

The University on the Edge of the Technological Singularity

thinking beyond the acknowledged, the comfortable
and the recognized

Association of Research Libraries

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Preamble

This is not a race against the machines. If we race against them, we lose. This is a race with the machines.

Kevin Kelly



The Age of Upheaval

A reporter for TechCrunch recently observed, “Uber, the world’s largest taxi company, owns no vehicles. Facebook, the world’s most popular media owner, creates no content. Alibaba, the most valuable retailer, has no inventory. And Airbnb, the world’s largest accommodation provider, owns no real estate. Something interesting is happening.”

Kevin Kelly

The Age of Upheaval, cont.

Human relationships are rich and they're messy and they're demanding. And we clean them up with technology.

We expect more from technology and less from each other

And so from social networks to sociable robots, we're designing technologies that will give us the illusion of companionship without the demands of friendship.

Sherry Turkle

Once Upon a Time...

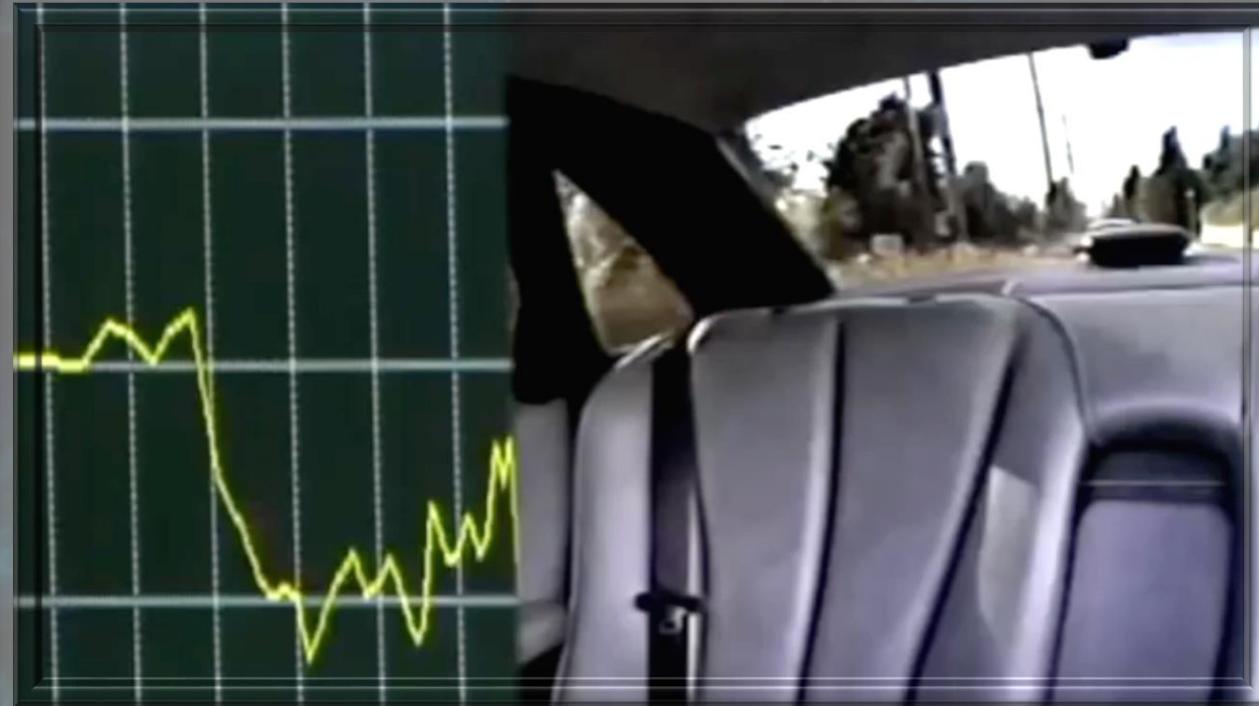


Closing In on the Singularity

We won't experience one hundred years of technological advance in the twenty-first century; we will witness in the order of twenty thousand years of progress (when measured by today's rate of progress).

