Privacy, confusology, price discrimination, and the seeds of capitalism's destruction

## Andrew Odlyzko

University of Minnesota odlyzko@umn.edu http://www.dtc.umn.edu/~odlyzko

October 29, 2019

- technology is leading to fundamental changes in our society
- those changes are even more fundamental than generally perceived, threatening the incentives that have made the market system as dynamic as it has been
- price discrimination, facilitated by erosion of privacy, and "post-truth" techniques, has a key but underappreciated role in these developments

#### • dominated by search for choke points

#### • minimal real investments

assisted by confusology (the "post-truth" world)

Verizon spokesperson, cited in *Bloomberg News*, Feb. 26, 2015, on high international roaming rates for data (up to \$20/MB):

It's a complex system; there's lots of different layers that determine rates, like regulatory and tax issues in different countries. Our goal, as always, is to provide the best value.

T-Mobile filing with the FCC, May 27, 2014: wholesale prices charged to international carriers averaged \$0.20/MB.

#### ratio of PR employees to news reporters in US:

#### • 1998 1.9

• 2018 6.4

• 30x increase in living standars in leading countries

• rapid increase in population and longevity

• historically unprecedented growth rates, less variability

[The market] has created more massive and more colossal productive forces than have all preceding generations together. Subjection of Nature's forces to man, machinery, application of chemistry to industry and agriculture, steam-navigation, railways, electric telegraphs, clearing of whole continents for cultivation, canalisation of rivers, whole populations conjured out of the ground – what earlier century had even a presentiment that such productive forces slumbered in the lap of social labour?

[The market] has created more massive and more colossal productive forces than have all preceding generations together. Subjection of Nature's forces to man, machinery, application of chemistry to industry and agriculture, steam-navigation, railways, electric telegraphs, clearing of whole continents for cultivation, canalisation of rivers, whole populations conjured out of the ground – what earlier century had even a presentiment that such productive forces slumbered in the lap of social labour?

#### Karl Marx, Communist Manifesto

Adam Smith extreme simplification:

- atomic buyers and sellers
- information opacity: balance of supply and demand determines price
- social relations irrelevant

• people hate the impersonality of the market

• companies hate being forced to accept market price

*Homo sapiens* is a social animal, and even private profit-maximizing organizations care about social relations:

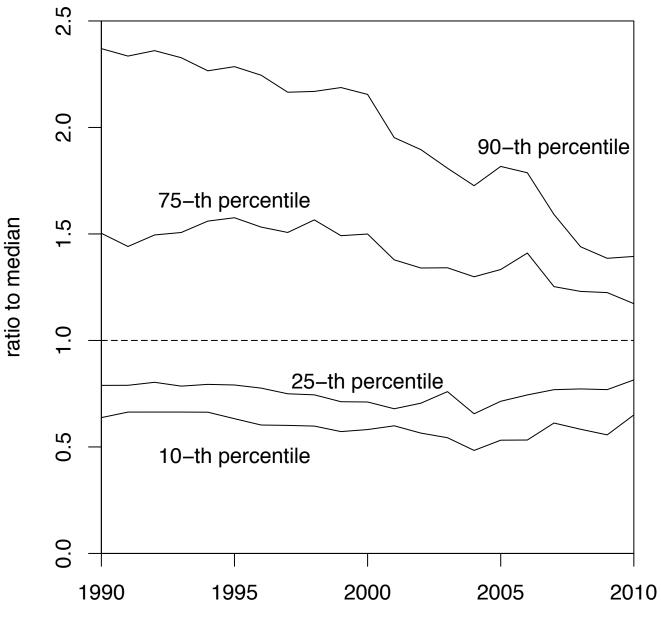
In recent Silicon Valley conspiracy to limit hiring of engineering talent that involved Apple, Google, Intel, Intuit, Pixar, and Adobe, a key motivation was that competition "messes up the pay structure."

#### • forces sellers to concentrate on price and quality

#### • stops them from practicing price discrimination

- very important role in economy
- positive role understood intuitively even by ancient policy makers, way before the theory was developed by the French econo-engineers of the 1840s
- never-ending quest to reconcile economic incentives to price discriminate with public concern about fairness

# Distribution of number of serials per research library



year

#### Value of price discrimination (Dupuis, 1849):

It is not because of the few thousand francs which would have to be spent to put a roof over the third-class carriages or to upholster the third-class seats that some company or other has open carriages with wooden benches. What the company is trying to do is to prevent the passengers who can pay the second class fare from traveling third class; it hits the poor, not because it wants to hurt them, but to frighten the rich. And it is again for the same reason that the companies, having proved almost cruel to the third-class passengers and mean to the second-class ones, become lavish in dealing with first-class passengers. Having refused the poor what is necessary, they give the rich what is superfluous.

#### PUNCH, OR THE LONDON CHARIVARI.

[MARCH 6, 1869.

172



#### ZOOLOGY.

Railway Porter (to Old Lady travelling with a Menagerie of Pets). "'STATION MASTER SAY, MUM, AS CATS IS 'DOGS,' AND RABBITS IS '' DOGS,' AND SO'S PARROTS; BUT THIS ERE 'TORTIS' IS A INSECT, SO THERE AIN'T NO CHARGE FOR IT !"

96

• can find out willingness and ability to pay

• can control use, and thereby eliminate arbitrage

• price discrimination means there is no market price

• without market price, the market cannot do its magic

- too much attention paid to the obvious dangers from new monopolies that seem to be arising (platform providers such as Google, Facebook, Apple)
- too little attention paid to all the other actors who are able to use Big Data, analytics, ..., to create barriers to competition and extract value
- possible sign of the decline of market economy: paradox of high corporate profits, low interest rates, and low entrepreneurial activity

- secure system of property rights very important for economic development
- price discrimination taken to its extreme is equivalent to abolition of rule of law, and letting many mafias run free
- decreases ordinary economic rewards, and also offends human sense of fairness, and breaks down the trust that is vital to efficient markets

- erosion of privacy leads to fundamental changes in society
- strong incentives for sellers and often governments
- major threats to the market
- good regulation very tricky, no simple solutions

### $http://www.dtc.umn.edu/{\sim}odlyzko/$

#### or just google/bing "odlyzko"