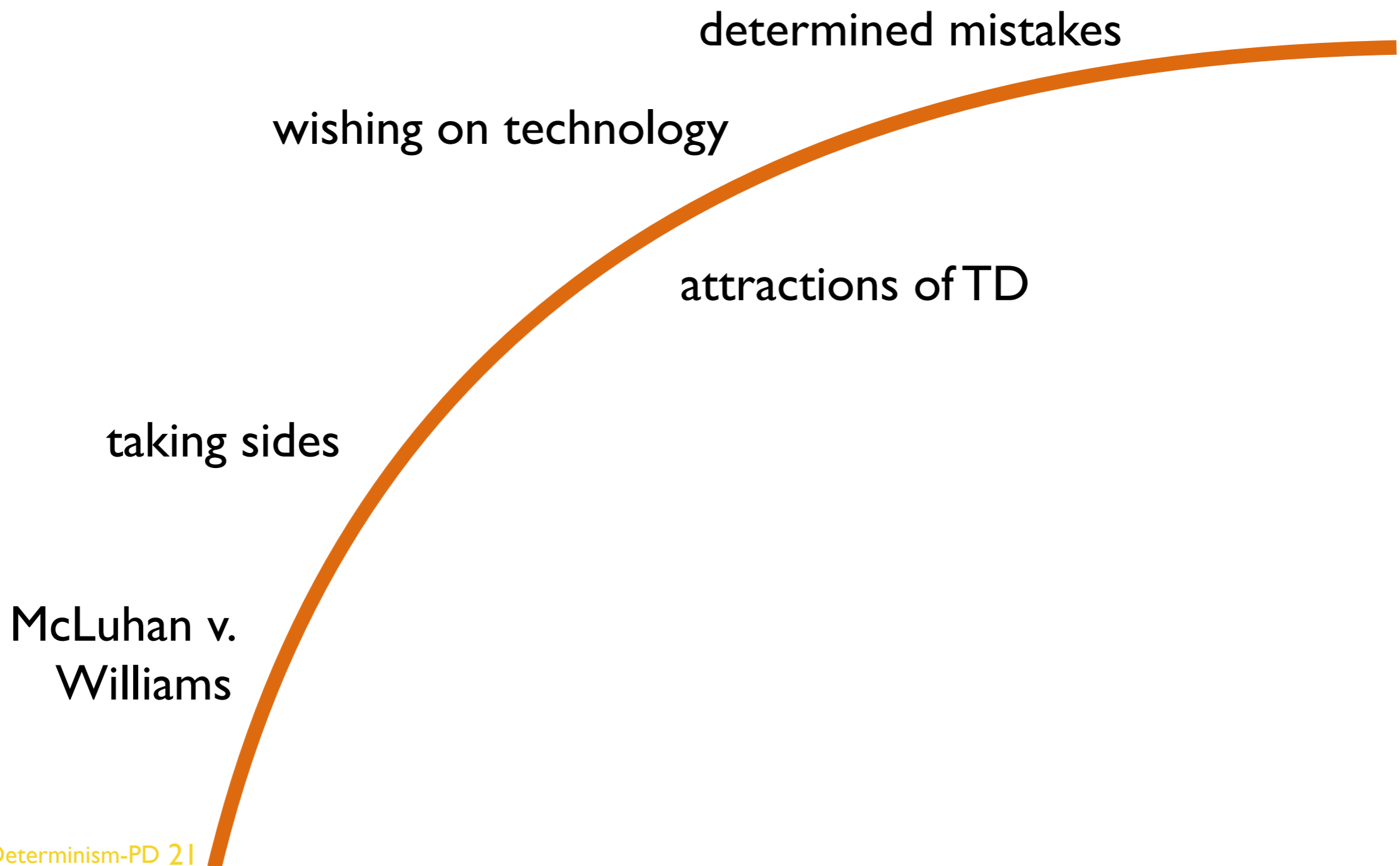


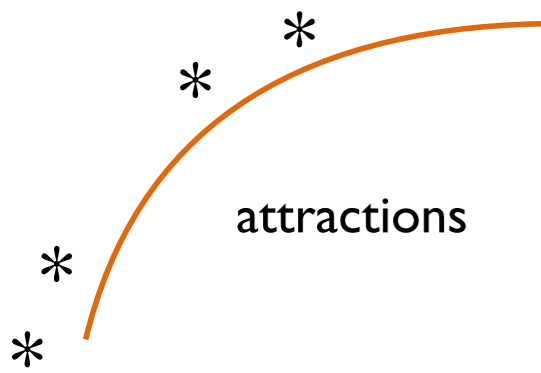
both...

Williams is also correct for addressing the “other causal factors in social change” [13] that McLuhan fails to address, that is the idea that technology is “a by-product of a social process...that is in any case occurring or about to occur” [13]. Williams bring up the idea of intention in technology, of being “developed with certain purposes and practices already in mind...as known social needs”[14]. This “interaction between new needs and new inventions”[15] and the idea of technology “being actively sought”[17] is the key argument to which McLuhan’s argument does not stand up against, but compliments. We do experience change because of technology, as McLuhan claims, but we also cannot deny that technology is also being developed with intention as a response to need; so change also drives technology. Whether we start at the beginning of time, whether the first humans applied their knowledge or figured things out on their own, the technology would have been there to drive change in lifestyle, right alongside the need for such a device. It is a never ending cycle, and to begin to question which came first would be much like trying to solve the riddle of the chicken of the egg. Both McLuhan and Williams are arguing two halves of a cohesive whole, and only together does their argument best account for what got us here. —Kathleen Gomez

technological
revolution

overview





determinism makes for easy work

For want of a nail
the shoe was lost.
For want of a shoe
the horse was lost.
For want of a horse
the rider was lost.
For want of a rider
the battle was lost.
For want of a battle
the kingdom was lost.
And all for the want
of a horseshoe nail.



looking back

just look at Cleopatra's nose

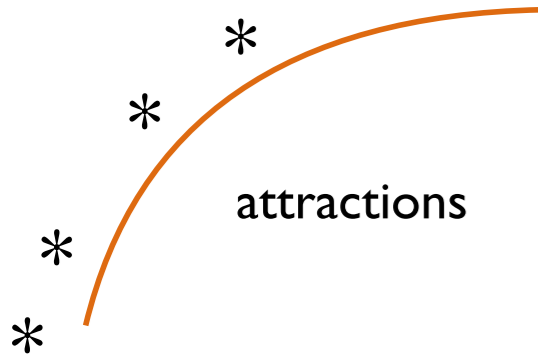


looking forward

"These technologies are inevitable.
Inevitability is not a flaw. ... makes
predictions easier."

—Kevin Kelly, *What Technology Wants*, 2010

coming up Feb 7th:
print revolution



easy history?



Francis Bacon
1561–1626

"Printing, gunpowder and the compass ... whence have followed innumerable changes, in so much that no empire, no sect, no star seems to have exerted greater power and influence in human affairs than these mechanical discoveries."

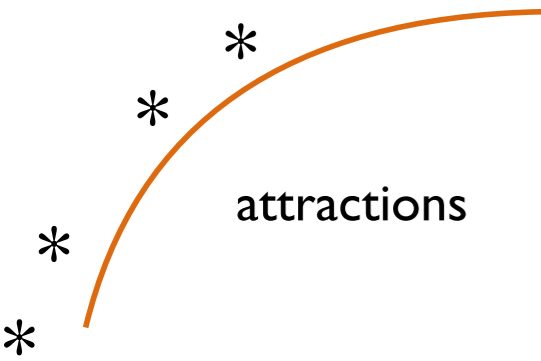
—Francis Bacon, *Novum Organum*, 1620



Thomas Carlyle
1795–1881

"He who first shortened the labor of copyists by device of movable types was disbanding hired armies, and cashiering most kings and senates, and creating a whole new democratic world: he had invented the art of printing."

