

Lecture 21

Outlook: The future of HCI

UNIVERSITY OF AUCKLAND

COMPSCI 345 / SOFTENG 350

Dr. Gerald Weber

Zoom: <https://auckland.zoom.us/j/95195173398>

How to navigate the future

- Dr Margeret Heffernan
 - “We are far too addicted to prediction and planning”
 - new book, *Uncharted: How to Navigate the Future*.
 - <https://www.rnz.co.nz/national/programmes/afternoons/audio/2018748942/how-to-navigate-the-future>
 - “The way people think about the future is very peculiar ... people seem to imagine that the future is somehow already planned.”
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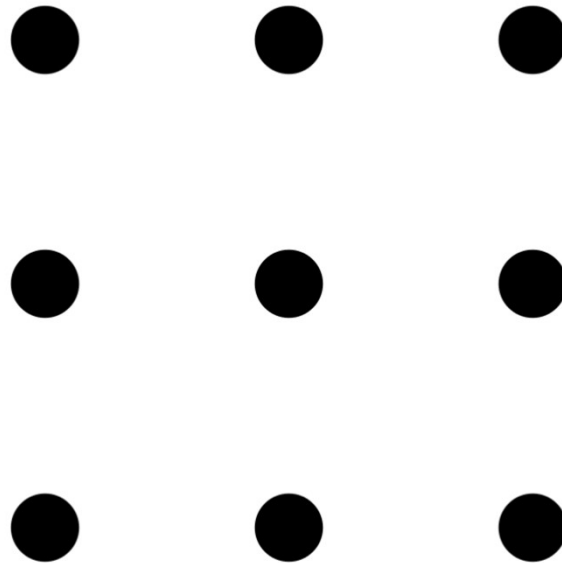
Disruption by Technology

- Disruption for consensus-building: post-truth.
 - Exacerbated by “The Algorithm”
 - E.g. recommender algorithm in Youtube
 - Related to: online distraction
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Online Distraction

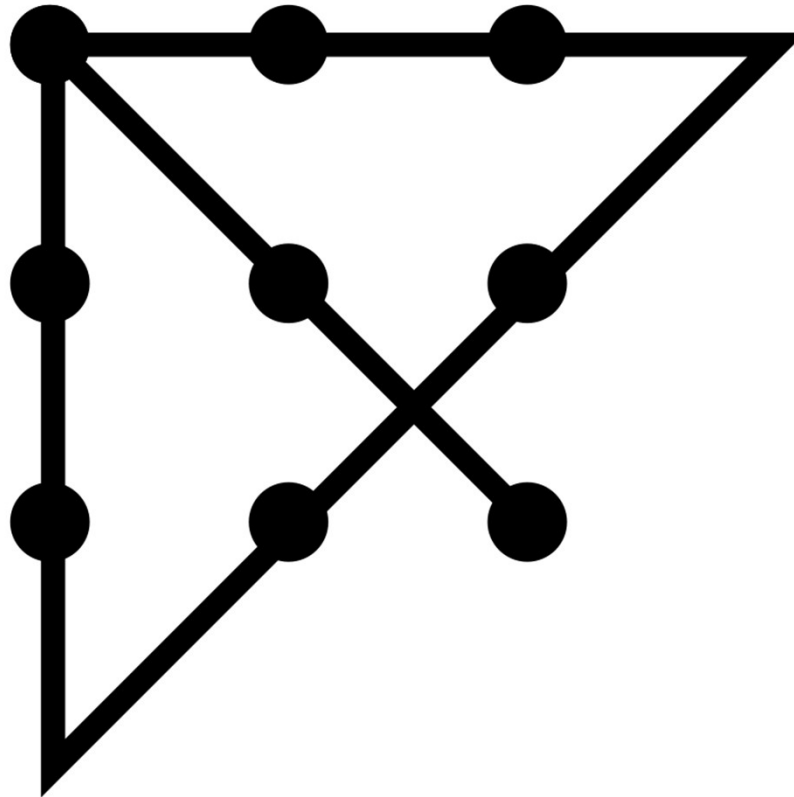
- James Williams, first recipient of Nine Dots Price
- James Williams: *Stand Out of Our Light: Freedom and Resistance in the Attention Economy*, CUP, 2018:
- <https://doi.org/10.1017/9781108453004>
- Success for online content provider is engagement: maximize time spent by user online.
- No person has this goal
- “deep misalignment” between personal goals and online provider goals.

Nine-Dots Puzzle



- <https://commons.wikimedia.org/wiki/File:9dots.svg>
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Online Distraction



- <https://commons.wikimedia.org/wiki/File:Ninedots.svg>

Disruption by AI

- Kai-Fu Lee. AI Superpowers (2018): China, Silicon Valley, and the New World Order (Houghton Mifflin Harcourt): “Lurking beneath this social and economic turmoil will be a psychological struggle. As more and more people see themselves displaced by machines, they will be forced to answer a far deeper question: In an age of intelligent machines, what does it mean to be human?”

