Silicon vs Carbon: Professional Ethics

Rob Reich, Professor of Political Science

GoldLab Symposium, May 2022
New Ethics, Society, and Technology Hub

Stanford has launched a new Ethics, Society, and Technology (EST) Hub. The mission of the EST Hub is to deepen Stanford’s strength in ethics and generate a fundamental shift in how faculty, staff, and students, whatever their disciplinary home, choice of major, and career pathway, think about our role as enablers and shapers of scientific discovery and technological change in society. The Hub is managed jointly by the McCoy Family Center for Ethics in Society and the Center for Advanced Study in the Behavioral Sciences.
Tech’s Ethical ‘Dark Side’: Harvard, Stanford and Others Want to Address It

Laura Norén, who teaches a data science ethics course at New York University, said, “You can patch the software, but you can’t patch a person if you, you know, damage someone’s reputation.”

Sara Hodges for The New York Times

By Natasha Singer

Feb. 12, 2018
CS182: Ethics, Public Policy, and Technological Change

Also Comm 182, Philosophy 82, Political Science 182, Public Policy 182
Advancing AI research, education, policy, and practice to improve the human condition.
AI should be inspired by human intelligence
AI should be guided by a concern for its impact on human society.
AI should augment, not replace, human capabilities.
RECENT BOOKS

DIGITAL TECHNOLOGY AND DEMOCRATIC THEORY

EDITED BY Lucy Bernholz, Hélène Landemore, and Rob Reich

SYSTEM ERROR WHERE BIG TECH WENT WRONG AND HOW WE CAN REBOOT

ROB REICH MEHRAN SAHAMI JEREMY M. WEINSTEIN
WHO SAID THIS?

“What the inventive genius of mankind has bestowed upon us in the last hundred years could have made human life care free and happy if the development of the organizing power of man had been able to keep step with his technical advances.

As it is, the hardly bought achievements of the machine age in the hands of our generation are as dangerous as a razor in the hands of a three-year-old child.”
ALBERT EINSTEIN, 1932
The twin revolutions in biotechnology and information technology call into question nothing less than what it means to be human and the place of humans in the natural world.

The promise of AI is a world of superintelligent machines.

The promise of bioengineering is the deliberate human intervention in the genetic code of individuals (and other species) and to shape evolution itself.

Both promise to transform what it means to be human.
The Optimization Mindset

Three Levels of Ethics
Optimization mindset of technologists
The Engineer’s Error: Misunderstanding the Value of Efficiency

It’s better to get something done efficiently rather than inefficiently
It’s better still to optimize
Everything is an optimization problem

Conclusion: efficiency/optimization are good, even intrinsically good
Three Problems with the Optimization Mindset

Core issue: optimization is a means, not an end

1. Problem of bad goals or ends
2. Problem of identifying measurable proxies for good goals
3. Problem of multiple valuable goals
Efficiency and optimization are not intrinsically good
Facebook’s Mission Statement

Mission
Give people the power to share and make the world more open and connected
Facebook VP on Measuring Progress

So we connect more people

That can be bad if they make it negative. Maybe it costs a life by exposing someone to bullies. Maybe someone dies in a terrorist attack coordinated on our tools.

And still we connect people.

The ugly truth is that we believe in connecting people so deeply that anything that allows us to connect more people more often is *de facto* good. It is perhaps the only area where the metrics do tell the true story as far as we are concerned.

Source: BuzzFeed News March 2018
The Soylent Story

From Silicon Valley Powdered Meals to International Complete Nutrition Platform.
“I started wondering why something as simple and important as food was still so inefficient, given how streamlined and optimized other modern things are.”

Rob Rhinehart, Co-Founder
“Everything is an optimization problem.”
Optimization becomes an orientation to life
The Optimization Mindset
Three Levels of Ethics
Three Ethical Lenses

• **Personal Ethics**
  • What does it mean to be a good person? What is your moral compass?

• **Social/Political Ethics**
  • How to create a framework of rules and laws that facilitate social cooperation, respect rights, and prevent harm.
  • Governance, law, and policy

• **Professional Ethics**
  • What are the standards of behavior that regulate my professional role?
An Ethical Lens

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Theranos and Silicon Valley's 'Fake It Till You Make It' Culture

Elizabeth Holmes, the CEO of the once highly touted blood-testing startup, is accused of an "elaborate years-long fraud."
The Ugly Unethical Underside of Silicon Valley

Too many startups are taking "fake it till you make it" too far.

