CS 182: Ethics, Public Policy, and Technological Change

Rob Reich
Mehran Sahami
Jeremy Weinstein
Hilary Cohen
Ursula Le Guin’s Omelas
Questions for Discussion

Are the people who walk away heroes or cowards?
Questions for Discussion

If you lived in Omelas, what would you do?
CHECK THE LABEL ON THE SHIRT/JACKET YOU’RE WEARING. WHERE WAS IT MADE?

WHEN IS THE LAST TIME YOU PURCHASED GASOLINE?

DO YOU HAVE MONEY DEPOSITED IN A BANK?

WHERE DOES STANFORD INVEST THE MONEY IN ITS ENDOWMENT?
“The Ones Who Stay and Fight”

“How Long ’Til Black Future Month?

STORIES BY NEW YORK TIMES BESTSELLING AUTHOR

N.K. JEMISIN

“Jemisin is a pillar of speculative fiction, breathtakingly imaginative and narratively bold.” — ENTERTAINMENT WEEKLY
“The Ones Who Stay and Fight”

“And now we come to you, my friend. My little soldier. See what I’ve done? So insidious, these little thoughts, going both ways along the quantum path...

... Good. Good.

Now. Let’s get to work.”
With Great Tech Comes Great Responsibility

A student guide for navigating ethical issues in the tech industry

II Addressing Ethical Issues as a Tech Worker

After reflecting on the timeline of tech worker organizing and the insights provided by current tech workers, you’re probably able to identify key takeaways for the steps you can take as a tech worker to positively shape the future of the tech industry. Here are just a few suggestions to help you on your path.

Be Proactive

Workers can proactively address ethical issues before they ever come to fruition. First, develop a strong ethical framework. Incorporate multiple perspectives and develop accountability systems so that workers are given continuous opportunities to reflect on and discuss their work and the potential issues. Additionally, consider all of the steps in which a task could be abused, how these steps can be put in place. By thinking through the series of possible outcomes, tech workers can make the decisions necessary to protect the public from the negative impacts of misused or abused technological tools.

Build Relationships

Building strong relationships is an essential organizing ingredient, especially when tackling ethical challenges. If you feel something is not right, other people in your company probably feel similarly. But, without strong relationships, folks may not trust that it is safe to speak out. Additionally, when planning actions, seeking outside opinions or networking with management, workers must trust that they have each other’s backs in these often intimidating situations.

Talk Across Teams

The tech industry often perpetuates the mythology of the lone individual who has a breakthrough idea that changes the world. Yet, the reality is that within tech, folks work in teams where each member is deeply reliant on each other. While this can be a fun, collaborative opportunity, it can be complicated to step forward with an ethical concern.

No one wants to disrupt the team or be seen as the black sheep. So, talking across teams can help workers discuss their concerns before bringing them up with the people they work with most closely. “Tech hubs” can be a low-stakes way for folks to come together across teams and discuss the possible ethical ramifications for their work or projects. This dialogue is necessary to identify if a project is producing unethical outcomes, and if other workers feel emboldened to mobilize and demand change.

Work with Impacted Communities

Involving diverse communities in your work can help companies proactively understand how their tool would impact the community. When attempting to draw attention to ethical concerns, it is important to identify and seek out the communities negatively impacted by the unethical practice. Tech spends a lot of time serving as what we call “the tech bro” and a lot of time in group thinking who tech doesn’t work for. Frontline communities who experience the negative impacts of unethical tech practices are already organizing against those technologies. By supporting those movements and providing technical insights, tech workers can support and build power for the movement that’s already being built by those most impacted.

Learn Organizing Strategies

There are so many organizing tools available to tech workers. From petitions, protests, media presence, coalition building, there are a multitude of tools that organizers can use to draw attention to unethical practices and encourage companies to be accountable to the impact of their policies. By learning what tools are available and how they can be employed for change, future tech workers can be better prepared to demand justice change and secure safer tech for all.
Doomed to Choose

• Ethics should inspire us to action. We actually have no other choice but to act. (Passivity, deciding not to care, and not to choose, is an ethical choice.)

Maya Lin (architect, pictured left):
• “I seek to create spaces for people in which to think, but not what to think.”
Six Concluding Ideas

Seek out discomfort. Get off track.

We do not live in a fundamentally just society or world.

Will you use your opportunity at Stanford to attain or cement privilege, power, and status?
Six Concluding Ideas

As Stanford undergrads: will you get into good trouble, or get along by going along?

“Most students are gentle cowards who think that their gentleness offsets their cowardice.” – William Sloane Coffin, Yale Dean of Religious life
Six Concluding Ideas

The unexamined life is not worth living.  Socrates

But also, the unlived life is not worth examining.

Do not make academics the only thing you do here. There’s more to life than being an excellent sheep.
Six Concluding Ideas

Have moral ambition

Strive for moral decency, not moral sainthood.

Moral perfection and moral purity are overrated.
Six Concluding Ideas

Embrace ambiguity

The most interesting questions in life don’t have singular answers; they have better and worse answers. We put certain questions to ourselves not so we can answer them but so that we can spend a lifetime wrestling with them.

Paraphrase of German Poet Ranier Marie Rilke
Six Concluding Ideas

A motto for living?

Skepticism of the intellect, optimism of the will.
Paraphrase of Antonio Gramsci.
Why This Class?

• In the last few decades, computing has arguably changed humanity on a global level more than anything else

• It has changed governments
  • Online platforms to organize protests
    • Arab Spring (and others)
  • Networked information’s impact on elections
    • Targeted misinformation and disinformation
    • Filter bubbles and echo chambers
Why This Class?