- IEEE tech talk, 20 Sep 2018:
 - <https://spectrum.ieee.org/tech-talk/robotics/artificial-intelligence/former-head-of-google-china-foresees-an-ai-crisis>
- More than 50% of jobs in danger
- Further links
 - <http://www.pbs.org/wnet/amanpour-and-company/video/kai-fu-lee-on-the-race-for-artificial-intelligence/>

Future Trend: Smart Glasses

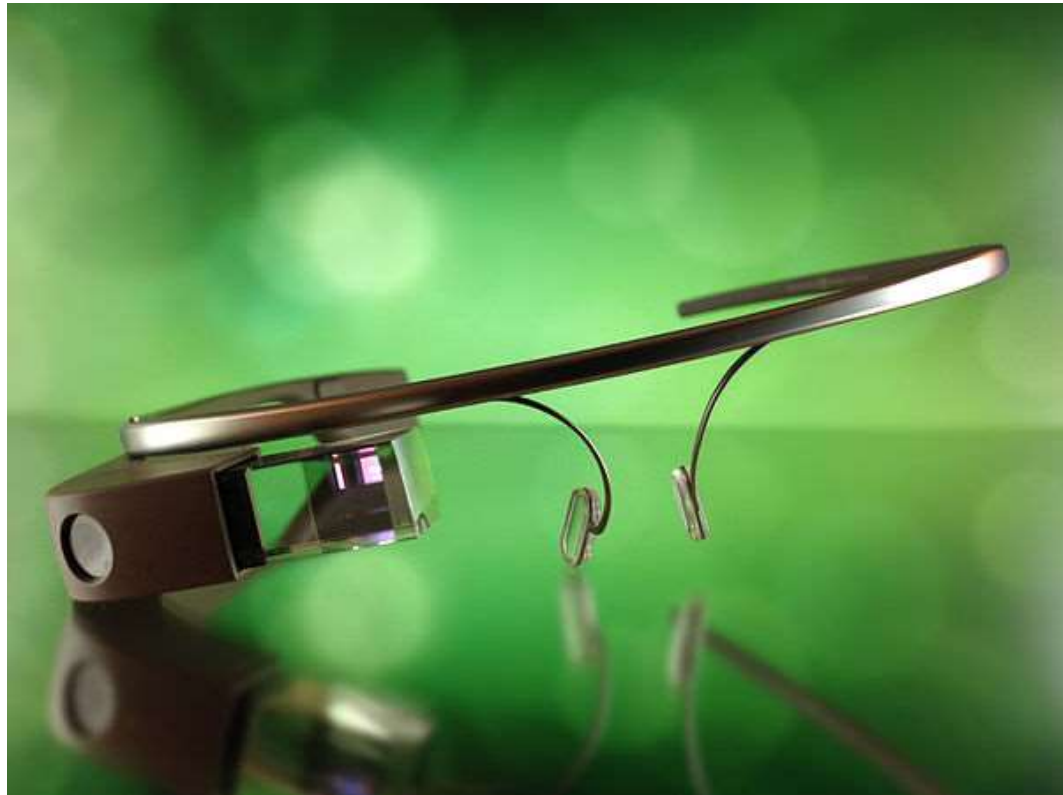
- Google Glass
- Apple Glass
- Epson Moverio



- Photo of Google Glass by Dan Leveille
- https://commons.wikimedia.org/wiki/File:Google_Glass_photo.JPG

Future Trend: Smart Glasses

- Google Glass (2013/2014)
- Front-facing camera
- Linear Swipe-pad
- Display non-HD
- Criticism: privacy concerns



