CITP Next 10 Years

1. My Talk

1.1. Celebrating CITP

- Anecdote: email from me to Ed Felten, circa 2005
    - Earnest
    - Awkward
- Visiting and giving a talk soon thereafter about the failure of anonymization
    - Doing a little import/export of a grad student from Texas named Arvind Narayanan
    - Meeting Harlan Yu and David Robinson and Joanna Huey
    - A precocious undergrad named Jonthan Mayer
- CITP has had major impact

1.2. Code is Law turns 25

- Larry Lessig published the original version in November 1, 1999.
- Impact
    - On the world
    - But on me too
- Basic thesis: Code is Law
    - Too many thought this was just a descriptive observation.
    - It should have been seen as a call-to-action.
- If we are merely observing how technology changes, we are not doing enough.
    - We are forgetting our agency
- Others
    - I'm building not only on Lessig but on Joel Reidenberg, another CITP alum, and his "Lex Informatica"
    - And Batya Friedman and Helen Nissenbaum and Values in Design
- You hear reflections of these thoughts in various policy proposals today.
    - Dark Patterns, another CITP specialty
    - Duties of Loyalty and other Fiduciary Duties

- But even today's emerging conversations about Guardrails

1.3. Decentering Technologists

- CITP recognizes that technologists play a central role in so many critical social contexts and conflicts in the world today.
  - They have long understood the urgent need to train these technologists to understand and perform their work through a broader, more well-rounded, interdisciplinary and humanistic lens.
  - They are an standout example for something going on at Universities around the country.
    - Mandatory ethics training in CS departments.
    - CS AND workshops on the sidelines of the major conferences.
    - Entire conferences: most notably FAccT
  - At Georgetown: Tech, Ethics, and Society minor and the Tech & Society initiative.
- The model is one with technologists at the very center of so many important decisions.
  - In the best cases, they surround themselves with interdisciplinary friends in concentric circles of engagement and advice. Employees, lawyers, advisors, friends.
  - But when push comes to shove, they shut the boardroom doors and make the big decisions without those people. (They tend to let the finance and business people stick around too!)
  - The best we can do is hope that all of our training and advice have stuck.
- Report Card: how is it going?
  - In terms of outputs, not bad!
    - If you look at the steady stream of work coming out of CITP and other Centers, it seems encouraging.
    - If you look at the steady stream of amazing people coming out of these programs, also very encouraging.
  - In terms of results, a mixed bag.
    - Some successes: Work in the federal agencies. Especially FTC, CFPB, and DOJ.
    - Very few legislative or regulatory changes of significance.

    - And the technological results are bad or dismaying.
        - Disinformation and Misinformation.
            - Content moderation assailed and in retreat.
        - Bias, harassment, and discrimination.
        - Surveillance Capitalism and Surveillance surveillance.
        - Economic inequality and labor precarity.
- Why aren't our efforts to create more ethical and socially adept technologists helping?
    - We're sending mixed messages
        - be rigid and formalist
        - while being humanistic and flexible
        - In their best moments: differential privacy and dark patterns
    - We're training people with one set of skills about another set of skills
        - And people from a narrow band of racial, ethnic, and class parts of our society.
    - We're doing this in a system of capitalism and a marketplace of surveillance capitalism.
        - Ari Waldman's Industry Unbound
- Conventional wisdom: So we need to double down and do more.
    - More ethics courses.
    - More interdisciplinary majors.
    - What else can we do?
- The problem:
    - Very, very expensive
    - Pushes against deeply entrenched norms.
    - It's not clear there is time!
- But what are we to do?
    - Aren't our hands tied by the fact that these technologists are the gatekeepers of infrastructural systems and essential knowledge?
- My argument: Perhaps not!
- I'm referring to a shift I began to see about a decade ago, but accelerated with the rise of large language models.

    - Simply put: the role played by the technologist has begun to shift.
        - They have become decentered.
    - Anecdote to motivate the idea: the first time I ever trained a neural network.
        - Shocked and dismayed.
    - The idea that tuning hyperparameters is "more art than science."
    - The endless quest to turn to reinforcement learning for everything.
    - From architect to zookeeper.
- But I see a light at the end of this tunnel.
    - Look at arxiv.org, for example.
        - Not peer reviewed.
        - Often not especially computer scientific.
        - Hey, look what our model did. Isn't that odd?
        - Not to denigrate the rigor or importance, but to highlight the role these humans are playing.
    - Amazing, important results of recent years:
        - poem, poem, poem, poem
        - Chain of Thought reasoning
        - Few-shot learning
        - Zero-shot learning
    - Not only is this not computer scientific, I'm not sure it is the kind of work that needs a technical mindset to do well.
        - The tweet that noticed that "an innocent person will die"
        - The grandmother jailbreak.
        - If these models embed human language and can be mimic our emotional and psychological responses, maybe we need people with the instincts and training of disciplines such as:
            - psychology
            - anthropology
            - philosophy

- The vision I have:
    - Teams of people working together.
    - The technologist is there at the table, maybe in a prominent pride of place.
    - But they're not in the center.
    - And they don't get to kick the rest of us out after we've made our best pitches.
    - They are essential parts of the team, but they are not everything.
- But this world I'm describing is not inevitable, and it can be reversed if we're not careful.
    - Already the computer scientists are computer sciencing, finding ways to reinject advanced technological techniques, making prompting look more like coding.
    - If we're not careful, they can fine-tune their models to need to be programmed rather than talked to.
    - We may face specific architectural choices, and we need to know when they are being made.
    - We need a way to label that move. We need a way to look out for it.
- To be clear: I am not talking about removing or marginalizing technologists and their expertise.
    - I'm hoping by decentering them, I will be helping unleash them.
        - There will be so many interesting and important questions for them to pursue with their distictive training and distinctive methodologies.
        - They will be training the next foundation model, exploring the deep meaning of thought and learning, working on more efficient architectures.
- I think I'm arguing for layer separation.
    - Technologists do a great job with:
        - telecom networks
        - computer architecture
        - operating systems
    - They've caused more problems the higher they've moved up the stack, the more they've interfaced with social systems.
- To end, since we're all educators: For education specifically, maybe it means a new path:

- Focus on CS if that's the kind of problems you want to pursue.
    - And we should continue to bring in ethics and other disciplines, but maybe we can refocus.
- But if you're not so predisposed. If you'd rather learn about society or politics or beauty or human flourishing, you don't need to get a CS major.
    - Don't worry, there will be a place at the table for you.

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