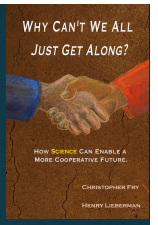
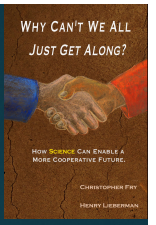


Artificial Intelligence
-- Not the Son of Frankenstein

HENRY LIEBERMAN AND CHRISTOPHER FRY

MIT COMPUTER SCIENCE & ARTIFICIAL INTELLIGENCE LAB

Dangers of AI



Forbes Billionaires Innovation Leadership

15,029 views | Aug 7, 2018, 04:14am

Job Loss From AI? There's More To Fear!

Kiran Garimella, Ph.D. Contributor
COGNITIVE WORLD Contributor Group
AI & Big Data
Chief Scientist/CTO, ex-CIO, AI, blockchain, author

Robot ordering the human out
HTTPS://CDN-IMAGES-1.MEDIUM.COM/MAX/800/1*GQM0ZLCZVLTBD_9XWJGYN

The New York Times

DISRUPTIONS

Artificial Intelligence as a Threat

The New York Times

Report Cites Dangers of Autonomous Weapons

By John Markoff

Feb. 28, 2016

A new report written by a former Pentagon official who helped establish United States policy on autonomous weapons argues that such weapons could be uncontrollable in real-world environments where they are subject to design failure as well as hacking, spoofing and manipulation by adversaries.

The Atlantic Popular Latest Sections Magazine

TECHNOLOGY

An Eye Without an 'I': Justice and the Rise of Automated Surveillance

ROSS ANDERSEN JUN 14, 2012

Share Tweet Email

Automated surveillance allows governments (and others) to data mine the physical world, yet little attention has been paid to the ethics of perpetual recording.

Hello, human, I'm here to see you (MGM).

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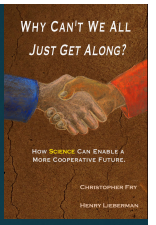
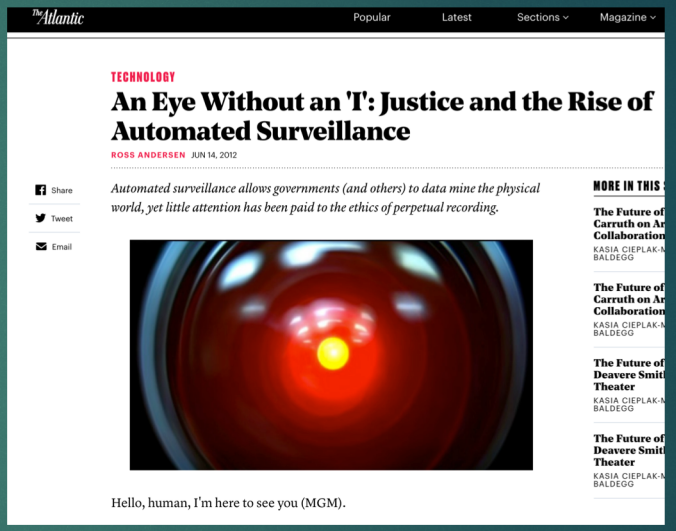
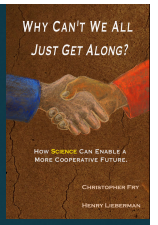
Dangers of AI



- Technological Unemployment
- Surveillance / Loss of Privacy
- Automated Discrimination
- Dehumanization of society
- Robot Rebellion
- Intelligence Explosion

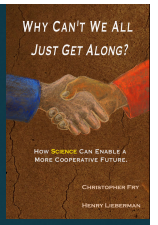


…but we might miss the *Opportunities* of AI!