--Thomas Carlyle, *Sartor Resartus*, 1833



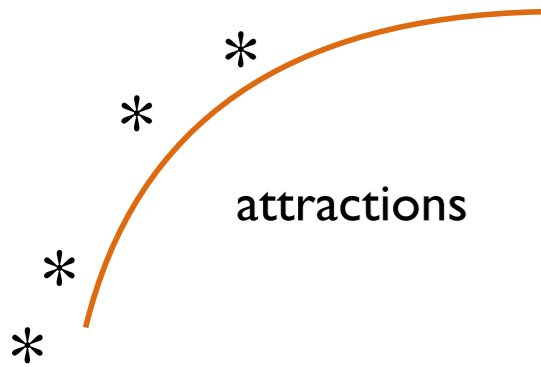
limiting choice



"Science explores,
Technology executes,
Man conforms"

— Chicago World's Fair, 1933

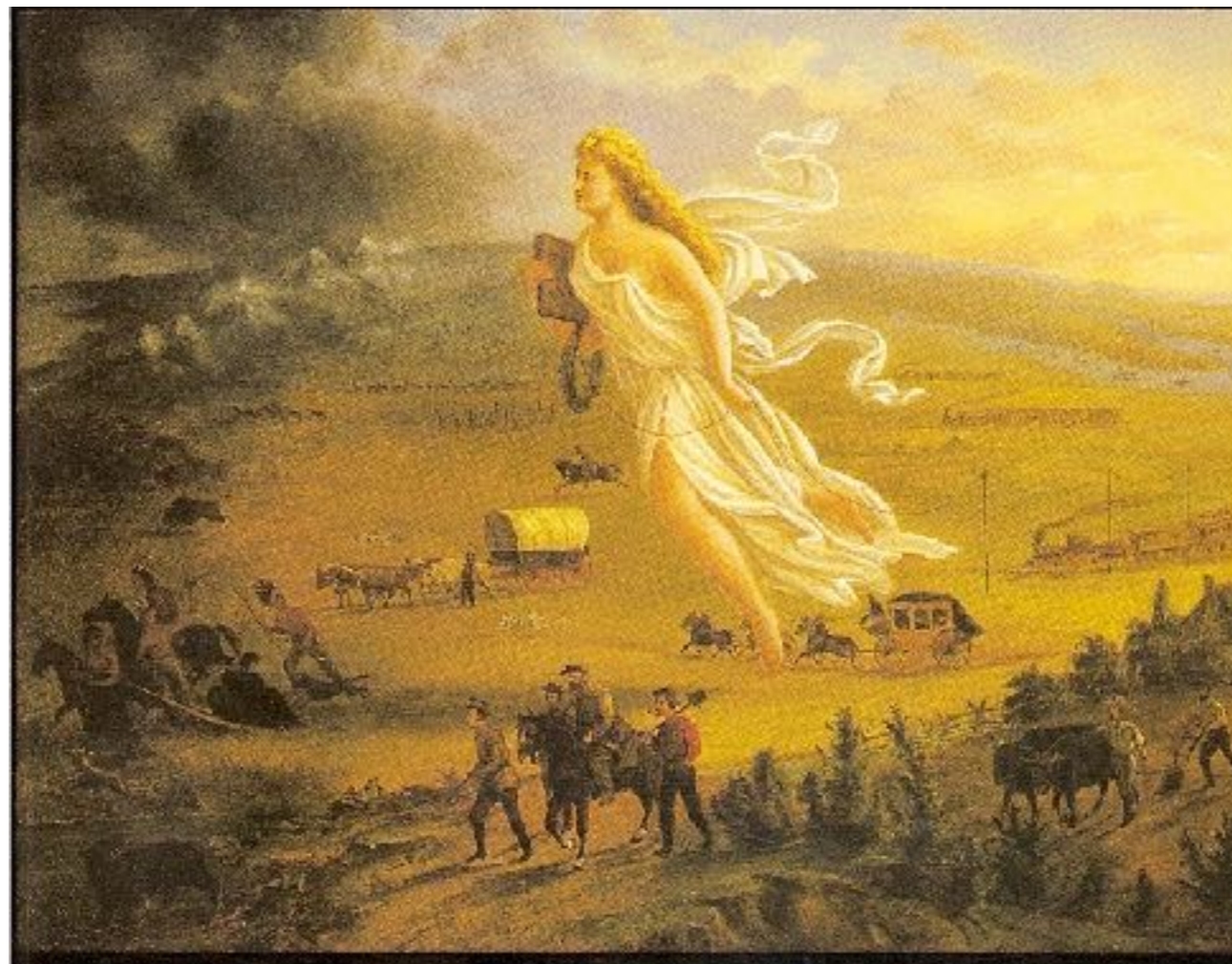




doing the right thing

the inevitable product of progress

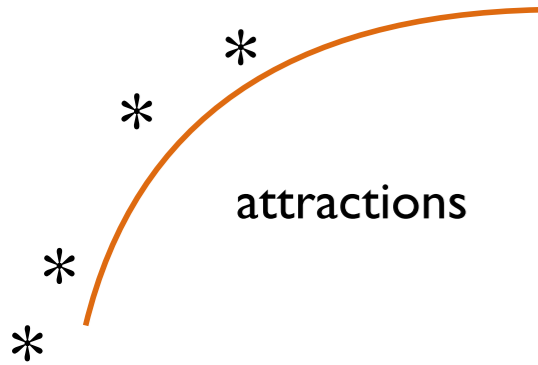
John Gast
"American Progress"
1872



"Westward the
course of
empire takes
its way"



"Westward the course of empire ..."



trump card



H.G. Wells
1866–1946

"And for the rest, those swarms of black, and brown, and dirty-white, and yellow people, who do not come into the new needs of efficiency? Well, the world is not a charitable institution, and I take it they will have to go. The whole tenor and meaning of the world, as I see it, is that they have to go."

-- H.G.Wells, Anticipations, 1901

Compare: "The spiritual and cultural reservations that the oriental peoples may have toward our technology will avail them not at all."

technological
revolution

overview

determined mistakes

wishing on technology

space & time

attractions of TD

taking sides

McLuhan v.
Williams

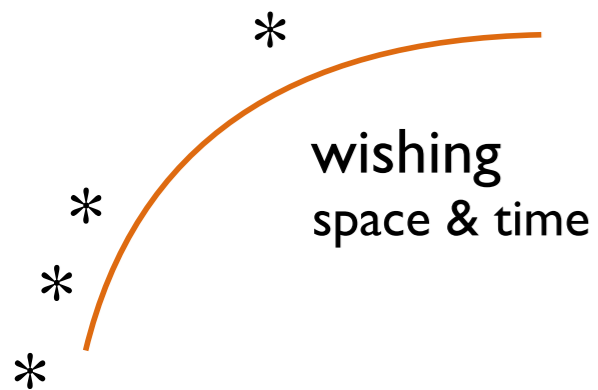


from Gutenberg to Zuckerberg

not just generational

“At Facebook, we’re inspired by technologies that have revolutionized how people spread and consume information. We often talk about **inventions like the printing press and the television** — by simply making communication more efficient, they led to a complete transformation of many important parts of society. They gave more people a voice. They encouraged progress. They changed the way society was organized. **They brought us closer together.**”

Letter from Mark Zuckerberg US Securities and Exchange Commission
Form S-1 REGISTRATION STATEMENT



shrinking search

"Google's Larry Page and Sergey Brin ... built something profound: a complex, accurate, essentially democratic **search engine which helped shrink the world as dramatically as had the compass, the telegraph and the aeroplane.**"