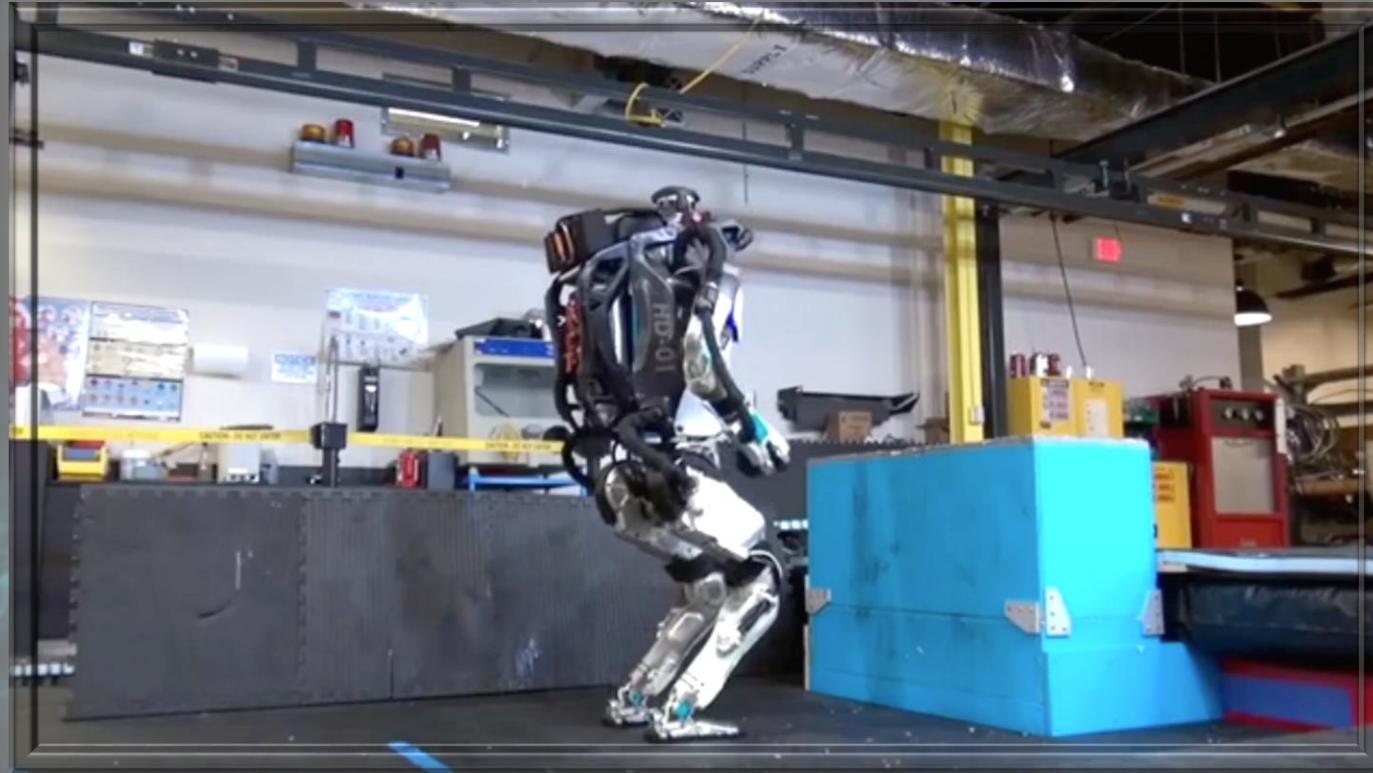
Raymond Kurzweil

Closing In on the Singularity: Terror and Ecstasy



“No Maps for These Territories,”
<https://www.youtube.com/watch?v=pSnPa1mWgK0>

Terror and Ecstasy



“Boston Dynamics’ Atlas robot can backflip now,”
https://www.youtube.com/watch?v=68F-UUU_Ff4

Terror: Infobesity



“Hyper-Reality,” <https://vimeo.com/166807261>

Terror: Losing Control

Starting in the summer of 2018, the European Union may require that companies be able to give users an explanation for decisions that automated systems reach. This might be impossible, even for systems that seem relatively simple on the surface, such as the apps and websites that use deep learning to serve ads or recommend songs. The computers that run those services have programmed themselves, and they have done it in ways we cannot understand. Even the engineers who build these apps cannot fully explain their behavior.

[https://www.technologyreview.com/s/604087/the-dark-secret-at-the-heart
-of-ai/](https://www.technologyreview.com/s/604087/the-dark-secret-at-the-heart-of-ai/)

Ecstasy: The End of Prejudices

- AI and algorithms will end prejudices, poverty and inequality.
- The dawn of a new creativity, the discovery of new realms, the dawn of a world where fear and violence are greatly diminished.



Terror: Programmed Prejudices

- Predictive programs are only as good as the data they are trained on, and that data has a complex history.
- Like all technologies before it, artificial intelligence will reflect the values of its creators.

