

Stochastic Machine Witnesses at Work: Today's Critiques of Taylorism are Inadequate for Workplace Surveillance Epistemologies of the Future

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Jonathan Mabey on Unsplash

Ways of knowing in HCC...

- There are a bunch of different epistemologies in HCC research
- These map, to a degree, to the *waves* concept¹
- In the paper I focus on the rarefying impulses of 1st Wave Cognitive Science-inspired HCI, and the reifying impulses of the Ubicomp tradition

1. S. Bødker, 'When second wave HCI meets third wave challenges', in Proceedings of the 4th Nordic conference on Human-computer interaction: changing roles, in NordiCHI '06. New York, NY, USA: Association for Computing Machinery, Oct. 2006, pp. 1–8. doi: 10.1145/1182475.1182476.

Rarefication and reification at work

- If these 1st Wave and UbiComp epistemologies were brought together in the workplace, the potential for surveillance would increase
- VR workplaces (metaverses, etc) could combine these kinds of knowledge



Questions about
measurement suffuse work,
because modern work has
been constructed around
the idea of measurement.

How do we measure anything at work?

- What things exist (or could exist)? These are ontological questions
- How can we create knowledge about the things that exist (or could exist)? These are epistemological questions
- My basic contention is that we need to work harder on these questions when we're thinking about instrumenting workplaces to measure things about work

Scientific Management

- The foundation of Scientific Management is measurement
- “A long series of experiments, coupled with close observation, had demonstrated the fact that when workmen of this caliber are given a carefully measured task [...]” they perform better at work and become better people(!)



Scientific Management

- This is a positivist epistemology
- There are real things out there in the world, waiting to be measured
- If we design experiments with appropriate control, then we can observe true reality
- These experiments should be *scientific*, driven by hypotheses



Is anyone doing this?

- Contemporary workplace monitoring is about instrumenting devices and applications
- Telemetry gets fed into data lakes
- Stochastic machines are used to aggregate and look for patterns
- Objective truth is the patterns they find



Debatable!

- Do most employers have the skills to make sense of all of this?
- Vertically integrated ones (like Amazon) might be able to
- What about SMEs?
- They subcontract this out to a company like Microsoft.
- Epistemological implications?



Modern work is the
inheritor of Scientific
Management.

But today's work
measurement doesn't look
scientific in a way Taylor
would recognise.

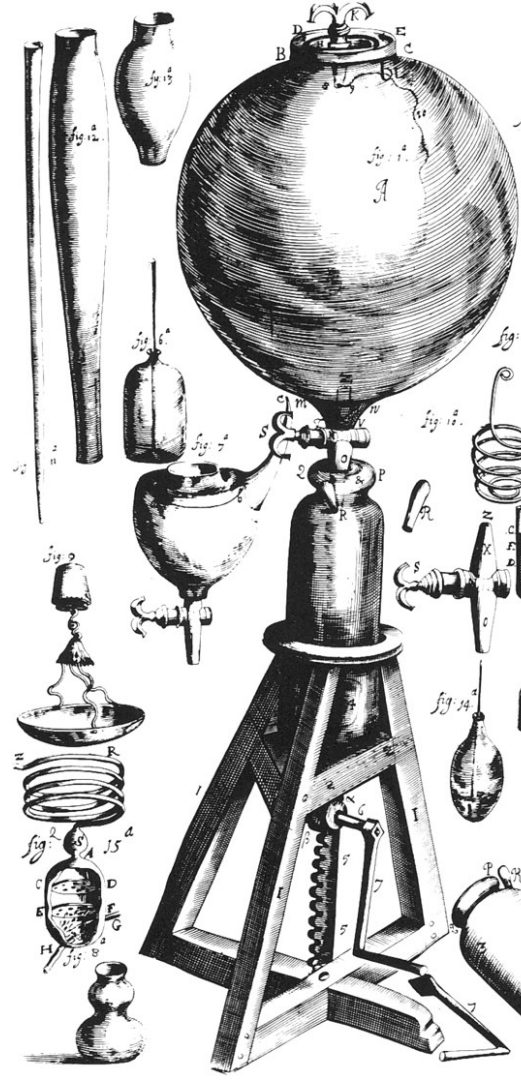
There's another issue

- Workplace epistemologies have changed
- It's not a continuation of Scientific Management epistemology, it's some *other way* of generating knowledge about work
- Those ways of knowing are tied to machine ontologies (i.e., what exists to machines)
- The machines determine truth



How does empiricism work?