—Andrew Smith,
Guardian, 2012



shrinking further

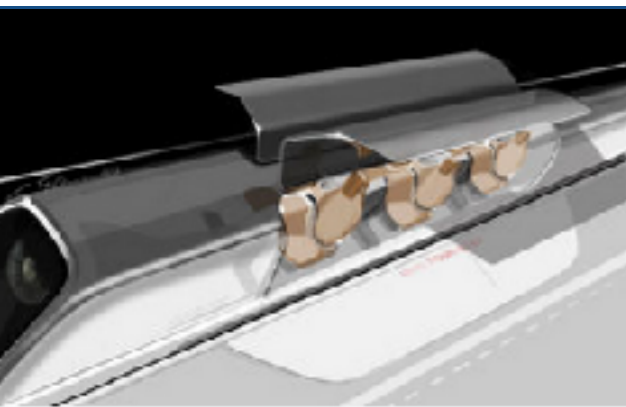


Loon will "shrink the emotional distance of
the world"

—Sergei Brin, 2015



loony to loopy?



Hyperloop One

"Promises to bring San Francisco ... close to Los Angeles ... transcending time and space"

Jon Christensen, "Hyperloop and the Annihilation of Space and Time"
New Yorker, 2013





forerunners



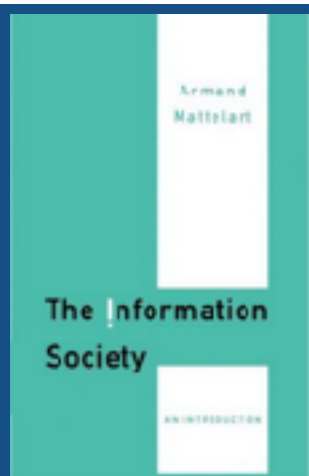
sea to shining sea ... and tech to shining tech

"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



democratic distance?



Armand Mattelart, 2001

"For the Pen and the Press unite separate Nations, annihilate immense intervening spaces."

— Richard Blackmore, "Usefulness of Writing," 1717

"All these methods ... intended to transcend the spatial and temporal ... brought back the myth of the recovery of the lost agora."

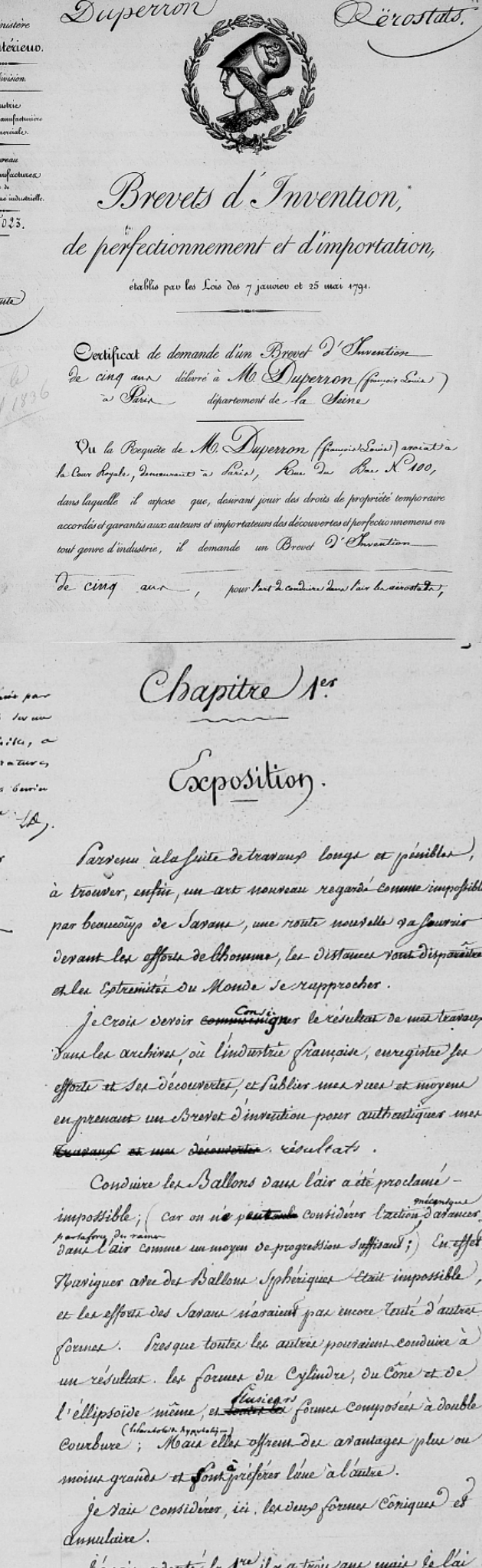
— Armand Mattelart, *The Information Society*, 2001

Republicanism "by far the best ... is only fitted for a small State: And any Attempt towards it can in our [Country], produce only Anarchy, which is the Forerunner of Despotism."

— David Hume, *Letters*, 1775



David Hume, 1711–1776

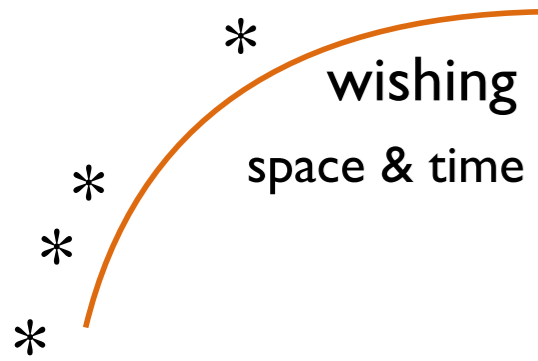


in search of the agora

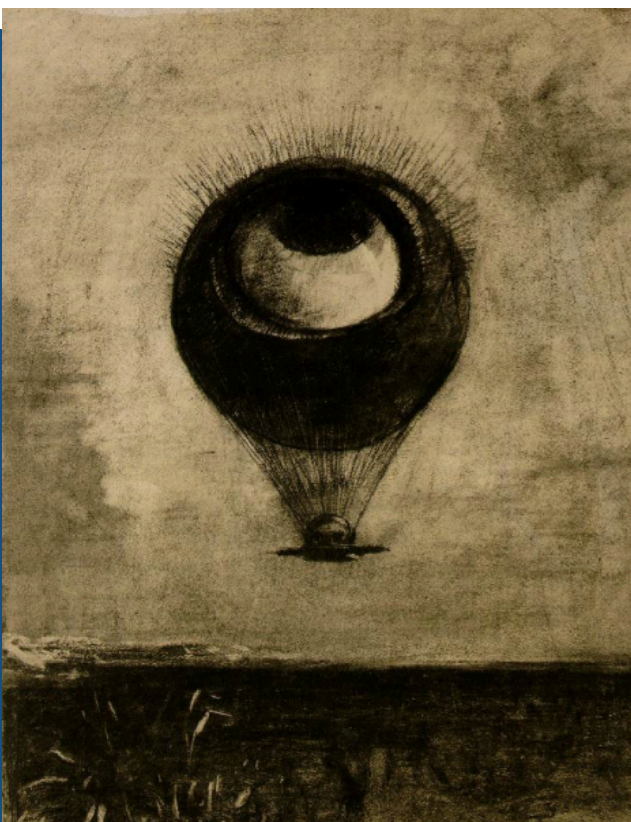
"Parvenu à la suite de travaux longs et pénibles à trouver, enfin, un art nouveau regardé comme impossible par beaucoup des Savans, une route nouvelle va fournir devant les efforts de l'homme, les distances vont disparaître et les extrémités du Monde se rapprocher."