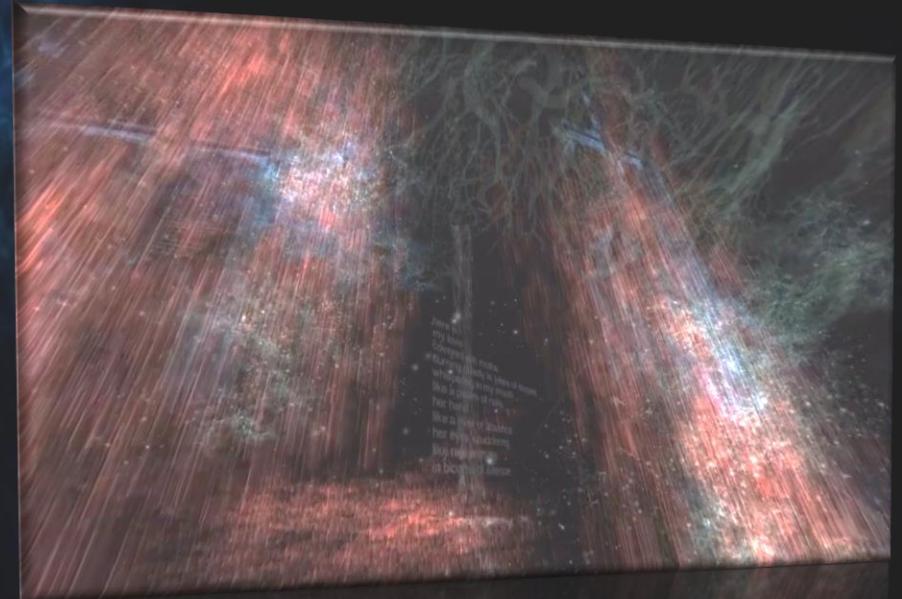


Kate Crawford, NY Times

Ecstasy

Access to the extraordinary new realms of knowledge

- Environment, quantum physics, traffic, etc.
- Accessing patterns from the overabundance of information (all the scientific articles produced in a year)
- Accessing new patterns AlphaGo plays with alien intelligence.



The Terror and The Ecstasy: Probing

AI technology appears to be hyper-capable of learning all sorts of information about a person's most intimate preferences based on visual cues that the human eye doesn't pick up. Those details could include things like hormone levels, genetic traits and disorders, even political leanings — in addition to stated sexual preferences.

<http://www.businessinsider.com/sanford-gaydar-facial-recognition-technology-2017-10>



Ecstasy: Growth

A recent study by Accenture, for instance, suggests that the implementation of AI, broadly defined, could lift annual GDP growth in the US by two points (to 4.6 percent). A growth rate like that would make it easy to deal with the cost of things like Social Security and Medicare and the rising price of health care. It would lead to broader wage growth. And while it would complicate the issue of how to divide the economic pie, it's always easier to divide a growing pie than a shrinking one.

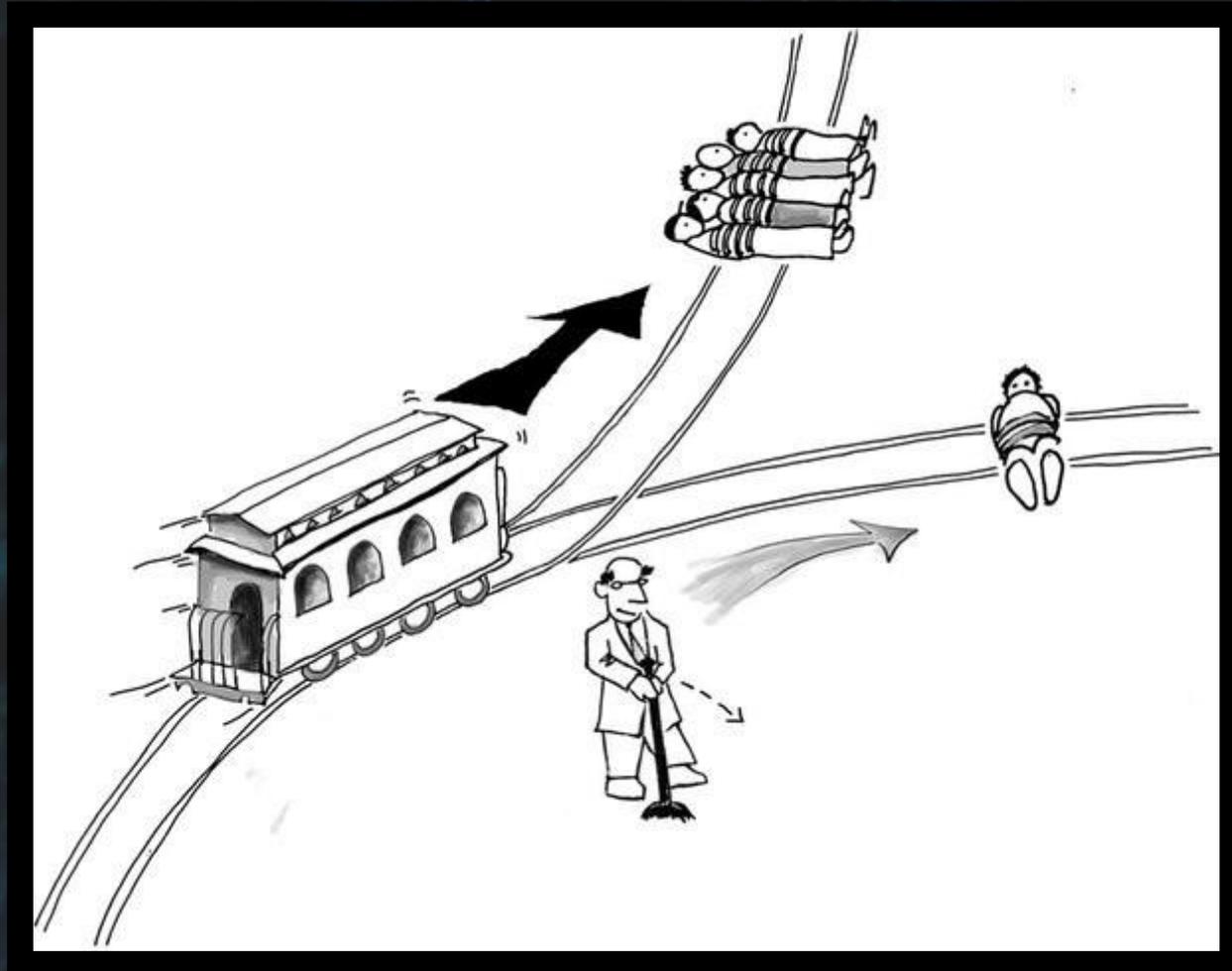
<https://www.wired.com/2017/08/robots-will-not-take-your-job/>