- End war
- End poverty
- Reduce inequality and discrimination
- Deal with climate change and ecological issues
- Make government work better for citizens
- Reduce crime and have a fairer justice system
- Universal access to education, improve learning
- Improve psychology and social relations
- Better transportation, housing, food supply, (your issue here)

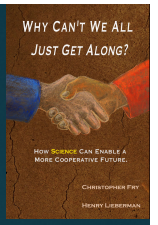
Pessimistic scenarios imagine pouring AI into our present systems



- Capitalist economics
- US Democracy (voting, parties, exec/legislative/judicial…)
- Nation-state international order

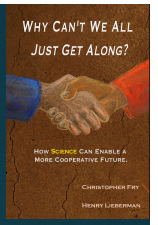
- … but those systems were designed for *their* times: 18th and 19th centuries
- Let's redesign these systems for the 21st Century!

Pathologies of Technology…
.. Or Pathologies of Competition



- Technological Unemployment … Competition for "labor costs"
- Surveillance / Loss of Privacy … Competition against customers/citizens
- Automated Discrimination … Discrimination about $
- Dehumanization of society … Industrial age "mechanization"
- Robot Rebellion … Will robots be competitive/cooperative?
- Intelligence Explosion – Competition Explosion

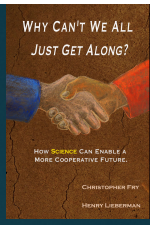
Don't fear an "intelligence explosion". Fear a "*competition* explosion"



- If AI winds up just being a tool of one or more human competitive factions, we're screwed.
  - AI used for government surveillance and control of citizens: "1984" scenario
  - AI used for military conflict between nations. Weapons stolen, or go out of control.
  - AI used for corporate profit. Addictive products, automated deception, microtheft.

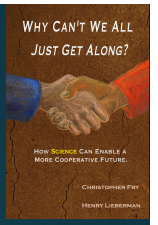
- The fix is not to restrict the use of AI. It's to *limit competition*.
  - *Arms control* approach
  - *Peace treaty* approach

What will happen with AI?



- Will AI that is smarter than people pose a threat to society?
  - Do *people* who are smarter than you pose a threat to you?
- Will machines cooperate with humans?
  - Will humans cooperate *with each other*?
- Will computers “take over the world”?
  - Do *you* want to “take over the world”?

AI ‘R’ Us

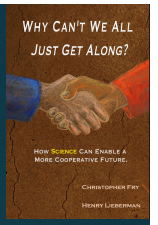


- AI developed by introspection about human cognitive processing
- AI developed by observing and modeling human behavior

- The better AI gets, the more like us it will be
  - AI will depend upon *social intelligence*

- In later stages, AI will provide advances in psychology
  - Why do people commit crimes?
  - Where does greed and selfishness come from?
  - What are better ways for people to interact cooperatively?

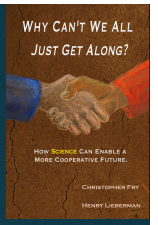
How AI will lead to a more cooperative society?



- AI will *remove barriers* to cooperation
  - Scarcity
  - Complexity

- AI will facilitate mechanisms for cooperation
  - Better understanding of the psychology of cooperation and competition
  - Permit redesign of social structures for cooperation
  - Software for collaborative decision making

Software Makerism

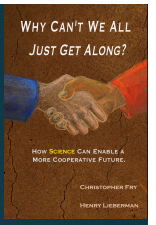


- Makerism applies to software as well as hardware

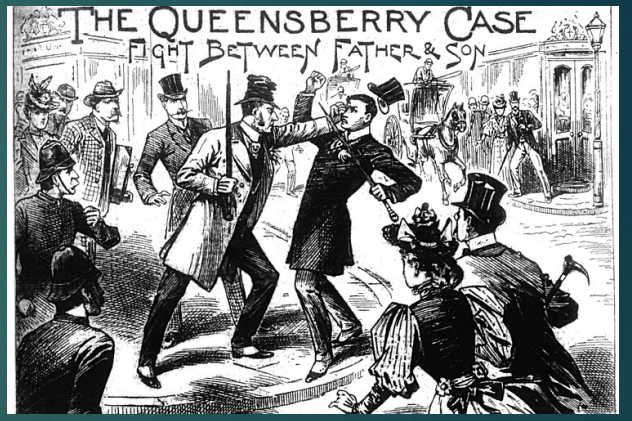
- Right now, software comes from giant companies
- Democratize software production -- anyone can program
- Open Source community – Hackathons, Maker Faires