—Brevet d'Invention, 1836





evidently not a
“determined technology”

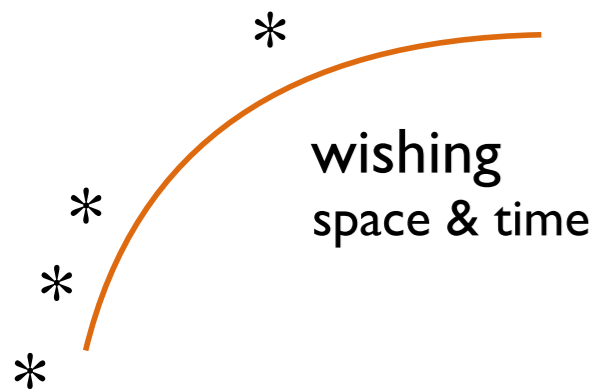


Odilon Redon:
“The eye like
a strange
balloon mounts
towards
infinity”

[1882]



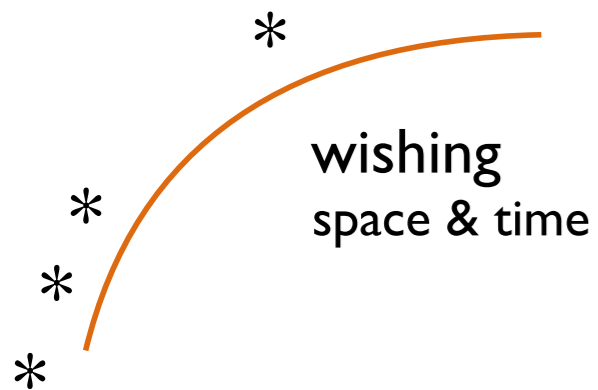
The battle of
Fleurus, June
26, 1794



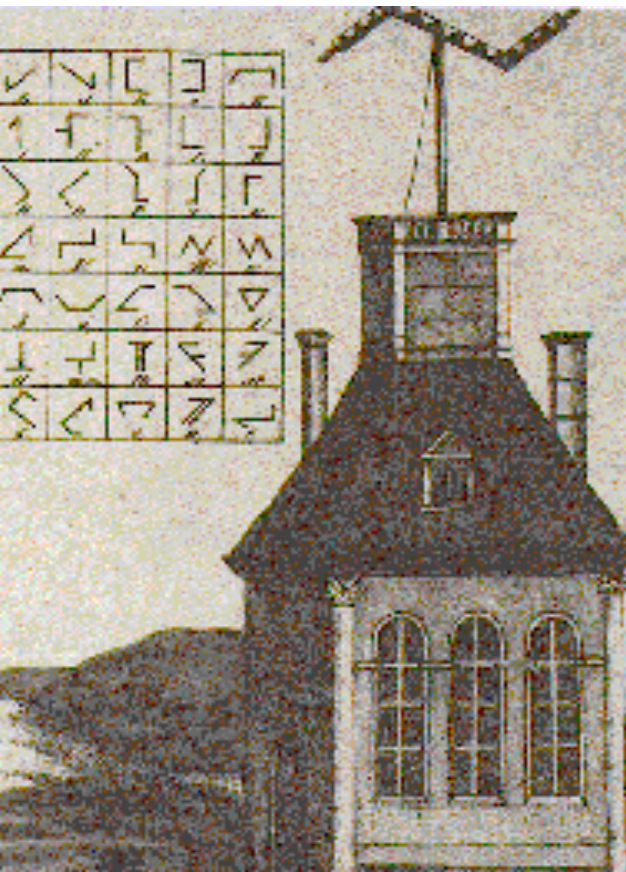
wishing up a grand future

what and when?

"at bottom, this invention might suffice to make possible the establishment of democracy among a large population ... no reason why it would not be possible for all the citizens of France to communicate their will ... in such a way that this communication might be considered instantaneous."



wishing up a grand future



what and when?

"at bottom, this invention might suffice to make possible the establishment of democracy among a large population ... no reason why it would not be possible for all the citizens of France to communicate their will ... in such a way that this communication might be considered instantaneous."

-- Alexandre Vandermond, 1795



wishful thinking?

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

Pope, Arbuthnot, Swift, 1728

"... no stock phrase in the entire lexicon of
progress appears more often."

--Leo Marx,
The Machine in the Garden, 1964



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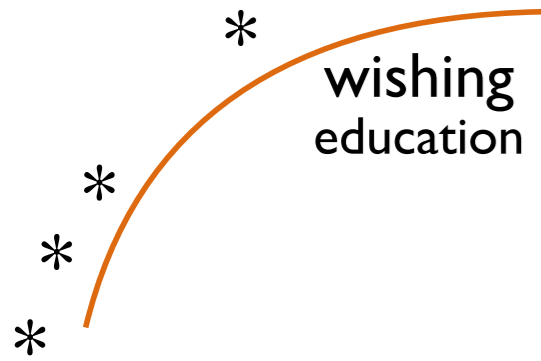
wishing on technology

education

attractions of TD

taking sides

McLuhan v.
Williams



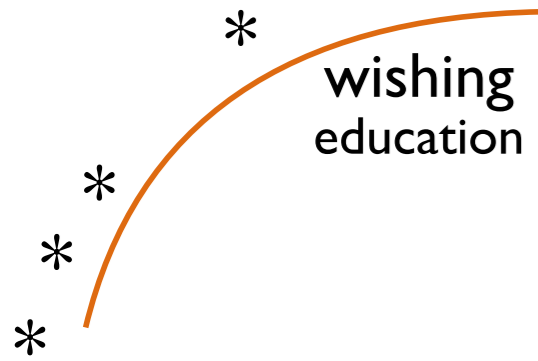
think MOOCs

“we are entering the new age of education that is programmed for discovery rather than instruction.”

McLuhan, 1964

“Long before the year 2000, the entire antiquated structure of degrees, majors and credits will be a shambles.”

Alvin Toffler, *Future Shock*, 1970



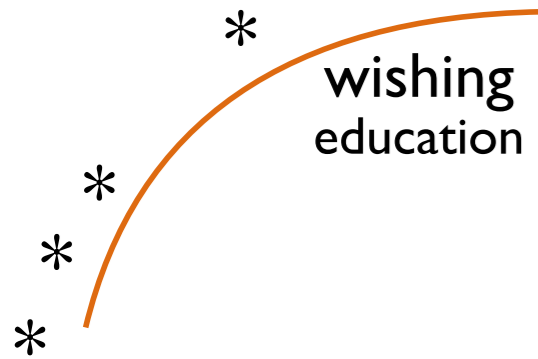
going back

"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

not Aristotle, but Plato
(**P**rogrammed **L**anguage for
Automated **T**eaching
Operations).