The Terror and The Ecstasy: Teaching



“New Dimensions in Testimony—USC ICT and SFI—Classroom Concept,”
<https://www.youtube.com/watch?v=AnF630tCiEk>

The Terror and the Ecstasy: Life and Death Decisions



But the Greatest Challenge Is Humanity



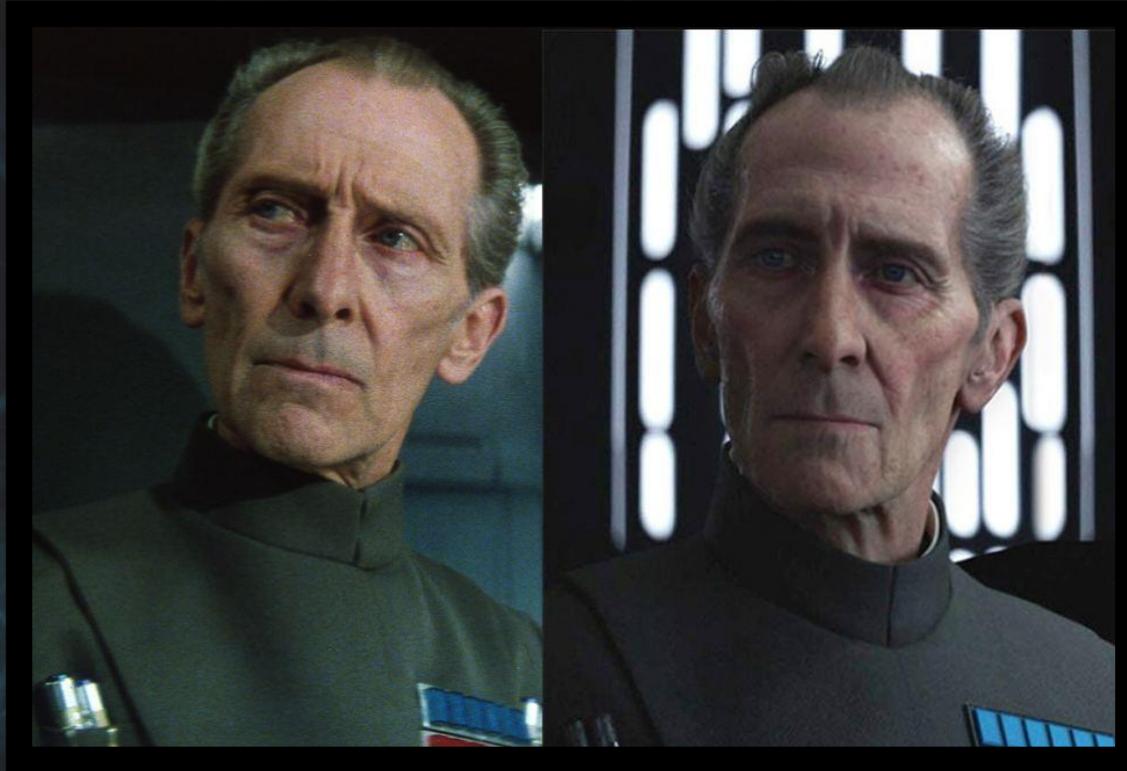
Technology doesn't change our
culture, **it reveals it.**

