Engaging with Automation at Work

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Development of human-computer interaction research

Human Factors
User serves the system
Understandable

Usability
System serves the user
Quick and easy

User experience
User enjoys interaction
Engaging
Development of human-automation interaction research

- **Human Factors**
  - User serves the system
  - Understandable

- **Usability**
  - System serves the user
  - Quick and easy

- **User experience**
  - User enjoys interaction
  - Engaging


1950’s vision of automation in 2000

Engaging with automation
i.e. working with
  - vigor
  - dedication
  - absorption

Schaufeli et al. (2002):
The measurement of engagement…
Journal of Happiness studies

https://jacobinmag.com/2021/03/the-utopian-promise-of-self-checkout-machines
2020’s vision of farmer’s work

Automation monitoring

Is there
vigor?
dedication?
absorption?

Monitoring automation - A dead end

Evergreen problems in monitoring work:

Loss of situational awareness
Deskilling
Complacency
Monitoring inefficiency

Still unsolved after 30+ years!

Human-automation interaction paradigm?

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<th>HCI</th>
<th>Engaging HAI Paradigm</th>
<th>HAI</th>
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<td>Command</td>
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<td>Help!</td>
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<td>Response</td>
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<td>Computer serves</td>
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<td>human</td>
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Human-Automation/AI Interaction paradigms

- **Intervention interaction**: Human intervenes automation

- **Adaptable automation**: Human chooses level of automation

- **Conversational agents**: Human response affects function
Thank you!

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Take-aways:
• Automation interaction research should proceed to engagement
• Engagement dimensions
  • Vigor, Dedication, Absorption (Schaufeli et al.)
• Drop plans for monitoring UI
• Engaging HAI paradigm still to be found (human – AI symbiosis?)