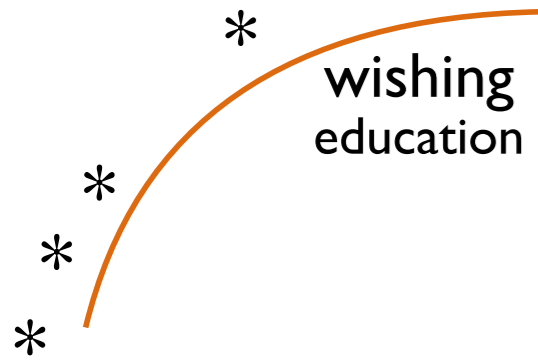
and back



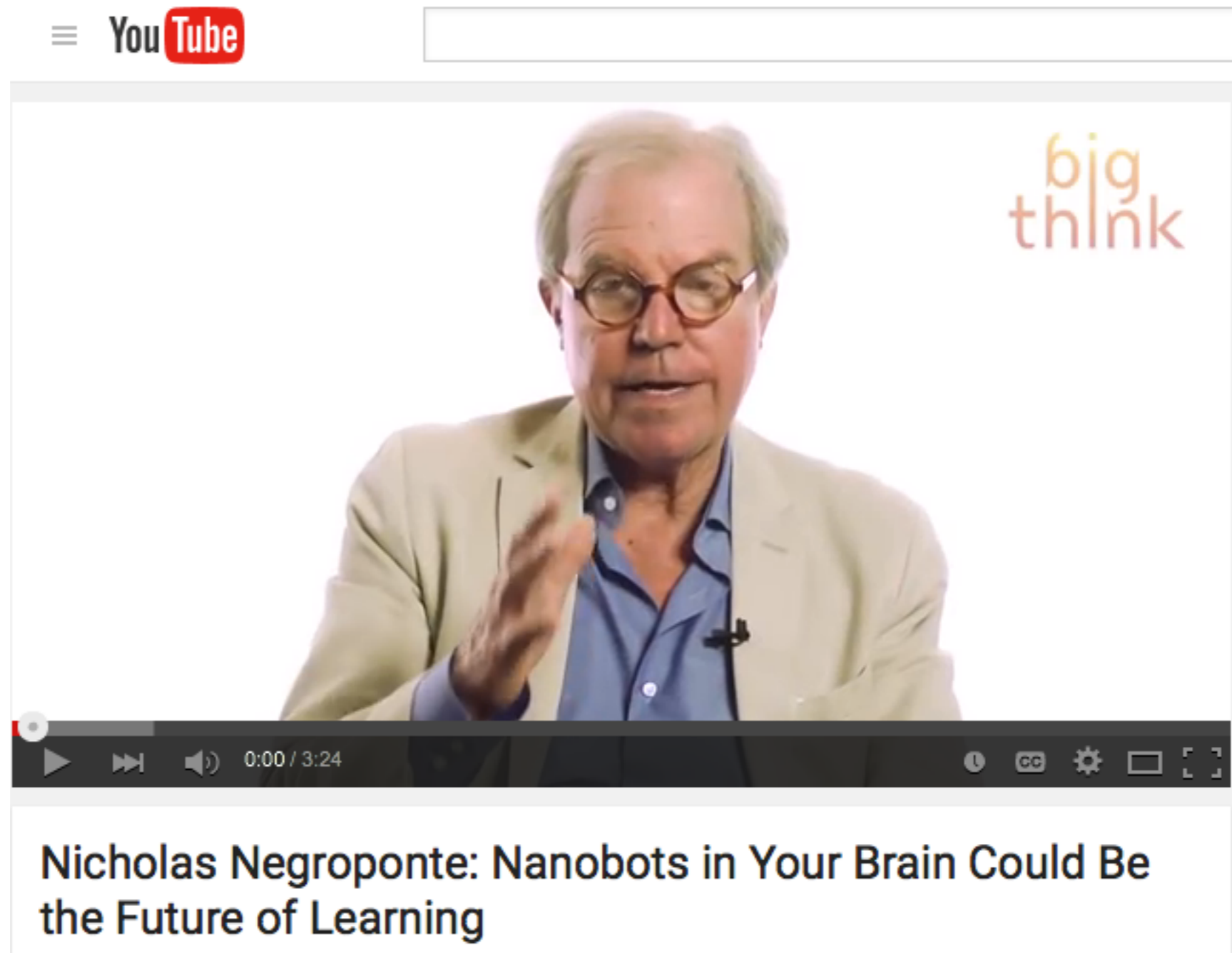
you should be so lucky

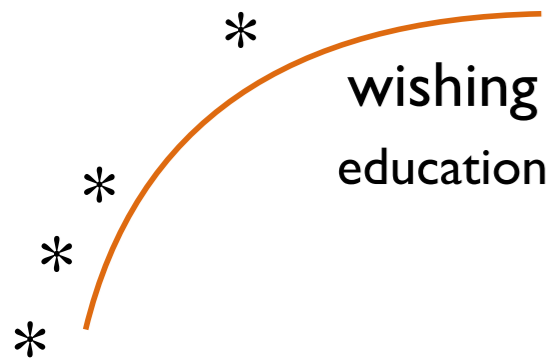
"Children in the public schools will be taught practically everything by moving pictures. Certainly they will never be obliged to read history again."

-- D.W. Griffith, 1915



beyond movies & MOOCs

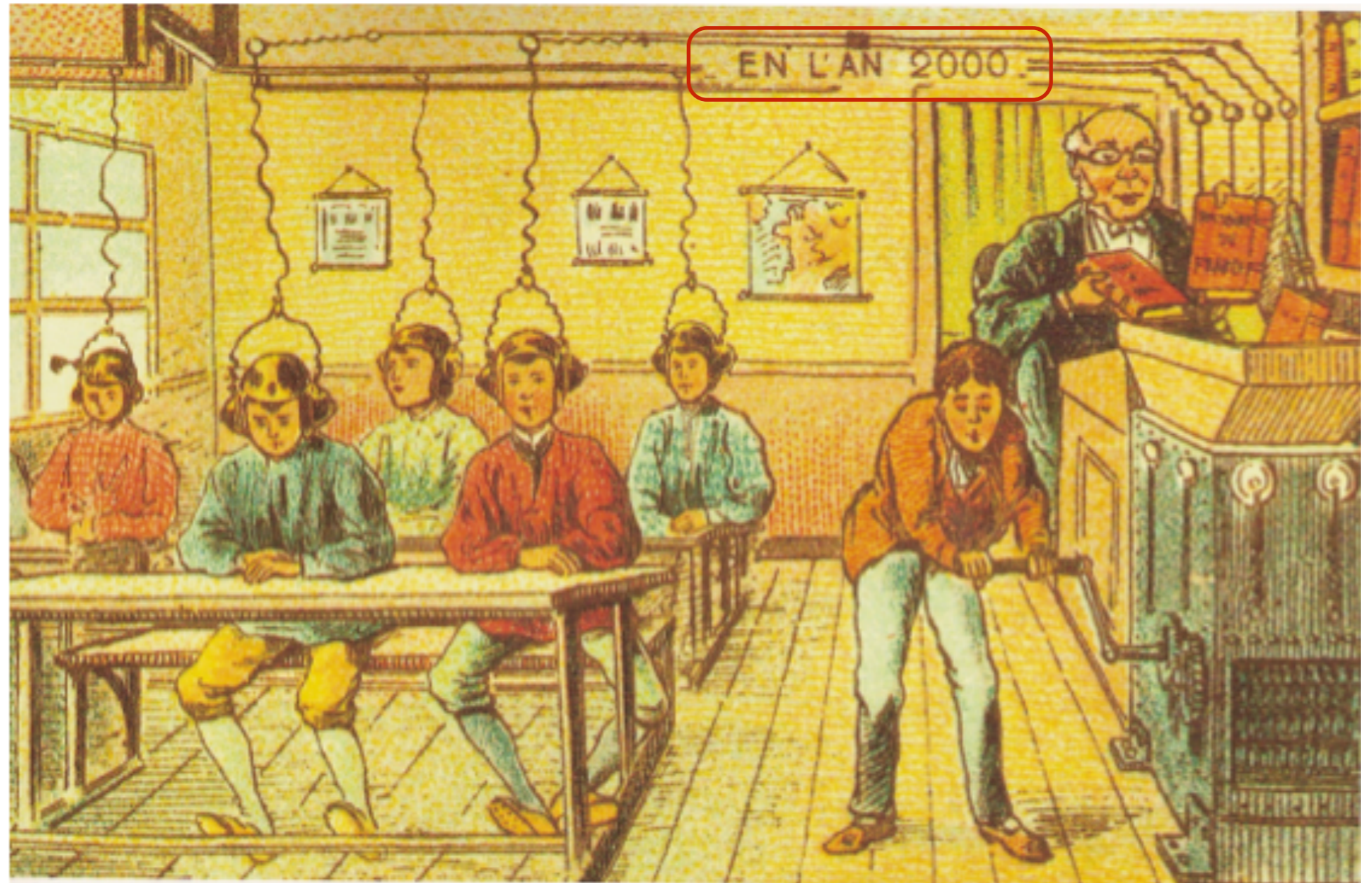
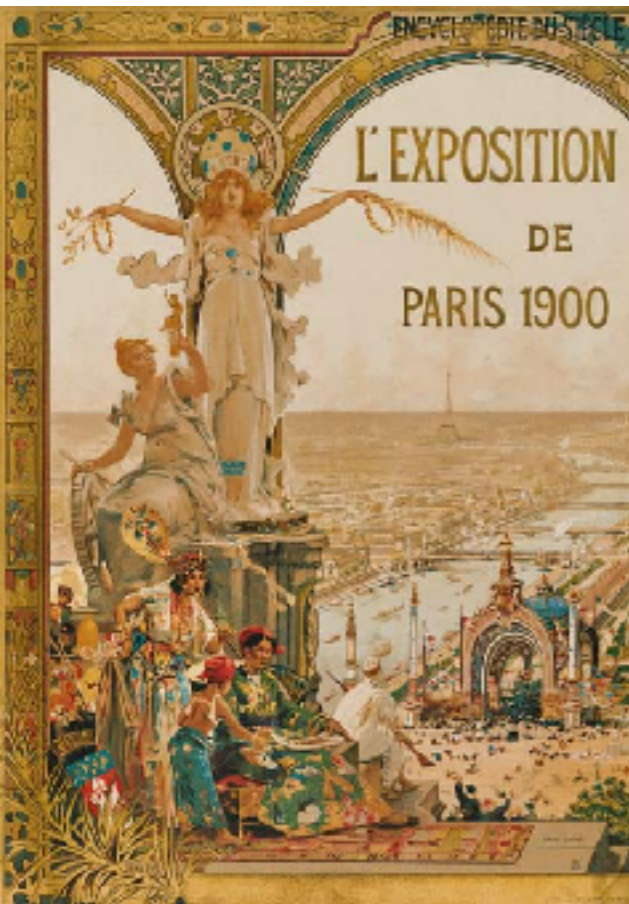