- <https://www.youtube.com/watch?v=4EvNxWhskf8>
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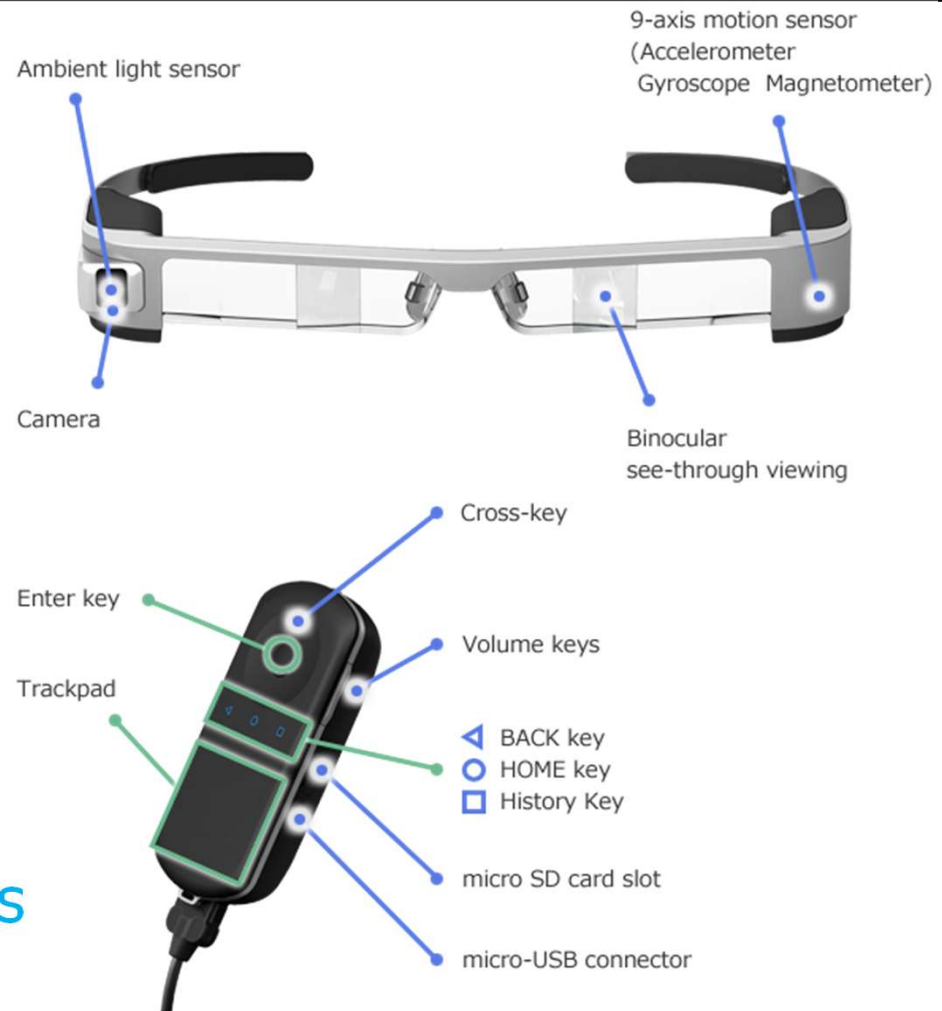
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Future Trend: Smart Glasses

- Use in Industry
- Remote collaboration
- Epson Moverio:
Binocular
see-through viewing
- [www.youtube.com/
watch?v=hhYPqF3aHUs](https://www.youtube.com/watch?v=hhYPqF3aHUs)



- Photo source: <https://tech.moverio.epson.com/en/bt-300/>

Digital Literacy

- Definition Wikipedia (17 July 2018, at 10:42 (UTC)):
- “It refers to an individual's ability to find, evaluate, produce and communicate clear information through writing and other forms of communication on various digital platforms.”



- “The problem is humans can't keep up with all the technology they have created” Avivah Litan, Vice President and Distinguished Analyst in Gartner Research, cited in:
<https://www.businessinsider.com/the-problem-is-humans-cant-keep-up-with-all-the-technology-they-have-created-2015-7?IR=T>

Reliability, user in control

- Vinton G. Cerf: “Undo, Redo and Regrets”. Commun. ACM 62 (2019), DOI:10.1145/3342707
- “As much as I wish all actions were reversible, they aren’t”
- Critique on update processes and disruption caused.
- <https://www.zdnet.com/article/windows-10-new-study-shows-home-edition-users-are-baffled-by-updates/>
“How annoying are Windows 10's automatic updates? In a new study, a group of UK researchers report that users of Home edition experience unexpected restarts and inconsistent installation times, caused by inappropriate defaults and inadequate notice of pending updates.” Critique of current state of reliability.

The Great Lockdown

- Zoom CEO Eric Yuan thinks the response to the coronavirus outbreak could lead to a fundamental, permanent shift in how people work.
- <https://www.geekwire.com/2020/zoom-ceo-coronavirus-outbreak-will-change-landscape-work-communication/>
- Major influence on competition between teleconferencing platforms : usability.
- Lockdown exacerbated digital divide

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Thoughts to go: value of today's technology

- “Many people have revelled in a return to a simpler life in recent weeks.”
- <https://www.rnz.co.nz/national/programmes/sunday/audio/2018746811/professor-emrys-westacott-the-wisdom-of-frugality>
- Each mobile phone has capacity of early supercomputers
- Unprecedented display /sensor capabilities.
- The whole of Project Gutenberg + the whole of Wikipedia fits on a micro SD card.
- Creative communities on the web
- The Long Tail