- End-User Programming
- Visual Programming
- Programming by Example

Value Alignment



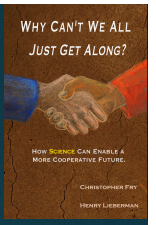
- Companies and governments are supposed to be working for us
- Instead, they compete with us and fight with us
  - Arms Control vs. Peace Treaty



- AI + Competition = Disaster

- Solution is not to *limit AI*
  - Don't kill the golden goose
- Solution is to *remove the need for competition*

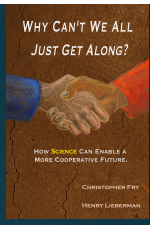
Democratization of AI



- Now:
  - AI is possessed by corporations and governments
  - Organizations compete with citizens
    - "We have to control you to help you"
  - Regulations are needed to protect citizens

- Future:
  - AI is possessed by citizens
  - Citizens cooperatively organize economic and political structures

Where does value come from?
Where does value go?



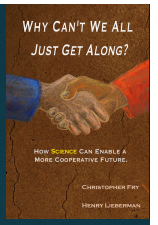
- Capital vs. Labor
- AI = Labor. 3DP = Capital
- + Technology?

- How is value shared (Capital / Labor / Tech)?

- Where does value “created by AI” go?

- Economics: “The purpose of $ is to provide incentive for creating value”

The Productivity of Dead People

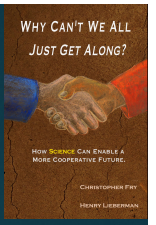


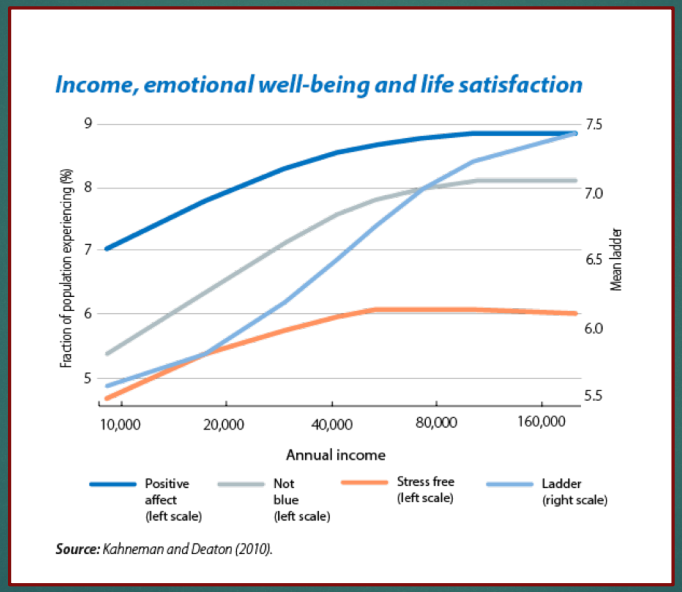
- Technology “keeps producing” long after inventors die
- ”Inherited” to kin, companies, …

- Universal Basic Income
  - Where does “the money come from”?