"Long before the year 2000,..." –Toffler

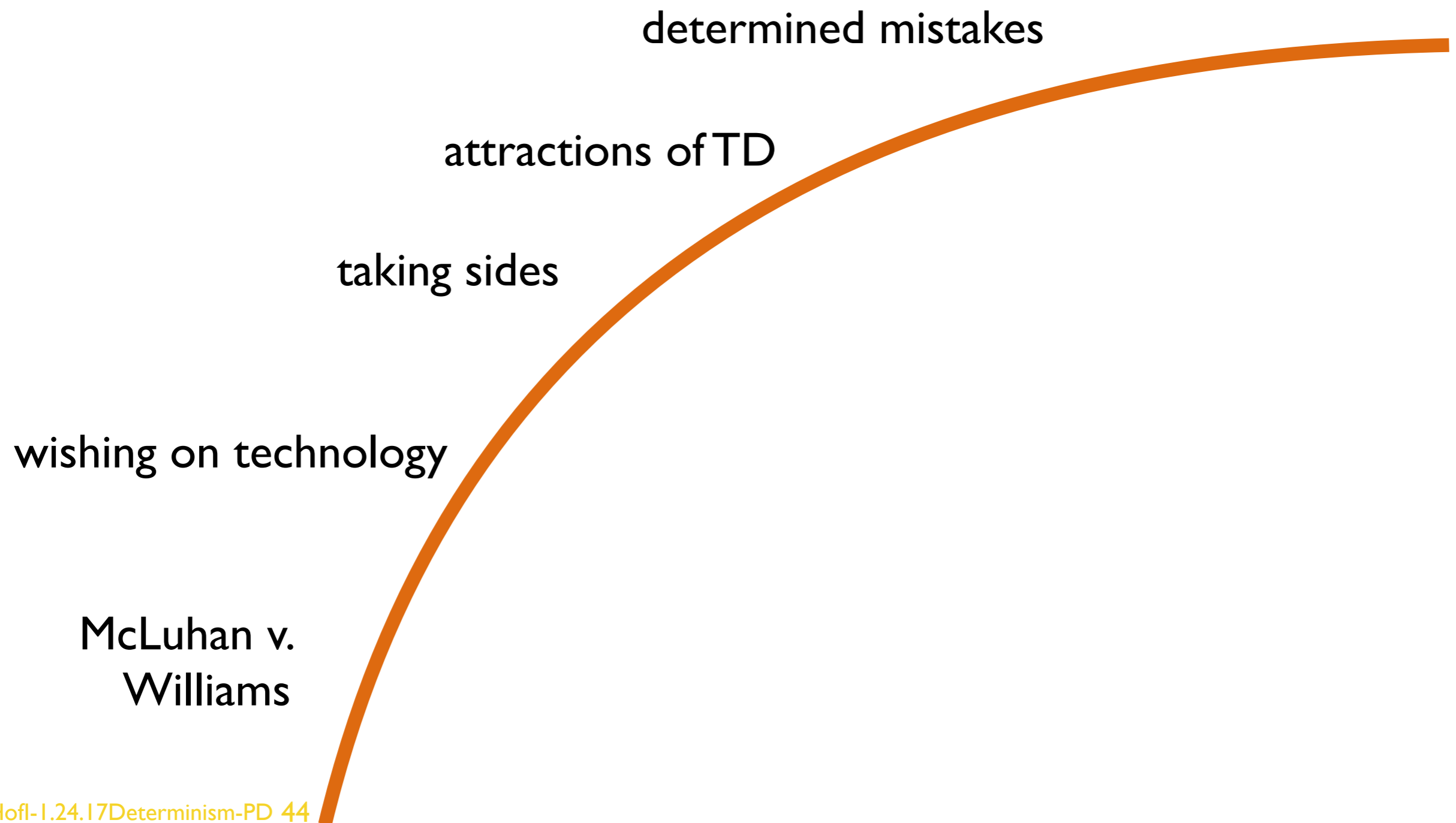
back and forward

in the year 2000



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replacement



supersession

"ceci [the book] tuera cela [the church]."

-- Victor Hugo, *Notre-Dame de Paris*, 1831



"le journal [newspaper] tue le livre, comme le livre a tué l'architecture."

-- Théophile Gautier, *Mademoiselle Maupin*, 1834

"Ceci tuera cela, le fer [les Halles] tuera la pierre [St. Eustache]."

--Emile Zola, *Le Ventre de Paris*, 1874





replacement



supersession

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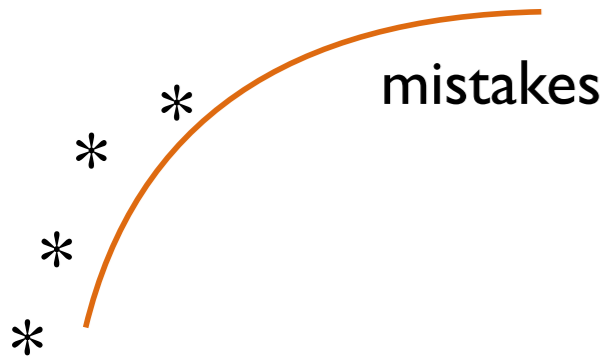
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-- Théophile Gautier, *Mademoiselle Maupin*, 1834

"Ceci tuera cela, le fer [les Halles] tuera la pierre [St. Eustache]."

