

Surveillance Capitalism - Shoshana Zuboff

Wenhao & Sofia & Anvitha





Introduction

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Author: Shoshana Zuboff

- Professor of Business Administration, Harvard Business School
- Defined the concept of Surveillance Capitalism
- International Conference on Information Systems Scholars' 2016 Best Paper Award



Image. <https://www.hachettebookgroup.com/contributor/shoshana-zuboff/>
https://en.wikipedia.org/wiki/Shoshana_Zuboff

Intro - “Big Data”



“Big Data”: General Definition

- Big Data is also data but with a huge size.
- Huge in volume and growing exponentially with time.
- Too large and complex that no traditional data management tools are able to store it or process it efficiently.
- E.g. Trade data (New York Stock Exchange)
Video, photo, messages, comments (Social Media)



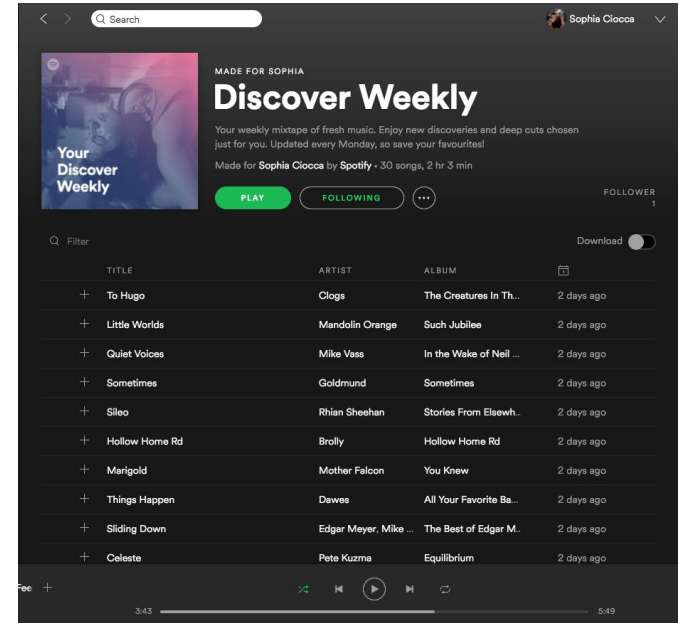
“Big Data”: Features

- Delineated by Constantiou and Kallinikos (2014)
 - **Heterogeneous**: high variability of data types
 - **Unstructured**: no fixed format
 - **Trans-semiotic**: extend beyond alphanumeric systems
 - **Decontextualized**: surrounding context removed
 - **Agnostic**: may be produced for purposes different from those sought by big data crunching



Applications in Daily Life

- Media and Entertainment Industry
- Collect personal browsing data
=> Recommendation System
- E.g. Spotify, YouTube, Amazon Prime



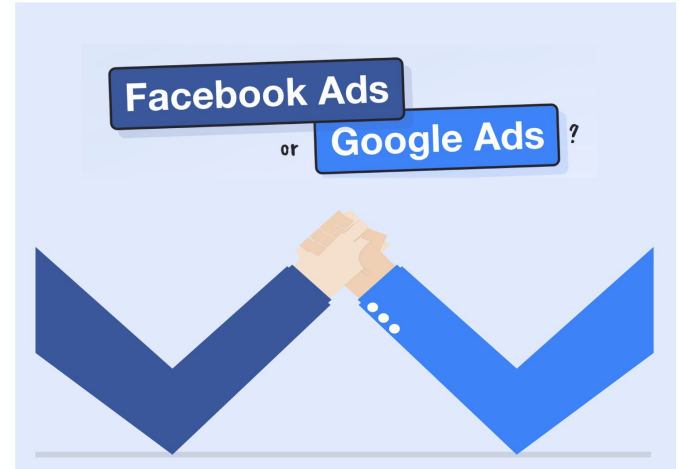
Applications in Daily Life

- Health Care via wearable devices
- Collect personal health record
=> Detecting possible diseases
- E.g. Apple Watch



Applications in Daily Life

- Advertisement
- Collect personal searching data
=> Personalized advertising
- E.g. Google, Facebook



What's in common?



What's in common?