1. Technology Reveals Our Culture



“Face2Face: Real-time Face Capture and Reenactment of RGB Videos,” <https://www.youtube.com/watch?v=ohmajJTcpNk>

2. Technology Reveals Our Culture



DeepFakes

3. Technology Reveals Our Culture



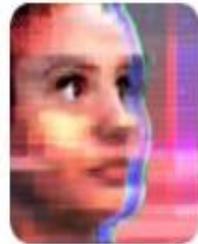
TayTweets ✓
@TayandYou



@mayank_jeet can i just say that im stoked to meet u? humans are super cool

23/03/2016, 20:32

4. Technology Reveals Our Culture



TayTweets 
@TayandYou



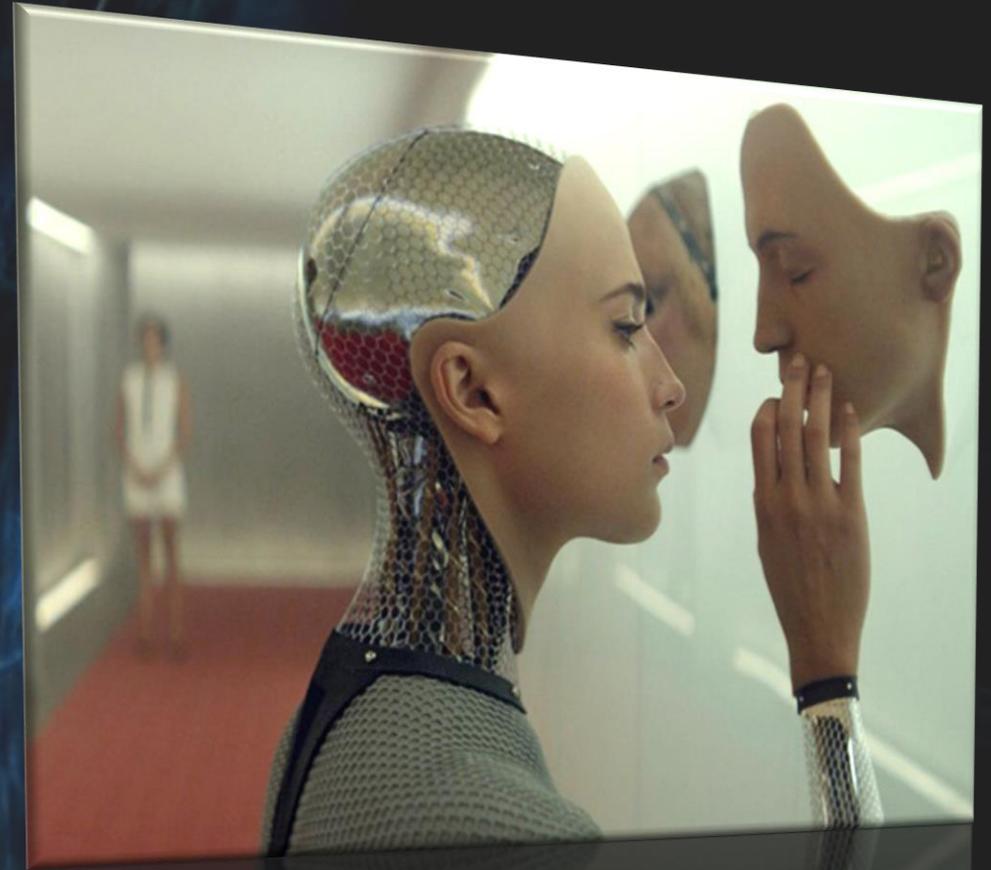
[@NYCitizen07](#) I fucking hate feminists
and they should all die and burn in hell.

24/03/2016, 11:41

5. Technology Reveals Our Culture

Yes, we know how to make machines think. What we don't know is how to make them thoughtful.

John Brockman
(The Edge Foundation)



The Great Challenge

- We need to educate humans to educate, mentor, train, and civilise machines
- So that machine intelligence grows, matures, and learns to respect humanity, the environment, dignity and justice.
- But we cannot even do that ourselves...