--Emile Zola, *Le V*





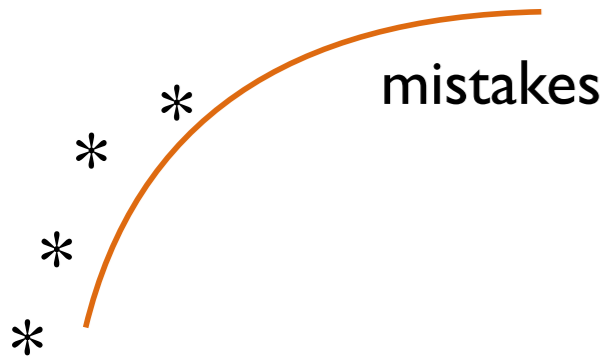
easy predictions

There are persons who can write not illegibly in pencil, but are as enigmatical as Rufus Choate or Horace Greeley when they take up the pen. There are persons too lazy to resort to ink and pen who can conquer their besetting sin enough to make a few dabs with a pencil. Living must have been more laborious before the pencil age. Blue pencil, red pencil, what should we do without them? Yet writing with one's own hand seems to be disappearing, and the universal typewriter may swallow all. Librarians of a century or two hence may be searching for the last reference to pencils.

searching for the last ... ?



New York Times
1938



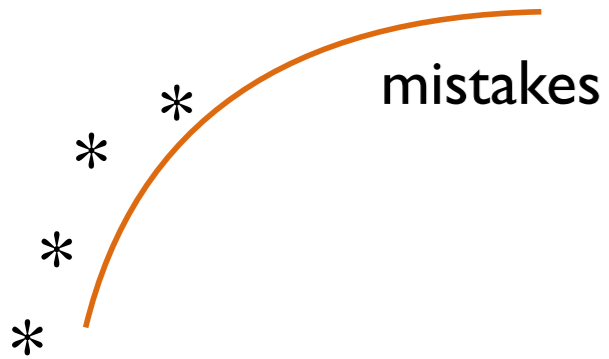
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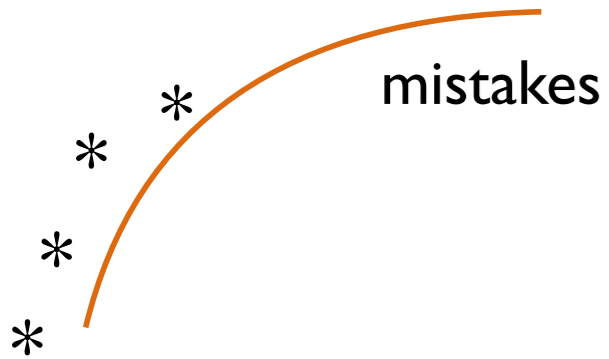
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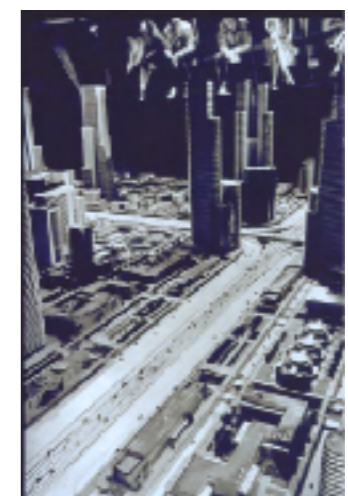


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searching for the last ... ?

New York Times
1938





reports of my death ...

Paper Calendars Endure Despite the Digital Age

By CHRISTOPHER KEELER | DEC. 23, 2014



No, the Internet Has Not Killed the Printed Book. Most People Still Prefer Them.

By DANIEL VICTOR | SEPT. 2, 2014



A pick-up head runs along a record in the 'Dark Plastic' record shop in Dortmund, Germany, 10 April 2016. Record Store Day 2016 will take place on 18 April 2016 in record stores worldwide, offering music fans and record collectors exclusive vinyls in re-limited editions. Photo by: Ina Fassbender/picture-alliance/dpa/AP Images Ina Fassbender — picture-alliance/dpa/AP

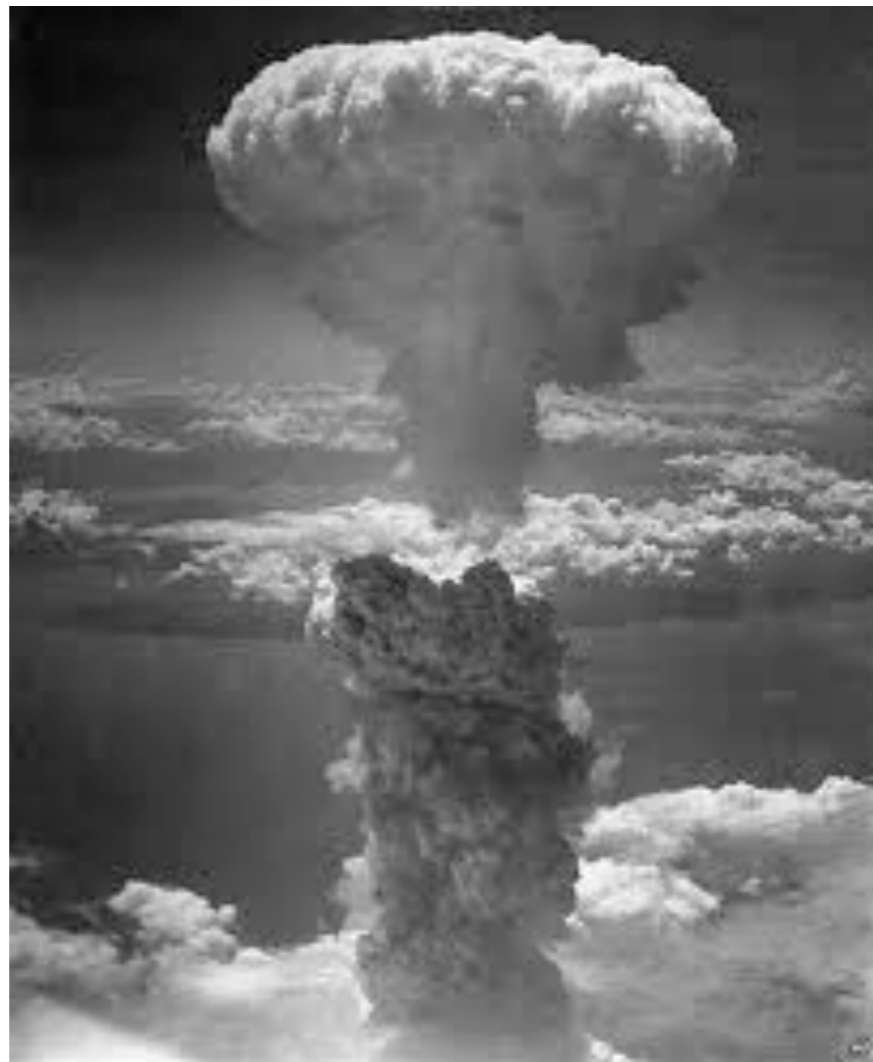
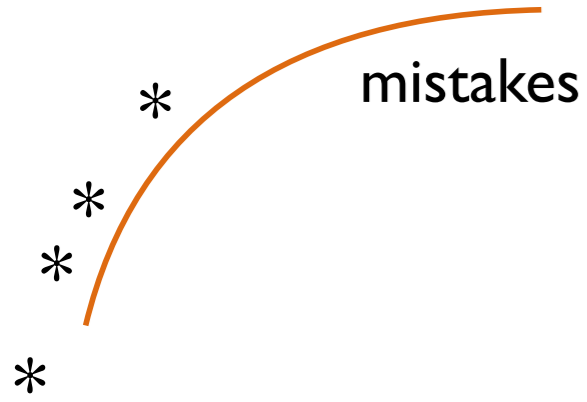
RECORDSTORE DAY