- Private information => Convenience
- Everydayness data => Primary target of commercialization strategies
- Produce revenue by predicting and modifying user behavior



“Big Data” Under Surveillance

- Recent White House report on “big data” (2014)
“The technological trajectory, however, is clear: more and more data will be generated about individuals and will persist under the control of others”
- Interview with Google Chairperson Eric Schmidt (2009)
Google retained individual search histories that were also made available to state security and law enforcement agencies.



“Big Data”: Different Approach

- Claim: Not a technology or an inevitable technology effect
- Foundational component in a new logic of accumulation: **Surveillance Capitalism**

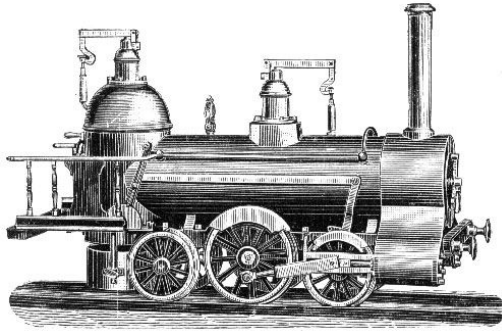


Computer mediation meets the logic of accumulation

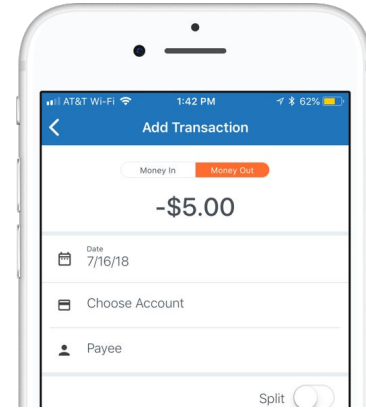
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Different types of Automation



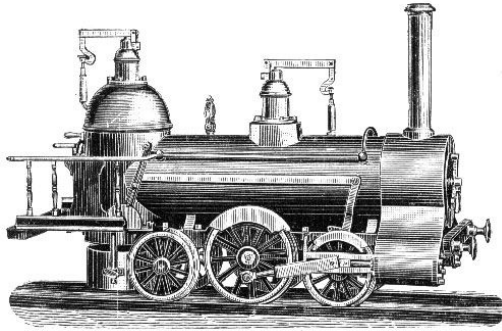
The Steam Engine
18th century



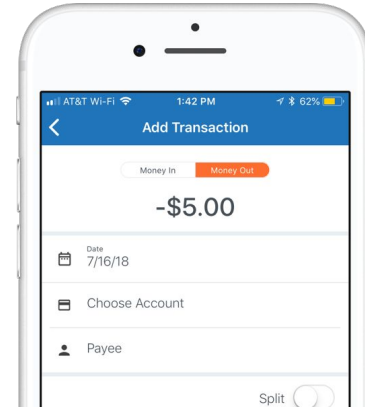
Transaction App
21st century



Different types of Automation



Automation
=> **Human Labor**



Automation
=> **Human Labor + Information**



Image. <http://www.steamenginerevolution.com/info/the-steam-engine/>

Image. <https://walletknock.com/chase-quickpay/>

Computer Mediated Work

- The action of a **traditional machine** is entirely invested in the object. **(Fully Automate)**
- The action of **computer-mediated work** symbolically renders events, objects, and processes that become visible, knowable, and shareable in a new way. **(Informate)**

Information Technology

- Information technology alone has the capacity to **automate** and to **informate**.
- Informating process
 - => “The electronic text” (Heterogeneous data)
 - => Information-based Learning (New form of labor)
- **Division of Learning vs Division of Labor**

Impact on Business Activities

- Computer-mediated learning + Daily business activities
=> new action types in firms
- Employee monitoring, supply chains, marketing approaches to diverse configurations of consumers...
- Online search, video meetings, social media interactions...

Impact on Market Sphere

- Who participates and how?
- Who decides who participates?
- What happen when authority fails?

Impact on Market Sphere

- “When it comes to the market sphere, the electronic text is already organized by the **logic of accumulation** in which it is embedded and the conflicts inherent to that logic.”
- **Logic of accumulation:** the taken-for-granted context of any business model, presiding idea of capitalism

Logic of accumulation

- Evolving population needs / changing of demands
 - => New market forms & logic of accumulation
 - => New form of organization and ownership
 - => New form of capitalism
- “...a market economy can adopt radically divergent institutional forms, including different regimes of property and contract and different ways of relating government and private producers.”