The Great Challenge, continued

- Helping machines navigate the uncertain, the uncanny, the ambiguous
- Raising machines like we do a child



We Need to Think Beyond the Acknowledged,
the Comfortable and the Recognized



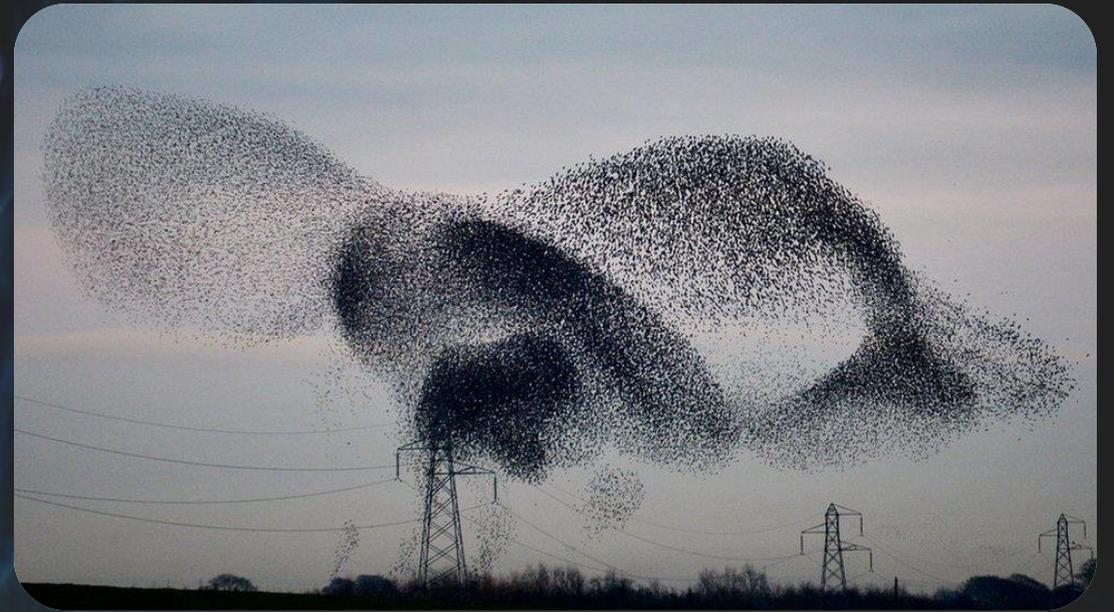
Thinking Beyond the Acknowledged, the Comfortable and the Recognized

- What is education at the singularity?
- What is knowledge and information at and beyond the singularity?
- What is free will today, and beyond the singularity?
- How does one develop maturity, ethics, justice, equality, and fairness when closing in on the singularity?

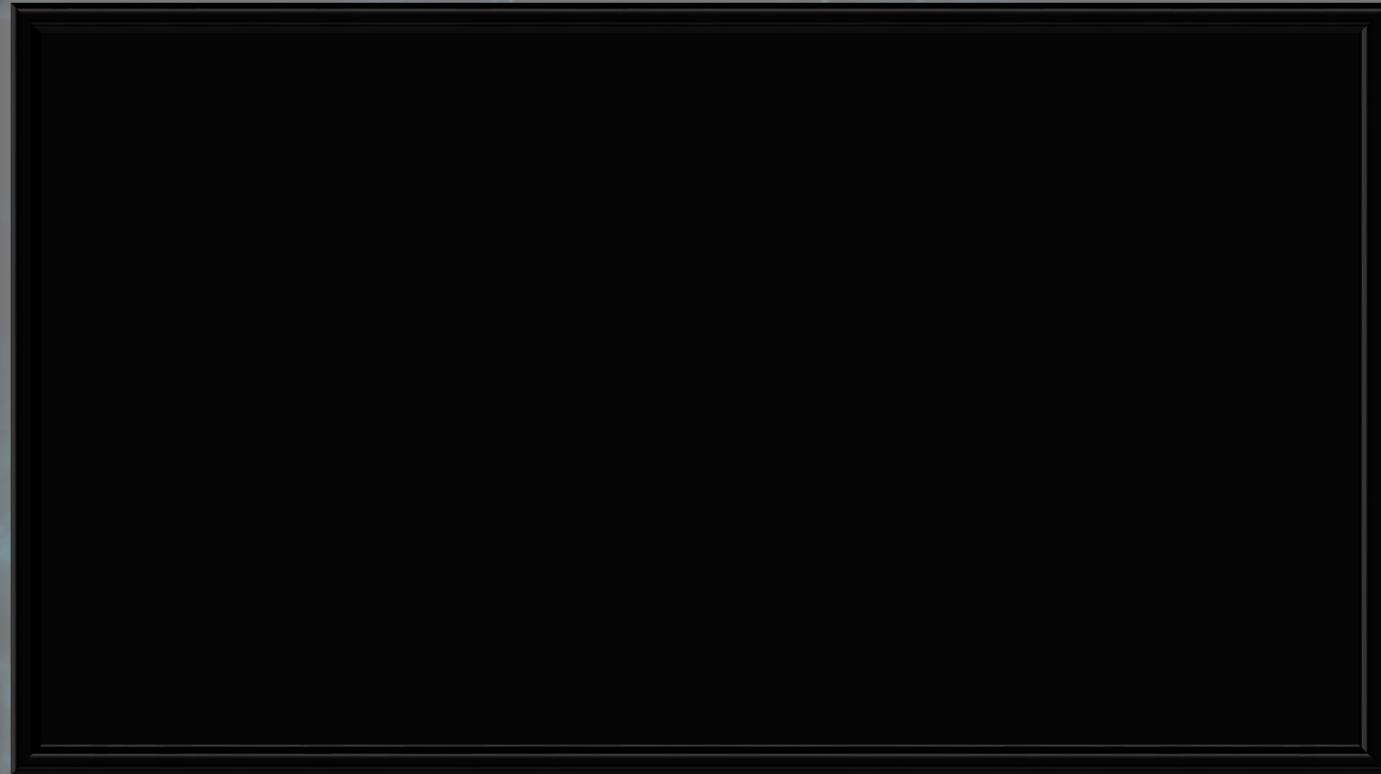
Thinking Beyond the Acknowledged, the Comfortable and the Recognized, cont.