- Latour writes about Boyle’s air pump
- He says that, with Boyle, we suddenly have a “parajudicial” process where we have a few reliable people observe a phenomenon, and then declare ‘facts’ about it, even if they “do not know its true nature”
- What if the ‘witnesses’ are machines?



Machine witnesses

- We have a credentialling system for human scientists (PhD), or for HR professionals (CIPD)
- We trust these human witnesses to phenomena
- Do we want a parajudicial process for generating ‘objective truth’ where all the actors are machines?
- Who will credential an outsourced machine witness to the phenomena in your workplace?



AI workplace monitoring tools are not just a different way of observing.

They are a fundamental change to what empirical observation is.

Summary

- “Measurement” and is not a simple concept. It is not just whatever comes out of machines
- The measurement that’s happening now is categorically different to measurement under Scientific Management
- Our current critiques of workplace measurement must catch up

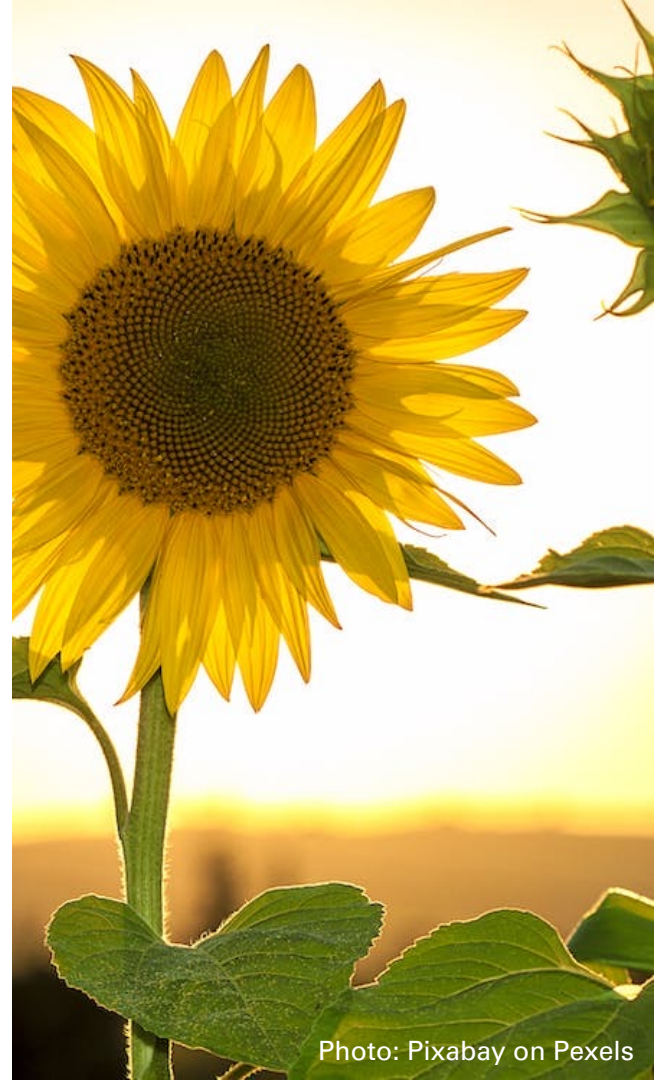


Photo: Pixabay on Pexels

Thanks for your attention

Slides and paper:

<http://sjjg.uk/chi24>

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