• In the last few decades, computing has arguably changed humanity on a global level more than anything else

• It impacts who has freedom
  • Access to platforms for free speech (and free reach)
  • Ability to communicate privately
  • Control of personal information
  • Incarceration: bail decisions
Why This Class?

• In the last few decades, computing has arguably changed humanity on a global level more than anything else

• It impacts our social relationships
  • Communication (e.g., Zoom)
  • Community formation (in social networks)
  • Information sharing and discovery
  • Harassment and cyberbullying
Why This Class?

• In the last few decades, computing has arguably changed humanity on a global level more than anything else

• It impacts our personal well-being
  • Mental health
  • Physical health
  • Internet addiction
Why This Class?

• In the last few decades, computing has arguably changed humanity on a global level more than anything else

• It impacts our view of our own abilities
  • Bias in systems that judge who we are
  • Relationship to AI and autonomous systems
  • The future of meaningful labor and employment
Why This Class?

- In the last few decades, computing has arguably changed humanity on a global level more than anything else.

- And it impacts many who had no opportunity for a role in its creation
  - Inequity in who builds technology
  - Inequity in who chooses what technology is built
  - Inequity in who technology is built for
  - Inequity in distributional impacts of technology
But There's Hope

• In the last few decades, computing has arguably changed humanity on a global level more than anything else.

It has also tremendously empowered you.

With that comes tremendous responsibility.

Take both seriously.
But, What Can I Do?

- You can’t solve a problem if you don’t know it exists
- And a little less arrogance wouldn’t be a bad thing...
Really, What Can I Do?

- My hope: we broadened your views of the power you have and they ways you can wield it
  - At the 10,000 foot level
  - At the 10 foot level

- Education $\rightarrow$ Awareness

- Awareness $\rightarrow$ Responsibility

- Responsibility $\rightarrow$ Accountability

- Accountability $\rightarrow$ Agency

- Agency $\rightarrow$ Action
Really, What Can I Do?
The Change

...BE THE...
CHANGE
YOU WISH TO SEE IN THE
WORLD
-Gandhi
Putting the Course in Perspective

YOU BLUNDERING IDIOT!
I TOLD YOU TO BRING
A MAP!
1. The consequences of technology are not unknowable
2. Governance isn’t a bad word
3. There isn’t one right answer
4. You are not only a user, you are a citizen
Many have argued that we cannot know the impacts of new technologies in advance, so the best strategy is to just innovate and see what happens.
Consequences are Conditional

We can *anticipate* potential impacts
We can *measure* those impacts empirically
We can *influence* how new technologies affect society
20/20 in Hindsight

Twitter was founded without a plan, Mr. Dorsey said. “It wasn’t something we really invented, it was something we discovered. And we kept pulling the thread on it.”

The unraveling was “electric,” he said, as the small, localized platform he built for friends to share updates on their lives morphed into a global social network. In the process, though, Mr. Dorsey said he now believes that he made a critical mistake: not hiring experts to help him understand the potentially far-reaching importance of apparently small design choices.

“The disciplines that we were lacking in the company in the early days, that I wish we would have understood and hired for,” he said, were “a game theorist to just really understand the ramifications of tiny decisions that we make, such as what happens with retweet versus retweet with comment and what happens when you put a count next to a like button?”
What is Regulation Anyway?

Government has a bad reputation in Silicon Valley.

It’s old. It gets in the way. It doesn’t understand technology. It will hold us back.

But let’s be clear.

Regulation is just a loaded word for an important thing — the actions taken by those we elect to transform our shared values (and reconcile our differences) into rules that serve the common interest.
Stages of Governance

• **1\textsuperscript{st} Generation**: Technology was a product of researchers/hackers. They defined the underlying code and architecture.

• **2\textsuperscript{nd} Generation**: Technology is generated by the commercial sector. The people inside companies—engineers, product managers, designers, sales people, and executives—set the rules, with limited oversight from government.

• **3\textsuperscript{rd} Generation**: Technology becomes an issue of politics, and outcomes reflect a push-and-pull between the companies that make things, the governments that oversee them, and the citizens/users who are affected by them.
How this Drama Plays Out

When competing values are at stake, they must be weighed against one another.


Who weighs these values and how? **This is a critical question of governance, politics, and power.**

We have talked about multiple places where this power is exercised: engineers, CEOs, consumers, governments, and citizens.

**Societies will have to decide when, where, and by whom these values should be weighed.**
There is Not One Answer
The U.S. is Not the Only Player

China and North America will see biggest AI gains by 2030

- 26.1% China
- 14.5% North America
- 11.5% Southern Europe
- 10.4% Developed Asia
- 9.9% Northern Europe
- 5.6% Africa, Oceania, & other Asian markets
- 5.4% Latin America

Source: PwC Global Artificial Intelligence Study, 2017
Europe as the Regulator of First Resort
The Roles We Play

We don’t know what part you will play in this evolving story.

Some of you will be engineers and others product managers. Some will sell technology while others will try to mitigate harms. Some of you will be novelists and others financiers. Some will help make our markets work, while others will pursue the public interest.

But all of you will be citizens.

While there are no right answers to the questions we have been asking, it will be up to you, in your role as citizens, to consider, debate, and make compromises to generate outcomes you are willing to accept.
Our Gratitude

Our outstanding lecturer/head TA, Hilary Cohen, and course manager, Ananya Karthik!

Elena Goldstein, who completed her third tour as a TA for this course, but must now graduate from law school!

Our extraordinary TAs who worked overtime to create the most engaging and productive learning experience for you this quarter: Anshul Gupta, Amit Haim, Will Kenney, Allison Lettiere, Hannah Mieczkowski, Luke Miller, Prach Panchakunathorn, Natasha Patel, Jeff Sheng, Chloe Stowell, Luke Sturm, and Anastasiya Vitko.