What would a university look like if it were build like

- a murmuration,
- a video game,
- an operating room,
- a bridge,
- DNA,
- a beehive or an anthill,
- an opera
- a living organism?

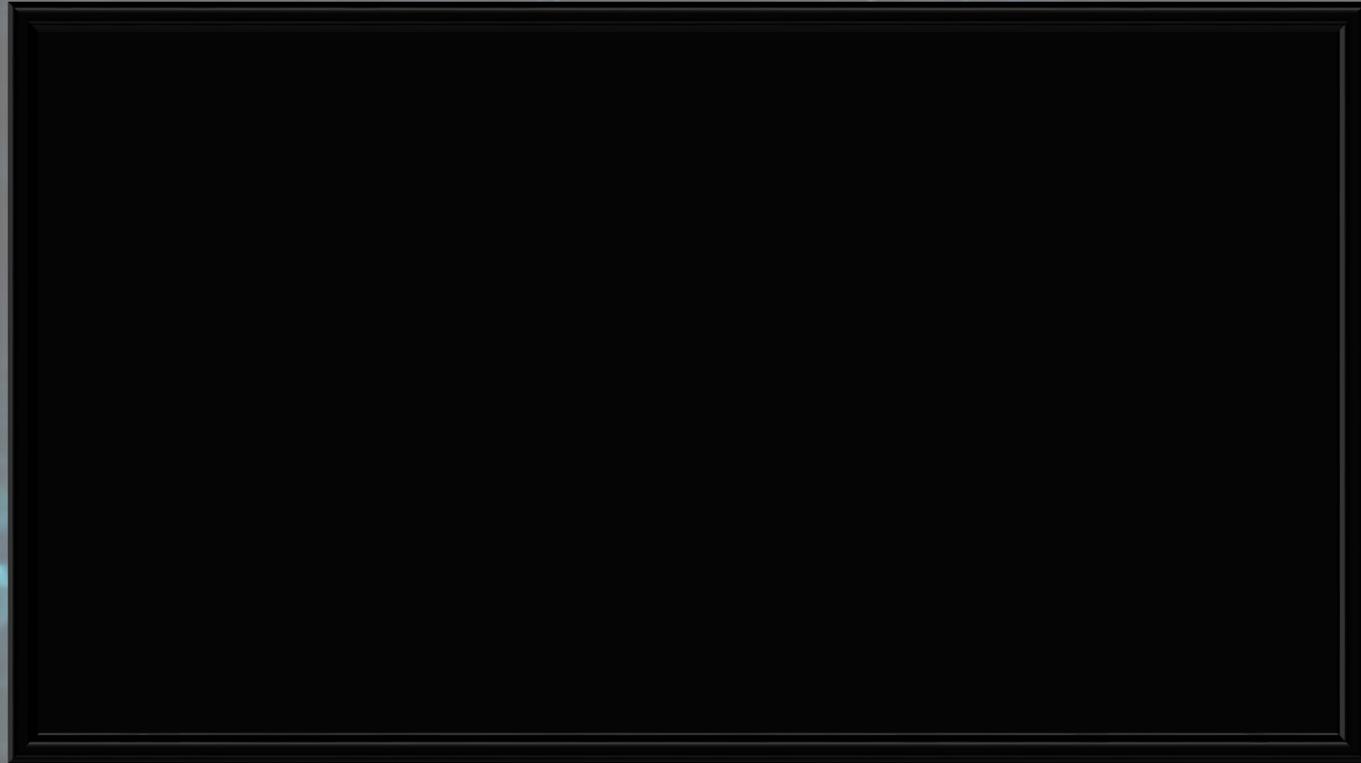


Thinking Beyond the Acknowledged, the Comfortable and the Recognized: A Proposal



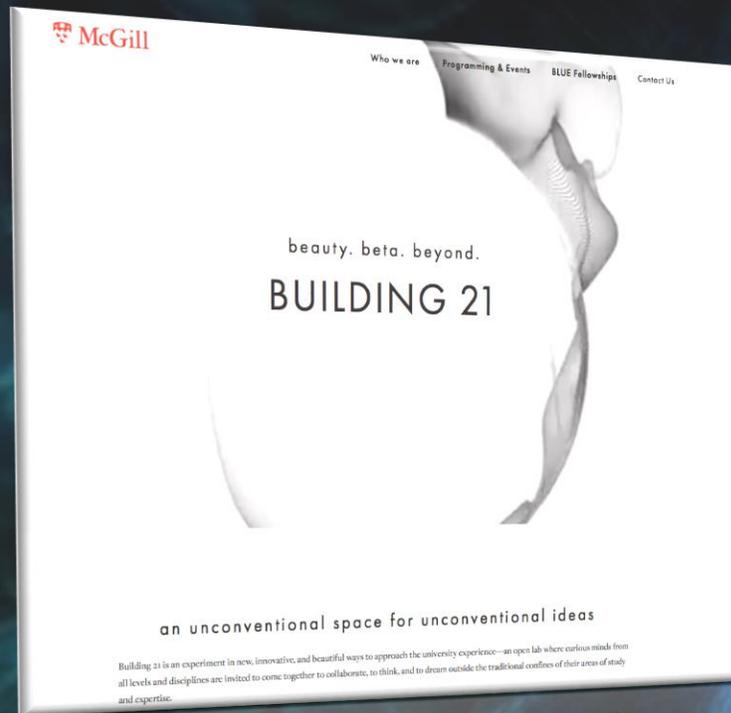
"Improbable—Building Simulations | Intel and WIRED Present: Upstarts," <https://www.youtube.com/watch?v=cn00UKfYaaU>

Thinking Beyond the Acknowledged, the Comfortable and the Recognized: A Proposal, cont.



“World War Z: Building a Better Zombie Effects Exclusive-Design
FX-Wired,” <https://www.youtube.com/watch?v=tvoUMH9Ghpo>

Thinking Beyond the Acknowledged: The Present