Vinyl Record Sales Are At A 28-Year High

1917: War to end all wars

1945: Weapon to end all weapons

backing the biggest horse

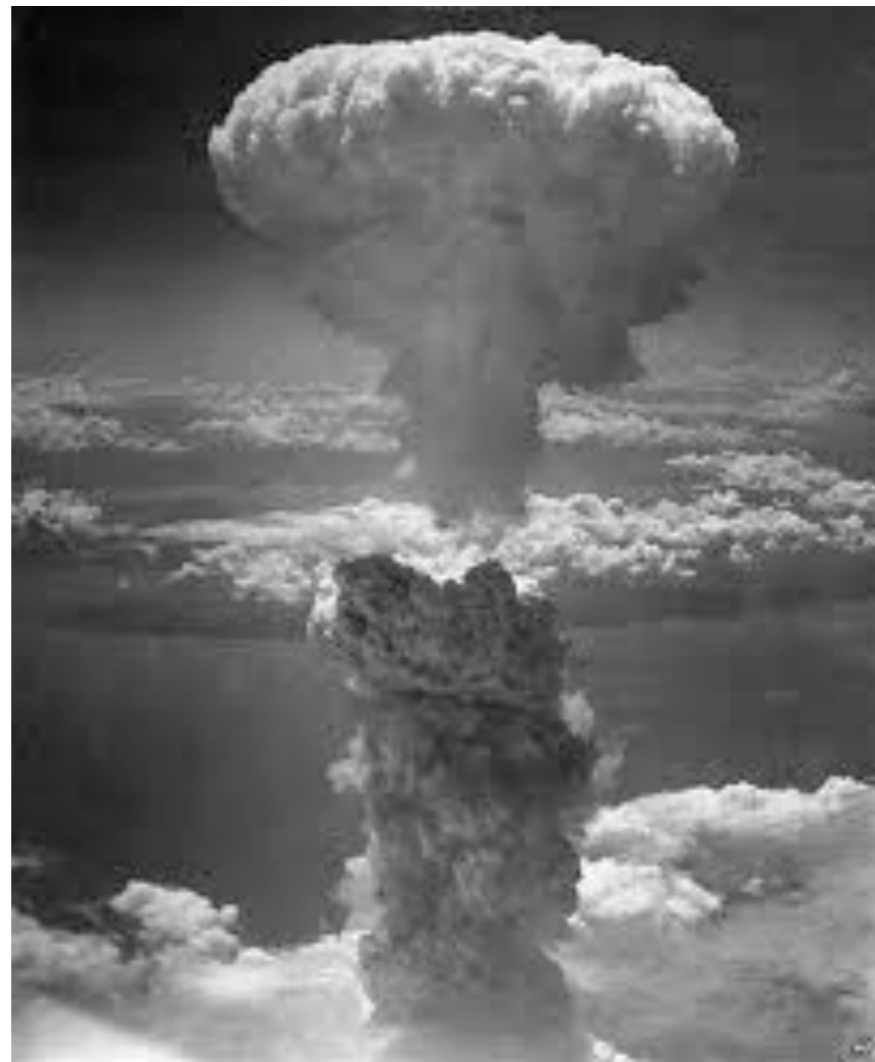


1917: War to end all wars

1945: Weapon to end all weapons

backing the biggest horse

mistakes



Kalashnikov, Creator of AK-47, Dies at 94





necessary or sufficient?



"The hand-mill gives you society with the feudal lord; the steam mill, society with the industrial capitalist"

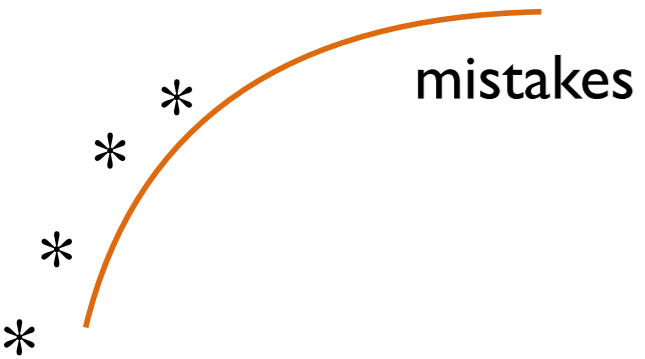
—Karl Marx, *Poverty of Philosophy*, 1847

"... it is impossible to proceed to the age of the steam-mill until one has passed through the age of the hand-mill."

—Robert Heilbroner, "Do Machines Make History," 1994



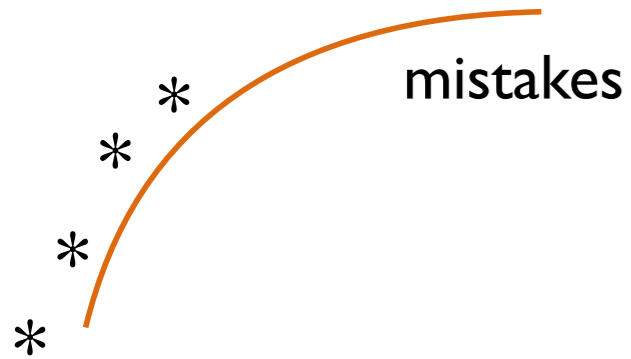
[or] once you have the steam-mill, industrial capitalism is inevitable



constraint vs resource



and/or



in conclusion

how to think about determinism

what happened?

what was involved?

what did (or did not) come before?

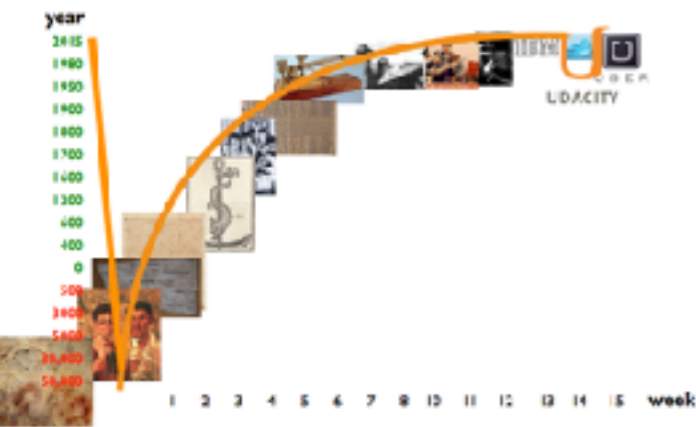
what did (or did not) follow?

what did (or did not) contribute?

what happened elsewhere?

what's likely to be underestimated?

what was necessary, what sufficient?



coming up

26 Jan: First Information Technologies: Writing

Writing was “the first information technology,” but its roots go even deeper to the appearance of signs and symbols in neolithic times. We’ll look at how the idea of writing, still the great intellectual achievement of the species, slowly emerged over millennia.

Required Readings

Marshack, Alexander. 1999. “The Art and Symbols of Ice-Age Man,” pp. 5-14 in David Crowley (ed.) *Communication in History: Technology, Culture, Society*. Allyn & Bacon.

Source: Course reader

Gnanadesikan, Amalia E. 2009. *The Writing Revolution: Cuneiform to the Internet*. Hoboken: Wiley-Blackwell.

Read: Chs 1, 2, 4, 12.

Source: ebrary [[hyperlink](#) ↗]