

# 2020 – Opportunities and Challenges for Research & IT

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# You should ask...

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Science 2020

What will our world be like in 2020?

Will digital technologies improve the quality of life, empower us, and make us feel safer, happier and more connected?

Or will living with technology make it more tiresome, frustrating, angst ridden, and security-driven?

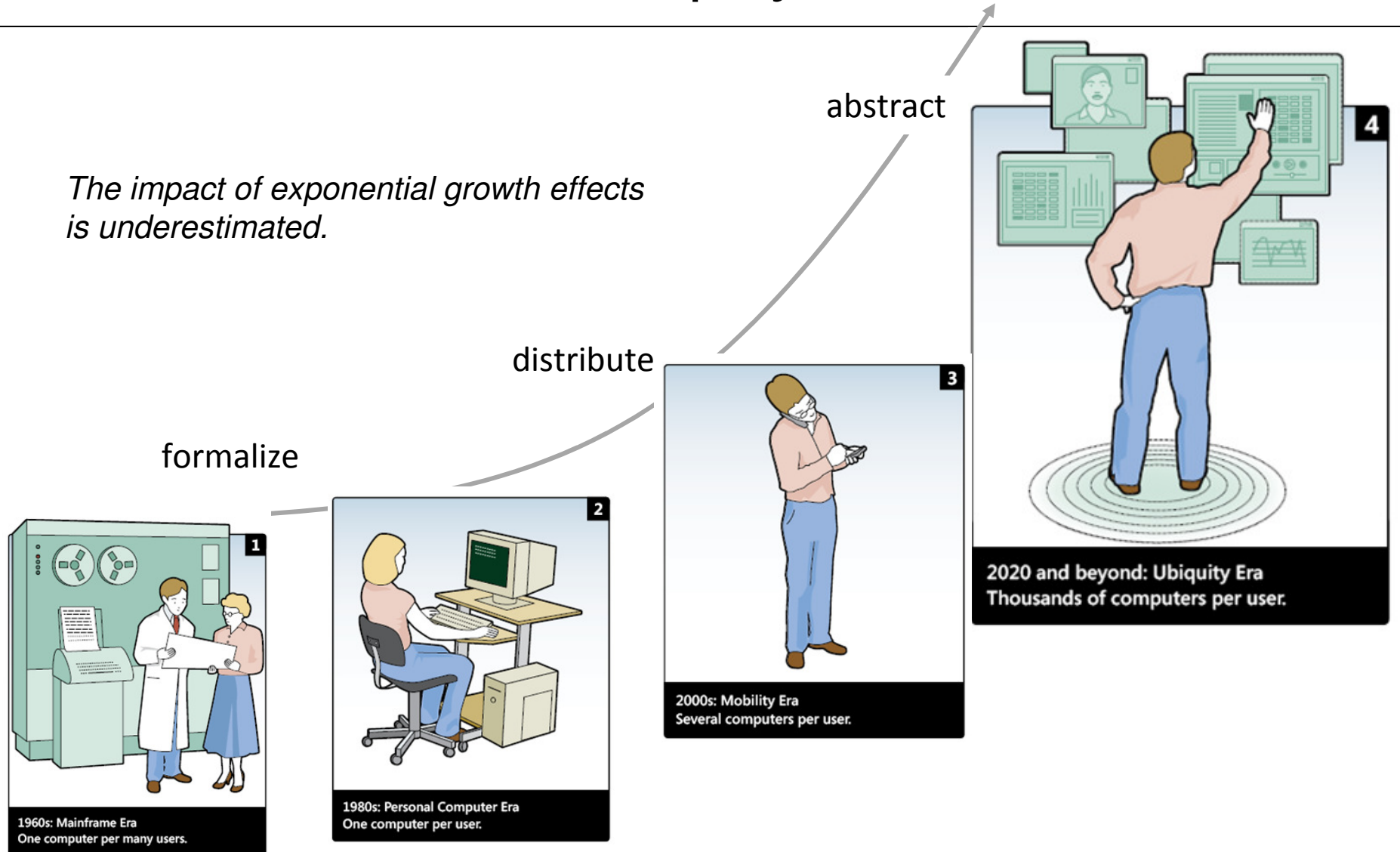
What will it mean to be human when everything we do is supported or augmented by technology?

What role can researchers, designers and computer scientists have in helping to shape the future?



# From Mainframe to Ubiquity

*The impact of exponential growth effects is underestimated.*



# Challenges

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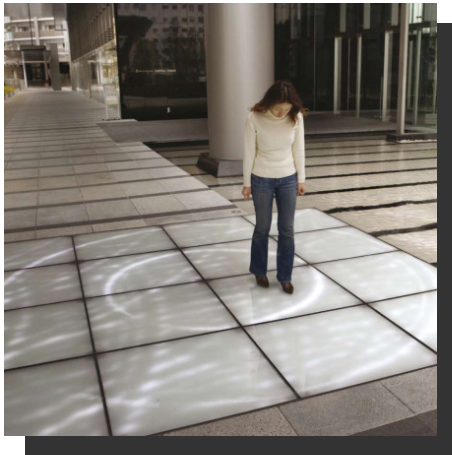


## Our Changing World

Possessions of Privileged → Commodities

Isolated Machines → Interconnected Devices

Usage → Interaction



## Transformation in Interaction

Relationship with Computer → Understand & Design

Use and Rely → Nature of Impact on Society

Hyper connected → Communication

Engagement and Creativity → Solve new Problems

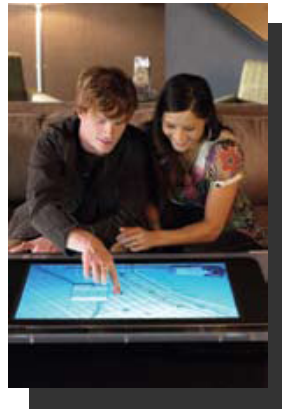


# Opportunities



## Next Generation Human Computer Interaction

- Design → Role, Function and Consequences of Design
- Discipline Partnerships → Sympathetic to Tools and Techniques
- Conventional Design → Conceptual Analysis of Human Values



# 4. Recommendations

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1. Revisit research and design methods in HCI
2. Be explicit about the remit of HCI
3. Develop disciplinary techniques that allow HCI to collaborate with other research communities
4. Teach HCI to the young
5. More advanced training for future HCI researchers
6. Engage with government, policy and society
7. Offer an inclusive future in 2020



# Resources

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- SCIENCE 2020, <http://research.microsoft.com/towards2020science>
- Being Human, <http://research.microsoft.com/hci2020/>
- Zukunft der Arbeit, <http://reflections.at/futureofwork.htm>
- Zukunft der Bildung, <http://reflections.at/bildung/>
- Nassim Nicholas Taleb - Black Swan, <http://www.fooledbyrandomness.com>



# Thank you!



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