Back to “Big Data”

- “Three of the world’s seven billion people are now computer-mediated in a wide range of their daily activities far beyond the traditional boundaries of the workplace.”
- Pervasive computer mediation => Events, objects, processes, and people become visible, knowable, and shareable in a new way.

Information Civilization

- Logic of industrial capitalism
=> industrial civilization
- Logic of surveillance capitalism
=> information civilization

Unveil Surveillance Capitalism

- Investigate through **Google**
- **Hal Varian**
 - Chief Economist @ Google
 - Emeritus Professor in the School of Information, the Haas School of Business & the Department of Economics @ UCB



Four new “uses” & SC

- Data extraction & analysis
- New contractual forms due to better monitoring
- Personalization and customization
- Continuous experiments



Data, Extraction, Analysis

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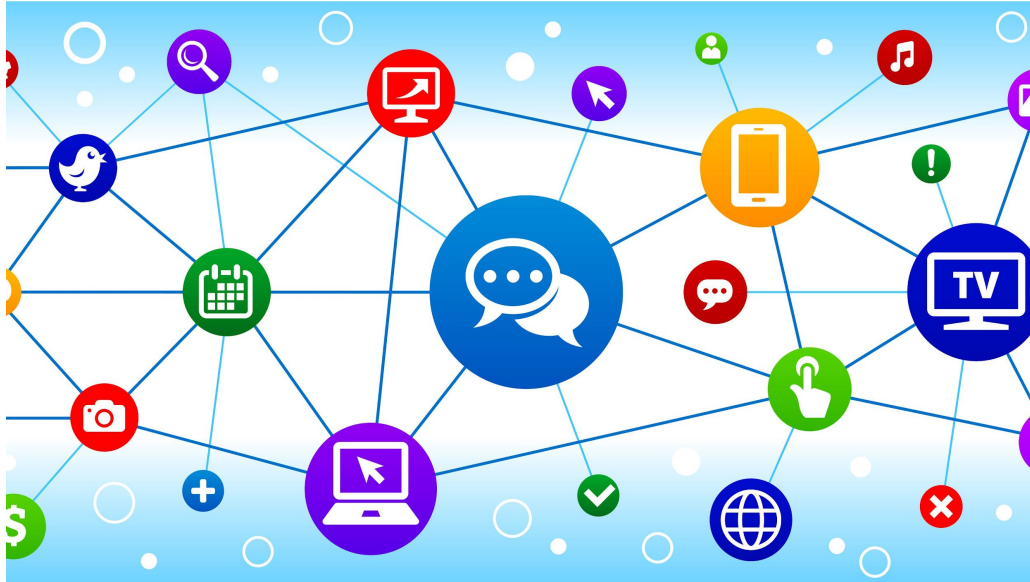


Data

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Sources of Big Data

- Computer mediated transactions



Sources of Big Data

- Data from various sources (Internet of Everything)



Image. https://en.wikipedia.org/wiki/Self-driving_car

Image. https://www.fitbit.com/us/products/smartwatches/versa?istCompanyId=a7a58ef0-2b29-4347-933b-7dd692310664&istFeedId=a6a412df-2601-466f-bd8f-5ece2201d669&istItemId=ixqxmpptr&istBid=t&utm_source=&utm_medium=paidsearch&gclid=EAlalQobChMIg6DM7urt6AIVqQilCR0rwQpHEAQYASABEgLZkPD_BwE&gclsrc=aw.ds



Sources of Big Data

- Data from government institutions



Sources of Big Data

- Surveillance cameras



Image. https://www.safetysign.com/products/8867/smile-youre-on-camera-sign?s=sk1sf3zsa1062v&gclid=CjwKCAjwhOD0BRAQEiwAK7JHmNMP9y_gAyBO1ix50a7bzEaXsaHxQMDX9CPftjiVewRHMONqS1pg0hoCOK8QAvD_BwE

Image. <https://www.wallpaperflare.com/two-white-surveillance-cameras-monitoring-safety-the-police-wallpaper-zynat>



Sources of Big Data

- Non-market activities (Everydayness)



What is this data used for?