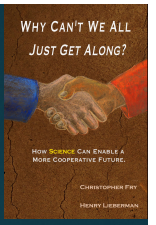
- UBI = ”your rich uncle who died and left you $”

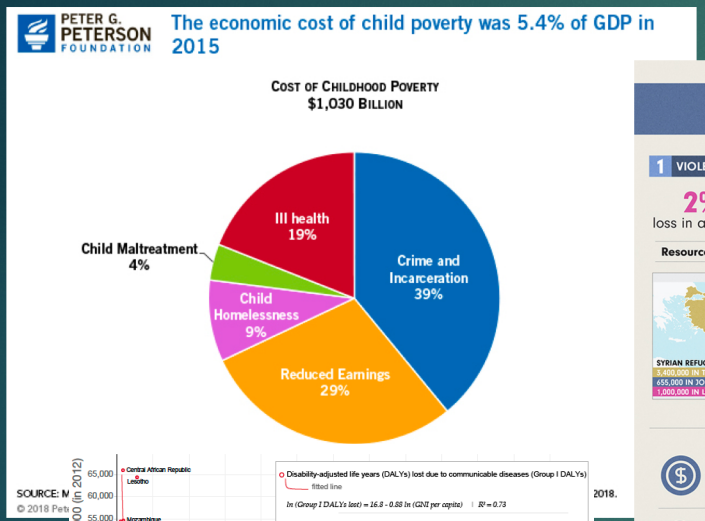
Can money buy happiness?

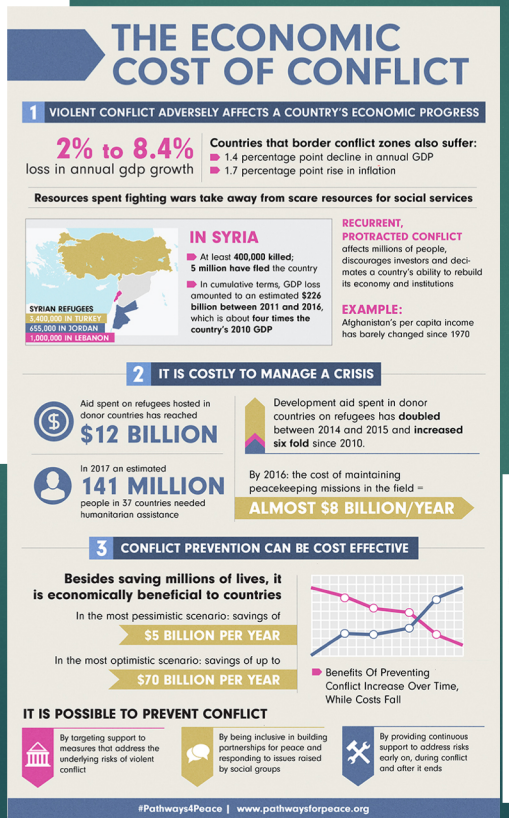


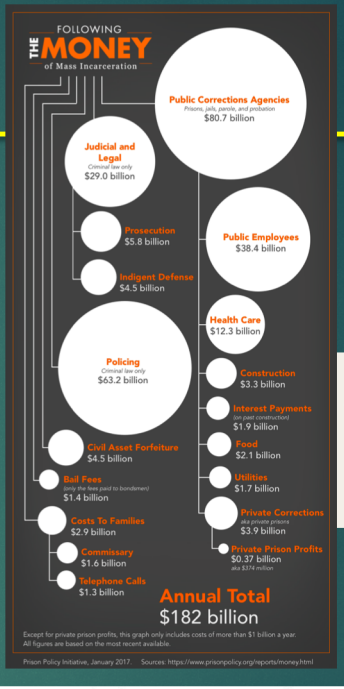


Poverty is too expensive!

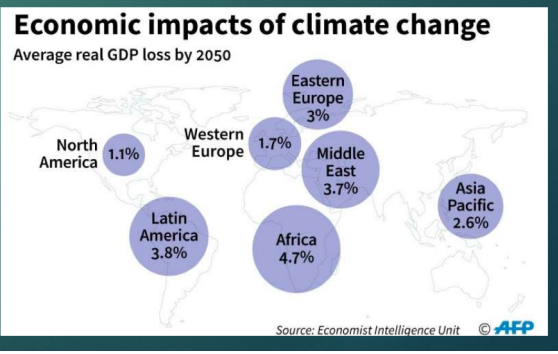




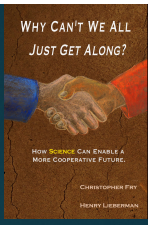




$1.5 trillion spent on war
$500 billion on interest
$87 billion to train Afghan military and police
$24 billion on economic development
$10 billion on counternarcotics



