Envisioning a Future of A.I. Public Servants

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• 2000: Ph.D. in Physics (Numerical Relativity) from Univ. of Texas at Austin. Then 6 years as postdoc: Supercomputer sim’s of binary black holes
• 2006: Joined Belmont faculty to teach audio engineers and play music, switched to acoustics & audio, wrote visualization apps to help teach
• 2015: Began researching/developing machine learning for signal processing
• Jan 2017: Started “ASPIRE: A Research Co-op” in Nashville in 2017- network of engineers, scientists & hobbyists
• Fall 2017-present: Working on research project, “Christian Responses to the Ascendancy of Artificial Intelligence” via SCIO grant program at Oxford (funding by Templeton & Blankmeyer)
Sci-Fi Nostalgia!

Dr. Theopolis

“Buck Rogers in the 25th Century”
TV Show, 1979-1981

Computerized intelligence known as a “Quad”
Computer Council:
“The mistakes that we have made in areas like our environment have been entirely turned over to [the AIs]. And they've saved the Earth from certain doom.” -- Dr. Elias Huer
These AIs were essentially benevolent, public servants
Refreshing to see an optimistic alternative to SkyNet, etc.
Interesting name: Theopolis - “City of God”

This optimism amounts to a form of hope, which is not unique to the secular culture of technological consumerism and progress made possible by scientific advances…
A higher intelligence will somehow resolve humanity’s problems

The Hope
THIS HOPE IS NOT ‘SCIENTIFIC’

(“A higher intelligence will somehow resolve humanity’s problems”)

Religion: “God will be their light”


Idiocracy: “We got this guy Not Sure”
The problems we face result from
- lack of intelligence
- lack of knowledge
- or perhaps: “lack of morality”
These problems admit a technical solution.
The Hypothesis is probably wrong

- AI raises --- not solves --- ethical issues
- And deciding these means political decisions.
  (Kate Crawford, “Just an Engineer? The Politics of AI”,
  *Royal Society of London Lecture Series sponsored by DeepMind*, Jul 23 2018)
- ...or cultural & spiritual transformation
- “AI Ethics: send money, guns & lawyers” (R. Sargeant)
- Databases (e.g. law enf.) are likely irreparably inhomogeneous across local, state & federal levels. (Vienna Thompkins)
...and abdicating our responsibility for decision-making is probably not achievable due to non-technical issues:

- even defining the terms in the problem(s) is (are) problematic
- and there’s no consensus
- it’s not obvious that there’s an “optimal fixed point” in all human interactions
- accountability (see @j2bryson)
Instead we are left with AI as a “useful tool”
‘BENEVOLENT’ USES OF AI

Benevolent.AI, #AIforGood, etc.

Save the Coral
Emma Kennedy et al.

Stop Sex Trafficking
Digital Reasoning / THORN
“How a Franklin software company helped rescue 6,000 sex trafficking victims” The Tennessean, Jul 6 2017

Cure Cancer
IBM Watson
“How the AI Project to Improve Cancer Treatment Went Wrong”, Slate, Aug 18 2018

OOPS!
‘EVIL’ USES OF AI

“Too many worry about what AI—as if some independent entity—will do to us. Too few people worry what power will do with AI” - Zeynep Tufecki @zeynep

Empower Fascists
Kate Crawford
“AI & the Rise of Fascism”
“Classification is Power”
Tracking dissidents
Biased models
Neo-phrenology

Fake & Manipulate
Miles Brundage et al.
Targeted ads, DeepFakes-style videos of politicians.
...and several other types of threats. See:
“The Malicious Use of Artificial Intelligence”

Scale Terror
Stuart Russel & Future of Life Inst.
“Slaughterbots” video of AI-enabled autonomous assassination drones

Fake & Manipulate
Miles Brundage et al.
Targeted ads, DeepFakes-style videos of politicians.
...and several other types of threats. See:
“The Malicious Use of Artificial Intelligence”
"Calling the computer ‘just a tool,’ even as one asserted that tools shape thought, was a way of saying that a big deal was no big deal.”

(Sherry Turkle, in Simulation & Its Discontents)

Tools have “ends” / teleology / goals:

• “The medium is the message” (McLuhan)
• Successful tech. development tends to become self-serving (Ellul)
• “What does [an AI] ‘want’?” (Kahn)

“A heat-seeking missile has a goal”

Future of Humanity Institute
Fairness, Accountability and Transparency

- Bias: Too many examples of ‘biased’ systems to count!
- EU’s GDPR requires algorithmic decisions be “explainable” (Are human decisions explainable?)
- Human creators need to be held responsible for AIs & robots — AIs should not be “persons” (Bryson)
- Transparency — the ability of a naive observer to form an accurate model of a robot’s capabilities, intentions and purpose (Wortham)
- But there’s a (design) balance: can’t overwhelm people with info (Theodorou)
IN CLOSING

☑ Optimism can be healthy
☑ Good to have realistic dreams (and nightmares -- @zynepon)
☑ “We get to decide” what AI will be (Bryson)

How to get involved:
- Learn some code - help shape AI development
- Follow AI Ethics / Safety / Law / SysML people (e.g. on Twitter)
- Attend Nashville Meetup: “Ethics and Governance of AI”
  https://www.meetup.com/Ethics-and-Governance-of-Artificial-Intelligence
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