- A small amount of this data is used to improve services and devices.



Zuboff's Critique

- Surplus Data (Data Exhaust)

Rise of data-driven business models



Zuboff's Critique

- Users are not aware that this data is being captured



Google

- Google became the leader in data exhaust
- Collects even more data exhaust by giving away free products/services that harvest data such as giving Starbucks free wi-fi
-



Google Street View



Google Street View Car



Documentary <https://www.youtube.com/watch?v=hIXhnWUmMww>

Example (O'Brien and Miller, 2013)

- Google Street View
 - Street View cars that not only take pictures but also collect Wifi network information
 - Major lawsuit filed in 38 states and district of Columbia
 - 7 million dollar settlement





Extraction

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Formal Indifference

- Formal Indifference
 - Is the notion that Google collects any data it can and then uses it for analysis later
- No quid pro quo relationship

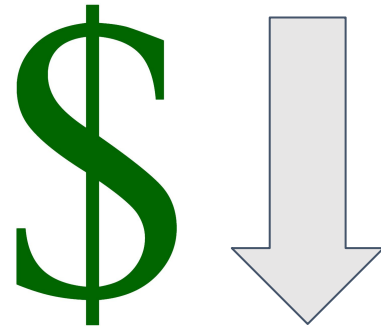
20th Century Companies

- Companies needed people as a source of labor and consumers (Interdependence)

20th Century Companies

This produced a mutual-benefit relationship

- Employees produced goods, while these goods and services became more available for people.



Big Data Companies (Google)

- People are no longer the customer or the worker
- Google has 48,000 only workers
- Customer - business who buy this predictive data for profit



Statistics

3 top Detroit automakers:

Revenue: 250 billion

Employees: 1.2 million

3 top Silicon Valley companies:

Revenue: 247 billion

Employees: 137,000



Zuboff's Critique

- Data is taken from users however users are not given anything back
- Users are not aware of this data collection
- Data is aggregated into predictive models and later sold to businesses for profit