BY ERIN GRIFFITH
December 28, 2016 3:39 AM PST
The Epic Rise and Fall of Elizabeth Holmes

In Silicon Valley’s world of make-believe, the philosophy of “fake it until you make it” finally gets its comeuppance.
Star Technologist Who Crossed Google Sentenced to 18 Months in Prison

Anthony Levandowski, a onetime star Silicon Valley engineer of self-driving cars, had pleaded guilty to stealing trade secrets.

Anthony Levandowski, a former Google and Uber engineer, agreed to pay $756,499 to
Lance Armstrong, 7 time winner of Tour de France.
Personal Ethics

- Important, but not especially interesting.
- No good argument for cheating, lying, stealing.
- Must design society to assume moral imperfection.
An Ethical Lens

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Democracy Is Losing Its Race With Disruption

New technologies have accumulated tremendous power over our politics, economy, and lives—no one knows what to do about it.

By Rob Reich, Mehran Sahami, and Jeremy M. Weinstein
An Ethical Lens

- **Personal Ethics**
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## Compare Professional Ethics in Biomedical Research versus Computer Science Research

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<thead>
<tr>
<th><strong>Biomedical Research</strong></th>
<th><strong>Computer Science Research</strong></th>
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<tr>
<td>Hippocratic oath: do no harm</td>
<td>ACM Code of Ethics</td>
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<td>Professional licensure requirements.</td>
<td>No IRB for data science</td>
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<td>Institutional Review Board (IRB) with ethics review</td>
<td>No single regulatory body</td>
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<td>Strong regulation by the Federal Drug Administration (FDA)</td>
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<td>Well developed institutional footprint in universities and hospitals (bioethics as a scholarly field, ethics committees at hospitals)</td>
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A prudent path forward for genomic engineering and germline gene modification

A framework for open discourse on the use of CRISPR-Cas9 technology to manipulate the human genome is urgently needed.
Chinese Scientist Who Genetically Edited Babies Gets 3 Years in Prison

He Jiankui's work was also carried out on a third infant, according to China's state media, in a new disclosure that is likely to add to the global uproar over such experiments.

The scientist He Jiankui at a medical conference in Hong Kong last year, when he announced he had created the world's first genetically edited babies. Xin Cheung/Associated Press

Stanford will investigate its role in the Chinese CRISPR baby debacle

The university wants to learn what ties its faculty members had to He Jiankui, the researcher who created gene-edited humans.

by Antonio Regalado
Feb 7, 2019

Officials at Stanford University have opened an investigation into what several high-profile faculty members knew about a Chinese effort to create gene-edited babies led by a onetime researcher at the California school, He Jiankui.

The investigation, according to people familiar with it, aims to understand what liabilities or risks Stanford may have in connection with the controversial medical experiment, which led last year to the birth of two girls whose genomes had been altered with a molecular tool called CRISPR to render them immune to HIV.

In an e-mail, Stanford confirmed the inquiry. "We have a review under way of the circumstances around Dr. He's interactions with researchers at the..."
Your Face Is Not Your Own

When a secretive start-up scraped the internet to build a facial-recognition tool, it tested a legal and ethical limit — and blew the future of privacy in America wide open.

By Kashmir Hill
Art by Zach Lieberman
Even if Clearview doesn’t make its app publicly available, a copycat company might, now that the taboo is broken. Searching someone by face could become as easy as Googling a name. Strangers would be able to listen in on sensitive conversations, take photos of the participants and know personal secrets. Someone walking down the street would be immediately identifiable — and his or her home address would be only a few clicks away. It would herald the end of public anonymity.

Asked about the implications of bringing such a power into the world, Mr. Ton-That seemed taken aback.

“I have to think about that,” he said. “Our belief is that this is the best use of the technology.”
Clearview AI CEO says ‘over 2,400 police agencies’ are using its facial recognition software

“It’s an honor to be at the center of the debate.”

By Elizabeth Lopatto | @mslopatto | Aug 26, 2020, 4:40pm EDT
Investigations

Emails show Pittsburgh police officers accessed Clearview facial recognition after BLM protests

The use of facial recognition broke bureau policy and, later, city law.

Juliette Rihl  May 20, 2021
21st Century Scientific Racism?
Cultivating an ethic of responsibility in AI science