

SEEING THE FOREST FOR THE TREES

HUMAN-CENTERED AI

Introducing The Stanford Institute for Human-Centered Artificial Intelligence

Artificial Intelligence has the potential to help us realize our shared dream of a better future for all of humanity, but it will bring with it challenges and opportunities we can't yet foresee.

At Stanford HAI, our vision for the future is led by our commitment to studying, guiding and developing human-centered AI technologies and applications. We believe AI should be collaborative, augmentative, and enhancing to human productivity and quality of life.

Our Mission: To advance AI research, education, policy, and practice to improve the human condition.

Stanford HAI leverages the university's strength across all disciplines, including: business, economics, education, engineering, health, law, life sciences, medicine, philosophy, psychology, and social sciences.

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Anthropological/Artificial Intelligence & the HAI

26 MARCH 2019

Last week Stanford launched the [institute for human-centered artificial intelligence](#), and to kick things off [James Landay posted about the roles AI could play in society](#), and the importance of [exploring smart interfaces](#).

I've followed the HAI's development in passing, and I watched the inaugural event in the background on Monday last week while I was doing other work. I study algorithmic systems that make important decisions about us - which I call "[street-level algorithms](#)" in reference to Michael Lipsky's [street-level bureaucracies](#) - and some of the work I've done in the past has taken a more careful look at historical parallels between things we see today (like [quantified self](#) and [piecework](#)) to see if we can learn anything useful either for making sense of phenomena from a sociological perspective, and sometimes for informing the design of systems from an engineering perspective. James is a professor in the Human-Computer Interaction group at Stanford, and I'm a PhD student in that group.

So I was worried to find James leave details out from a series of anecdotes - details that would seriously undermine the point James seemed to be trying to make in his post. I started writing notes to call out how a more cynical perspective might describe the future or remember the past

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I've followed the HAI's development and I watched the inaugural event background on Monday last week doing other work. I study algorithms that make important decisions about "street-level algorithms" in real time. Lipsky's [street-level bureaucracy](#) the work I've done in the past careful look at historical perspectives we see today (like [quantified](#) to see if we can learn anything making sense of phenomena perspective, and sometimes design of systems from an external perspective. James is a professor in the Computer Interaction group and a PhD student in that group.

So I was worried to find James from a series of anecdotes - it seriously undermine the point he's trying to make in his post. notes to call out how a more might describe the future or

be trying to make in his post. I started writing notes to call out how a more cynical perspective might describe the future or remember the past that James writes about; but with the launch of the HAI, the reaction from people around the world, and specifically *the responses from people in the HAI*, it seems like a more serious point that needs to be made.

The voices, opinions, and needs of disempowered stakeholders are being ignored today in favor of stakeholders with power, money, and influence - as they have been historically; our failure to listen promises to doom initiatives like the HAI.

James opens with a story of an office that senses you slouching, registers that you're fatigued, intuitively that your mood has shifted, and alters the ambient light accordingly to keep you alert throughout the day. This, James promises, is "a glimpse of the true potential of AI". Fair enough, I suppose. I believe that he believes in a future of work wherein his environment conforms to his desires, and makes his life better.

But here's another glimpse: someday you may have to work in an office where the lights are needfully programmed and tested by your

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But here's another glimpse: someday you may have to work in an office where the lights are carefully programmed and tested by your

aspect of your life at work. It's a casual, even optimistic, vision for someone whose career wasn't principally characterized by monitoring, surveillance, and punishment; [for drivers who can't afford to sleep, for Amazon delivery workers who have to urinate in bottles while they make deliveries, and for domestic workers who have no idea whether they're going to be safe in the next home they clean](#), this future is a threatening one. Stefan Helmreich wrote about this 20 years ago in *Silicon Second Nature*, and it seems to remain true today.

... researchers are encouraged to take their privileges for granted, even to the point where these become invisible [...] ignoring how much labor is done for them, labor that allows them to be flexible, self-determining, and independent.

- Helmreich 1999

James goes on to write about Engelbart's "[mother of all demos](#)" in 1968, the introduction of something like half a dozen features of modern computing that we use every day: text editing (including the ability to copy/paste), a computer mouse, a graphical user interface, dynamic reorganizations of data, hyperlinks, real-time group editing (think Google Docs), video conferencing, the forerunner to the internet, the list goes on. What he doesn't write about - what few of

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the Nuer people was that "... authority was to be mediated through indigenous leaders and the rule of Western law was to legitimate itself through a degree of accommodation to local 'customs'" ([Gledhill 2000](#)). The danger of aligning our work with existing power is the further subjugation and marginalization of the communities we ostensibly seek to understand.

the cruelty and everyday violence of our world is the result of dominant people and institutions abusing the kind of people [we] habitually study.

- Gledhill 2000

One of the most frustrating aspects of human-computer interaction isn't the common refrain that we haven't yet settled on a definitive core body of work that every practitioner should know. That would at least be a tractable problem. It's that we're not all on the same page about important facts about the origin of our field. For some people, Engelbart's demonstration was a singular vision of the future of computing; for others, it was the product of more than a decade of very carefully managed and guided work leading up to

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been for granted (Gledhill 2000), and it seems fashioned itself principally as a tool to further hegemonic influence by finding ways to shape indigenous cultures to colonial powers.

We should be thinking about the relationship we have with institutional powers; do we enhance their hegemony, we stand by and do nothing or do we actively resist it?

This isn't the first time we've faced such a crossroads. In the mid-20th century, anthropologists substantively informed intelligence operations during World War II. We came out of that with blood on our hands, but there was consensus that what we had done was morally right. It was World War II, and Nazism threatened the "psychic unity of humankind". Anthropologists conducted interviews, reviewed historical work, studied philosophical texts, and ultimately produced classified ethnographic accounts of Japanese and other cultures. We produced manuscripts detailing how to undermine cultures and to secure American dominance in war. We even reflected on how we had annihilated Native American cultures, and whether that had served our own ends: "in an attempt to hit at what was supposed to be the sole or main function of the chief, his many other functions were overlooked, social balance was seriously disrupted and a disintegration for which we had not bargained for place." (see [Janssens 1995](#)).

“HUMAN-CENTERED” AI IS A SYMPTOM OF A PROBLEM

**AI-CENTERED RESEARCH TENDS TO SEE THE WORLD
FROM A CENTRALIZING PERSPECTIVE**