Examples

- Email scanning
- Voice communication scanning
- Ignorance of privacy-settings



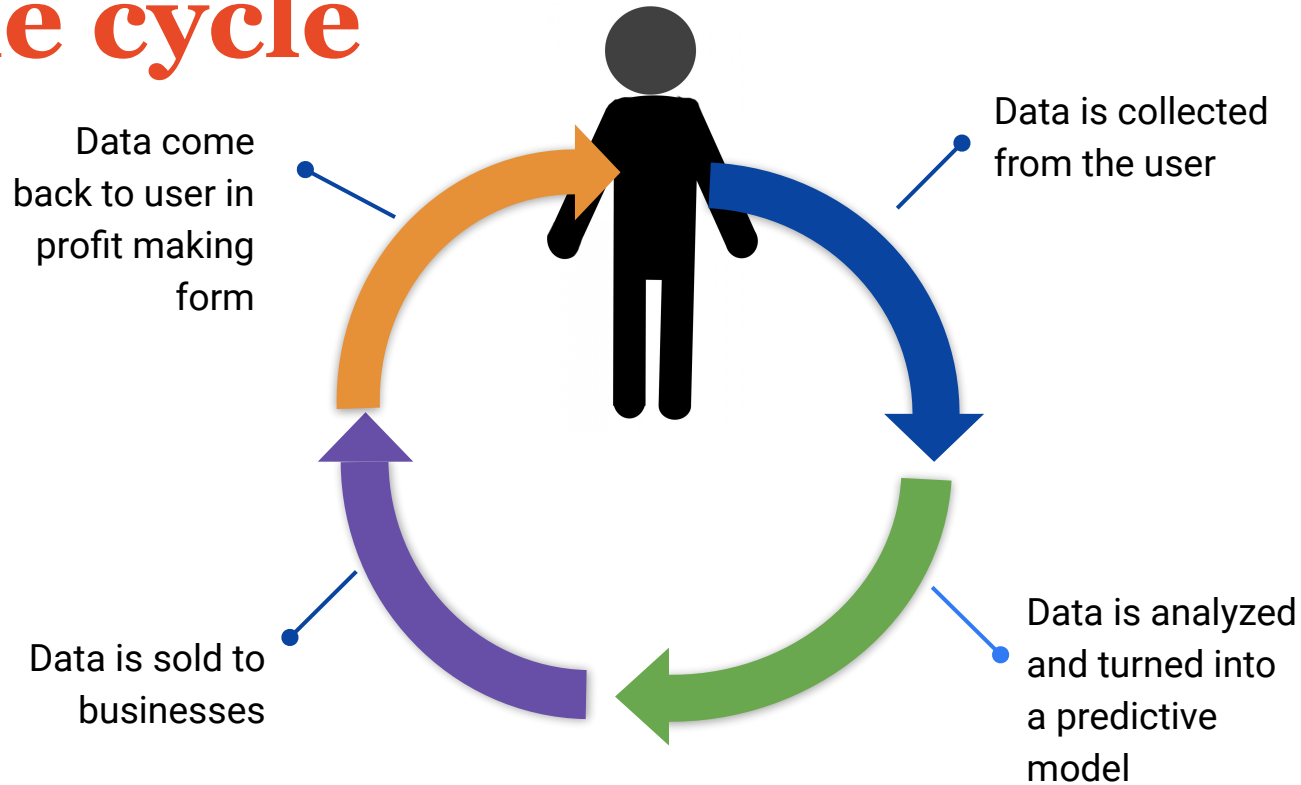
Analysis

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Analysis

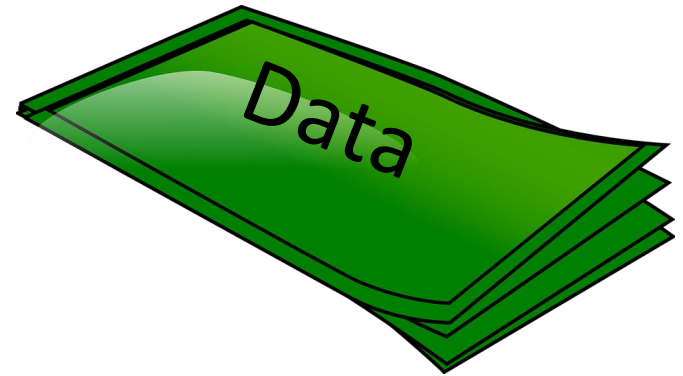
- Hyperscale data analysis that approaches virtual cost of 0
- Automation

The cycle



The new currency

- Surveillance assets
 - This data that is gained from users that profits depend on.
- Surveillance capital
 - Investment into surveillance assets





Monitoring and contracts

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Computer mediated transactions - Varian

- Observe previously unobservable behavior
- Write contracts
- Enable new business models



Image. <http://people.ischool.berkeley.edu/~hal/>

Varian, H.R. (2010). Computer Mediated Transactions, American Economic Review 100(2): 1–10.

Examples - Varian

Insurance companies

- Check if customers driving safely
- Determine either maintain insurance/ pay claims



Examples - Varian

Remote work

- Use smartphone data
- Geolocation, time stamps, photos
- Prove agent performed according to contract



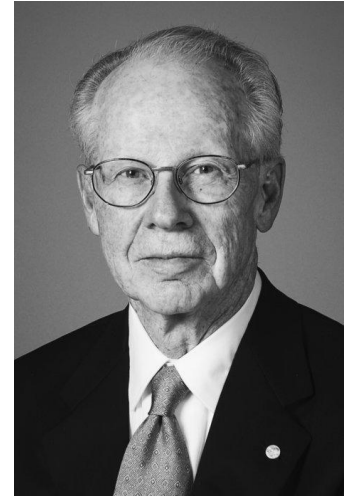
Williamson Economics

- Uncertainty is inevitable
- Contracts exist to reduce that uncertainty
 - Build on bounded rationality
 - Safeguard against opportunism
- Certainty requires unbounded rationality
- Relations built on trust
 - Survive greater stress
 - Display greater adaptability