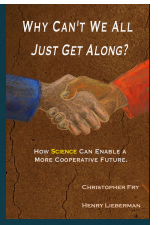
The Bankruptcy of Incentive



- Capitalism works by providing incentive to increase profit
  - Oppressive, because it is constantly bribing you to do things you don't want to do
- "What would people do all day if they didn't have to work?"

  - Only 13% of workers say their work is "personally meaningful
  - 40-60% of retirees satisfied with their life
- What would it be like to design a society around intrinsic motivation?

The world's best biz model

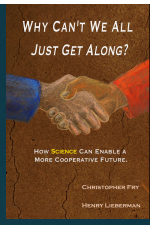


- Almost guaranteed to work!
  - Verified by major companies
- Not illegal
- But, …. some would consider it slightly unethical

- The world's first computer crime
- Can you trust business not to steal from you?

- Aggregation of microtheft

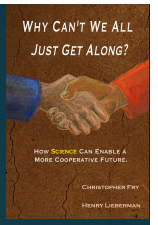
Well, what should happen to the surplus productivity?



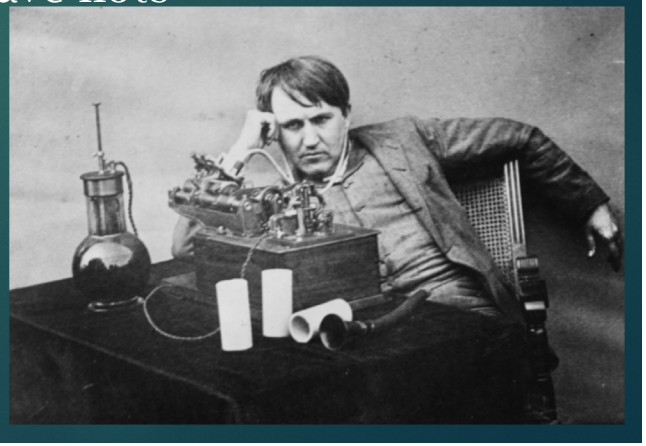
- Reward producers (incentive)
  - Credit assignment
- Invest in future
- Distribute to partcipants

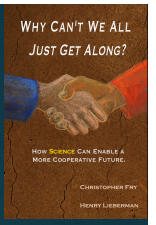
- Universal Basic Income (/ Wealth)

Dawn of the age of Electricity



- OMG! Electricity is a threat to society as we know it!
- Philosopher writes book about “runaway penetration” of electricity
  - Once we have a few electric devices, it’ll just encourage more
- Presidential Commission on Prevention of Electrocution
- Electrical devices will be connected in networks, no human intervention
- It’ll exacerbate inequality between electrical “haves” and “have-nots”
- People will lose jobs to electrical devices
- They’ll even implant electrical devices in the human body!

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How Science Can Enable a
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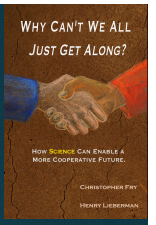
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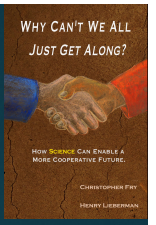
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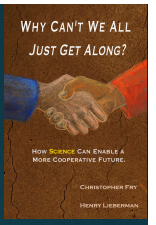
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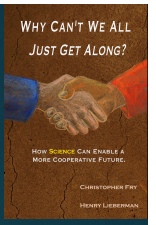
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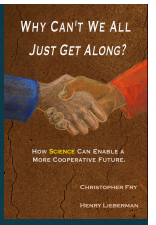
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