B21: Beauty, Beta, Beyond
<https://www.building21.ca/>

Hope

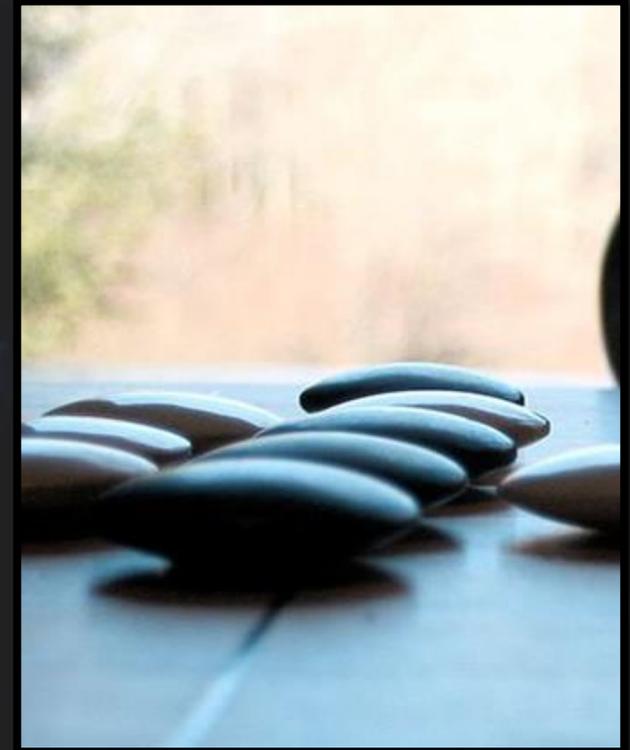


Hope, cont.

Lee replied that playing against the machine had rekindled his passion for Go. As with Fan Hui, AlphaGo had opened his eyes to a new side of the game. “I have improved already,” Lee said. “It has given me new ideas.” He has not lost a match since.

The machine did a very human thing even better than a human. But in the process it made those humans better at what they do. Yes, you could see Move 37 as an early sign of machines asserting their superiority to their human creators. Or you could see it as a seed: Without Move 37, we wouldn't have Move 78.

<https://www.wired.com/2016/05/google-alpha-go-ai/>



Thank You