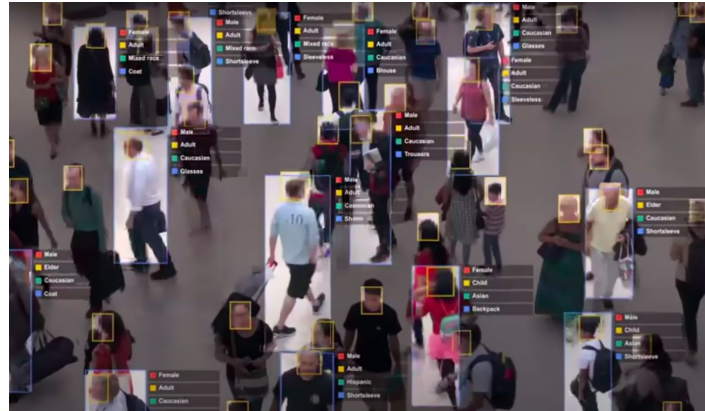
Zuboff's Critique

- Computer-mediated world immune to contract form
- Governance/rule of law stripped away
- Need for trust eliminated



Zuboff's Critique

- Computer-mediated monitoring is a system of control
 - Gain Knowledge of human behavior
 - Independent of consent, free will



Zuboff's Critique

- Subliminal cues online manipulate real world behavior & emotion
- Surveillance capitalism companies can exercise this power by bypassing user awareness



Example: Pokemon Go

- Experiment in guise of an augmented reality game
- Game developed inside Google under Niantic Labs



Example: Pokemon Go

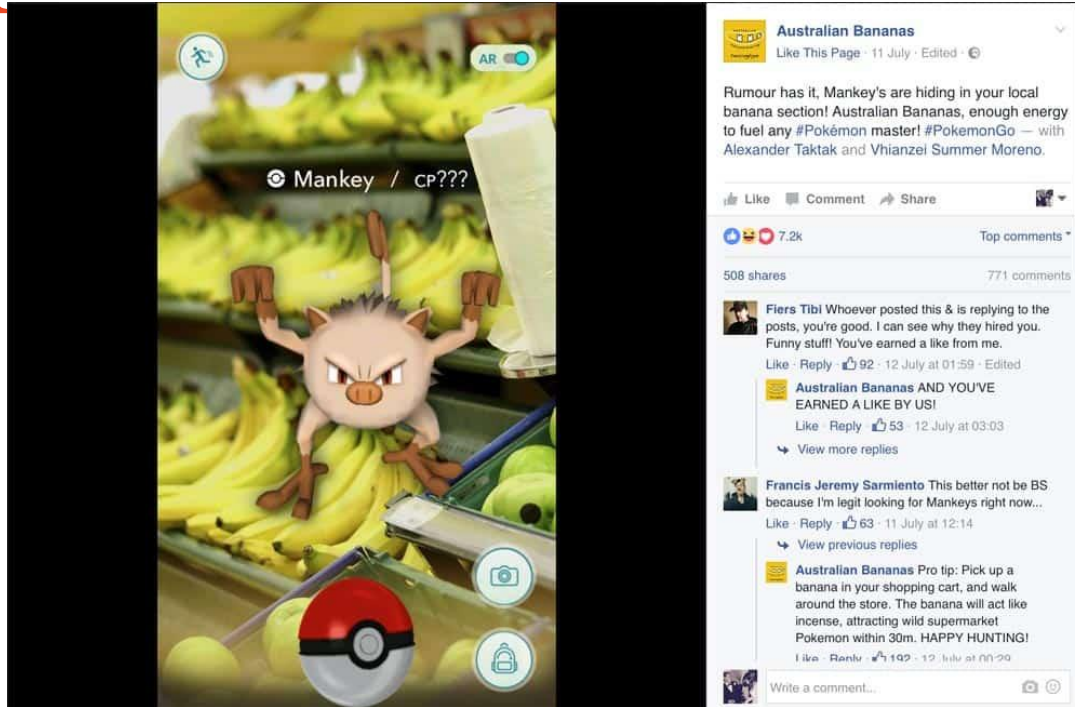
- Gives users the chance to explore real locations
- Smartphone vibrates when you're near a Pokemon
- Open the app and throw a Pokeball to capture PkMn
- Bigger game -> surveillance capitalism



Example: Pokemon Go

- Online surveillance capitalism
 - predict click through rate
 - sell to advertiser who pays for clicks on their website
- Real world surveillance capitalism
 - Businesses paid Niantic labs for foot-fall
 - Get real people with their feet into business establishments
 - Get them to buy something at restaurants, stores, bars

