BEING HUMAN IN AN ALGORITHMICALLY CONTROLLED WORLD

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Most of us interact with AI developed algorithms on a daily basis, yet most of us:

… are unaware of those interactions

… are unaware of the effects

Data Acquisition and Persistent Tracking

Information systems that touch our lives daily:

… determine and store to the greatest extent possible the physical locations of our actions and transactions (i.e. **location-based data**), and

… determine situational awareness relative to others, objects, spaces, and institutions in close physical and virtual proximity (i.e. **place based data**)

Persistent tracking of millions of people generates surprisingly detailed information about:

- who you are
- what you care about
- how daily life is lived
- socioeconomic status, and
- much, much more

By knowing digital tracks in detail, artificial intelligence techniques are:

- better able to analyze your past action patterns,
- predict your future actions,
        and
- those of millions of other people.

Information economy companies acquire a highly competitive market advantage if :

• attract large user data bases,

and

• integrate that data with past transaction and location data

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Are private companies generally free to acquire personal data by **sale, barter, trade, or otherwise** from each other?

Yes

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Provided that:

(a) their actions are not in violation of laws protecting personal privacy,

(b) acquisition is done for legitimate business purposes,

(c) information tied to identity is kept confidential by contract among sharing businesses, and

(d) the sharing is not in violation of a business's own privacy protection policies.

This set of conditions

• makes **massive accumulation of data** possible,

and

• makes **massive wealth concentrations** possible.

Machine Learning and Algorithmic Processing

Detailed personal information at the individual and aggregate levels is extremely valuable.

Algorithmic operations **applied to big data** are used to:

• sell you goods and services more effectively,
        and

• influence your decisions and attitudes in social and political contexts.

AI algorithmic processes are designed to determine **whether you are statistically more likely to respond with a profit maximization choice** if provided with information in one form as opposed to others.

Human Agency and Autonomy

Modern decision guidance systems are herding us in our choices.

Discriminatory Practices

Because massive data collections often reflect current and past discriminatory practices, machine learning and the derived algorithms inevitably incorporate those biases into choices offered to individuals.

Documented examples include:

• automated discrimination against **women in executive searches**,
• adverse offer decisions based on automated guilt-by-association machine profiling in regard to **loan**, **insurance**, and **school admission** applications

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• rejection of identification of dark-complexioned persons through **facial recognition** software
• automated guilt-by-association in predicting **crime risk** and **crime recidivism**
• inappropriate machine **reading of emotions** as we view information or images

Expansion of Economic Inequality

The increase in economic inequality in the U.S. is irrefutable.

Change in Pre-tax Annual Average Income in U.S. (1980-2014)

Lower 50%   Unchanged
                   (adjusted for inflation)
Top 10%   More than doubled
Top 1%   More than tripled
Top .001%   More than sevenfold
                   increase

... technology is destroying many existing jobs while at the same time creating some new jobs at the high and low ends of the wage spectrum, but many fewer good jobs in the middle

… middle class is rapidly shrinking

... half the decline in workers' share of income in the developed world can be attributed to advancing technology

... the number of new firms launched each year in the U.S. has fallen by nearly two-thirds since 1980

... the long-standing path to the middleclass of starting a business is increasingly being lost

... problem in the U.S. right now is not so much unemployment as massive underemployment

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Further, 47% of U.S. workers have a high probability of having their jobs automated over the next 20 years

… workers in almost all major sectors will lose jobs

… a survey of AI experts predicts there is a 50% chance that AI will outperform humans in all tasks in 45 years.

Globally, the top ten percent of humanity now controls 90 percent of the planet's wealth

"The system in America and around the world has been organized to siphon the gains from innovation upward such that the fortunes of the world's billionaires now grow at more than double the pace of everyone else's."

"So here is the concern, **economic inequality will lead to greater political inequality**, and those who are further empowered politically will use this to gain greater economic advantage, stacking the cards in their favor and **increasing economic inequality still further** – a quintessential vicious circle."

4/7/20

Anti-trust law has been shifted by the U.S Supreme Court in the past couple decades such that anti-monopoly law now focuses on **efficiency of markets** and **pricing of products** with little regard for the stifling and elimination of competitors.

Through **massive data accumulation and algorithmic mining** and **aggressive predatory practices** to eliminate competitors, Amazon has created a financial empire that dwarfs any of the monopolies that were disbanded in past times under previous interpretations of U.S. antitrust law.

Surveillance Capitalism

"Surveillance capitalism unilaterally claims human experience as free raw materials for translation into behavioral data. Although some of these data are applied to product or service improvement, the rest are declared as a proprietary behavioral surplus, fed into advanced manufacturing processes known as "machine intelligence", and fabricated into prediction products that anticipate what you will do now, soon and later."

The goal is no longer "… to automate information flows about us; the goal is to automate us."

"… an information system shaped by surveillance capitalism and its new instrumentation power will thrive at the expense of human nature and will threaten to cost us our humanity."

"**It is not OK** for every move, emotion, utterance, and desire to be catalogued, manipulated, and then used to surreptitiously herd us through the future for the sake of someone else's profit. 'These things are brand new.' … They are unprecedented."

Fundamental Research Question

How may information societies enable rich opportunities for all humans to more equitably share in the financial benefits of vibrant information economies while supporting agency and autonomy in individual humans?

Suggested Solutions

… are myriad

Revisiting Humanistic Information Economic and Legal Approaches

(1) Professor Black's constitutional reasoning in support of *human rights*

(2) Alan Westin's and Anne Branscomb's ideas advocating for *personal human ownership of private data*

As social and economic disparities grow **to the point of creating political crises**, these foundational ideas may yet have great efficacy.

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"To see what is in front of one's nose needs a constant struggle."
"Who controls the past controls the future."
"Apparently nothing will ever teach these people that the other 99 percent of the population exist."
"It is not possible for any thinking person to live in such a society as our own without wanting to change it."
- George Orwell

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