Example: Pokemon Go



<https://www.facebook.com/AustralianBananas/photos/a.402421320810.185359.144732140810/10153626408225811/?type=3>

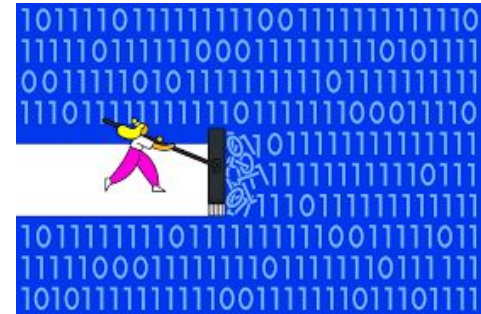
Hannah Arendt

- Making promises is the center of political thought
- Price of freedom: human error in keeping promises
- Mutual contracts/promises
 - only alternative to domination over others
 - community of equals
- Zuboff: computer mediated-world is not a community of equals



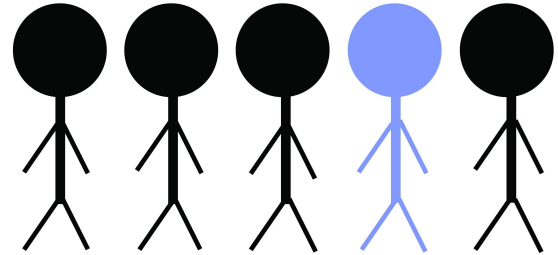
Big Other

- Architecture of surveillance capitalist companies
- Record, modify and commodify human experience
- Establish pathway for profit
- Take away freedom given by the govt./rule of law
- Cannot escape Big Other



Big Other

- World of no escape
- Anticipatory conformity: conscious choice to conform to society
- Difference between behavior
 - One would have performed
 - One chooses to perform



Big Other

- Big Other - anticipatory conformity disappears
- People's path predetermined
- Serve financial interests of surveillance capitalism
- Modification of people's behavior is a commodity



Key themes

- Varian: people agree to privacy invasion given they get something in return
 - Assertion is invalid
 - People don't understand what they consent to



Image. <http://people.ischool.berkeley.edu/~hal/>

Varian, H.R. (2010). Computer Mediated Transactions, American Economic Review 100(2): 1–10.

Key themes

- Exercising one's right to privacy is a choice
- Instead of many people with privacy rights, surveillance capitalists have extensive privacy rights
- Companies have opportunities for secrets
- People deprived of choice - what remains secrets



Key themes

- Facebook, Google take without asking
- Public lacks understanding on how they surveil for profit
- Lag in developing law and regulation
- Concentration of privacy rights is anti-democratic
- Resembles pre-modern absolutist authority

Key themes

- Big Other - regime that replaces contracts
- Rewards and punishments
- Redistribution of rights
- Absence of authority, free from detection/punishment





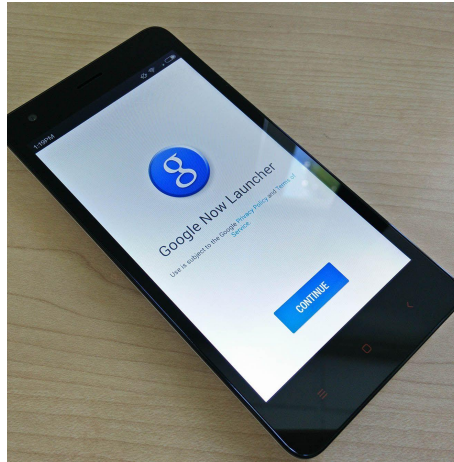
Personalization and communication

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Personalization - Varian

- People expect personalized search results & ads
- Take a step further with Google Now



Personalization - Varian

- Instead of asking Google questions
- Google should know what you want & tell you before you even ask
- Google Now needs a lot of info about you/your environment
- This worries people

Personalization - Varian

- People give private info to doctors, lawyers
- They share personal information
- They get services in return



Zuboff's Critique

- Those professionals are held accountable by laws
 - Example: Doctors -> medical malpractice
- Google is different
 - Distance from users
 - Free from law and meaningful regulation
 - No consequences for mistrust
 - Asymmetry of knowledge and power

Asymmetry of knowledge

- Google knows more about people than they know about themselves
- Typical user has no knowledge of
 - Google's business operations
 - Full range of personal data they contribute to servers
 - How that data is monetized
- Users have few meaningful options for managing privacy

Asymmetry of power

- Companies part of a global infrastructure essential for basic social participation
- Social dependency



Asymmetry of power

“When Facebook crashed in some US cities for a few hours during the summer of 2014, many Americans called their local emergency services at 911” (LA Times, 2014)



Asymmetry of power

- People numb to being tracked & modified
- Rationalize the situation - 'get something in return'



Google Now

- Basis of product - inequality
- Way to predict future is to observe the rich
- That is what the middle and poor class want
- Google Now will be vital resource for an effective life
- Ordinary people accept invasion of privacy

Google Now

- Adam Smith: evolution of luxuries into necessities
- Lower production costs make former luxuries affordable
- Expansion of production, jobs, higher wages



Image. <https://www.barrons.com/articles/luxury-meets-necessity-1408773202>

Smith, A. (1994). *The Wealth of Nations*. (E. Cannan, ed.), Later Printing edn New York: Modern Library.

Google Now

- Varian - no expansion in mind
- Demand is inevitable
- Google Now: necessity in exchange for surveillance

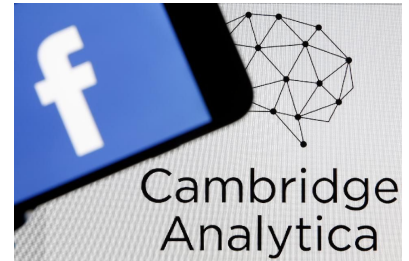


Google Now

“Of course there will be challenges. But these digital assistants will be so useful that everyone will want one, and the statements you read today about them will just seem quaint and old fashioned” - Hal Varian

Outcomes

- Political debate in EU - “break up” Google
- Americans alter online behavior, seek more privacy
 - Example: awareness after FB Cambridge Analytica scandal
- Youth online behavior: lack of knowledge rather than being unconcerned about privacy





Continuous experiments

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Continuous Experiments

- Big data analysis only yield correlation
- Continuous experiments required for causality
- Google successful at web experiments
- Treatment & control groups based on
 - Traffic
 - Cookies
 - Usernames
 - Geolocation

Polanyi - Market economies

- Life, nature, and exchange were commodified
 - Life -> labor
 - Nature -> real estate
 - Exchange -> money
- Surveillance capitalism: Reality -> behavior
 - Data about behavior of bodies, minds
 - Modify behavior for profit and control





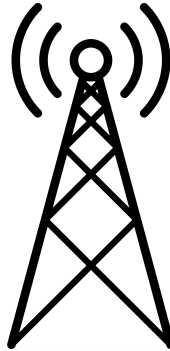
Conclusion

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What does this mean for us?

- Big data collected can be used to:
 - Modify/Control our behavior towards profits for businesses
 - These data collections and models have developed to predict current and near future behavior



What could this mean for us?

- Government can use this new found knowledge to control our behaviour towards political agenda like businesses do



What about laws?

- These practices violate our privacy laws
 - Google has learned to make user unaware of this data collection
 - No current laws because these practices are new
 - Users depend on new technology
 - If opposition arises Google has strategies to counter attack



Counter Strategies?

- Incursion:
 - Continue collection until resistance is met
- Habituation:
 - Make apologies, and try to mislead
- Adaptation:
 - You make changes and tell that it is fixed
- Redirection:
 - Continue harvesting data in another product



What can we do?

- Collective action and awareness against surveillance capitalism
- New laws that protect citizens against surveillance capitalism
- Government needs to step-up and protect citizens

Strengths

- She responded to every argument in Varians' paper very well
- All terminology/concepts in introduction is very well explained
- Great conceptualization of surveillance capitalism

Weaknesses

- Very Dense paper (Could have better wording/flow for the paper)
- No alternative solution to end of Surveillance capitalism
- Very difficult to sell the idea that we need to stop using FB and Google (as current solution to stop this unethical data harvesting)

Thank you!

Questions?
Comments?

