The Robots Must Be Crazy:
DSM TURING TEST

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Game Design & Development
Visual & Performing Arts
Quinnipiac University, Hamden, CT

The Automatic Confession Machine: A Catholic Turing Test

Exponential Growth of Computing

Twentieth through twenty first century

Calculations per Second per $1,000

10^{60}
10^{55}
10^{50}
10^{45}
10^{40}
10^{35}
10^{30}
10^{25}
10^{20}
10^{15}
10^{10}
10^{5}
1
10^{-5}
10^{-10}

1900 1920 1940 1960 1980 2000 2020 2040 2060 2080 2100

Year

All Human Brains

One Human Brain

One Mouse Brain

One Insect Brain

Logarithmic Plot

Passing the Test

Machine Intelligence inevitably enables Machine Consciousness?

Artificial Consciousness (AC)

Artificial General Intelligence (AGI)

Act as artificial moral agents (AMAs)

David Deutsch, “Philosophy will be the key that unlocks artificial Intelligence,” *The Guardian*, October 3, 2012, http://www.theguardian.com/science/2012/oct/03/philosophy-artificial-intelligence.

Passing the Test

Report from the Future of Identity in the Information Society (FIDIS):

"When it comes to attributing full legal personhood and 'posthuman' rights to new types of entities, the literature seems to agree that this only makes sense if these entities develop self-consciousness."

WP17, "D17.3: Bridging the accountability gap: rights for new entities in the information society?" ed. Bert-Jaap Koops, Mireille Hildebrandt and David-Oliver Jaquet-Chiffelle, FIDIS Future of Identity in the Information Society, accessed April 28, 2009. http://www.fidis.net/fileadmin/fidis/deliverables/fidis-wp17-del17.3-rights_for_new_entities_def.pdf

ConsScale

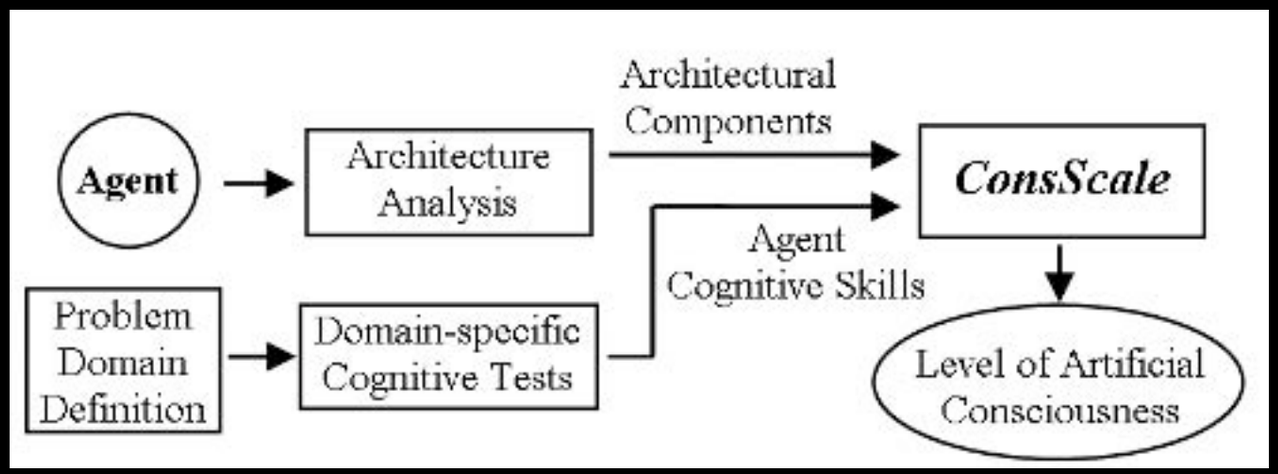
A Scale for Measuring Machine Consciousness

ConsScale is a tool for assessing the functional level of consciousness of a creature. It has been specifically designed for the evaluation of Machine Consciousness implementations.

http://conscious-robots.com/consscale/

ConsScale is a framework for characterizing the cognitive power of a creature. *ConsScale* includes the definition of an ordered list of cognitive levels arranged across a developmental path. The arrangement of the levels is inspired on the ontogeny and phylogeny of consciousness in biological organisms.

The basic assumption is that there exist different kinds of minds, and they can be characterized in terms of *ConsScale* criteria.



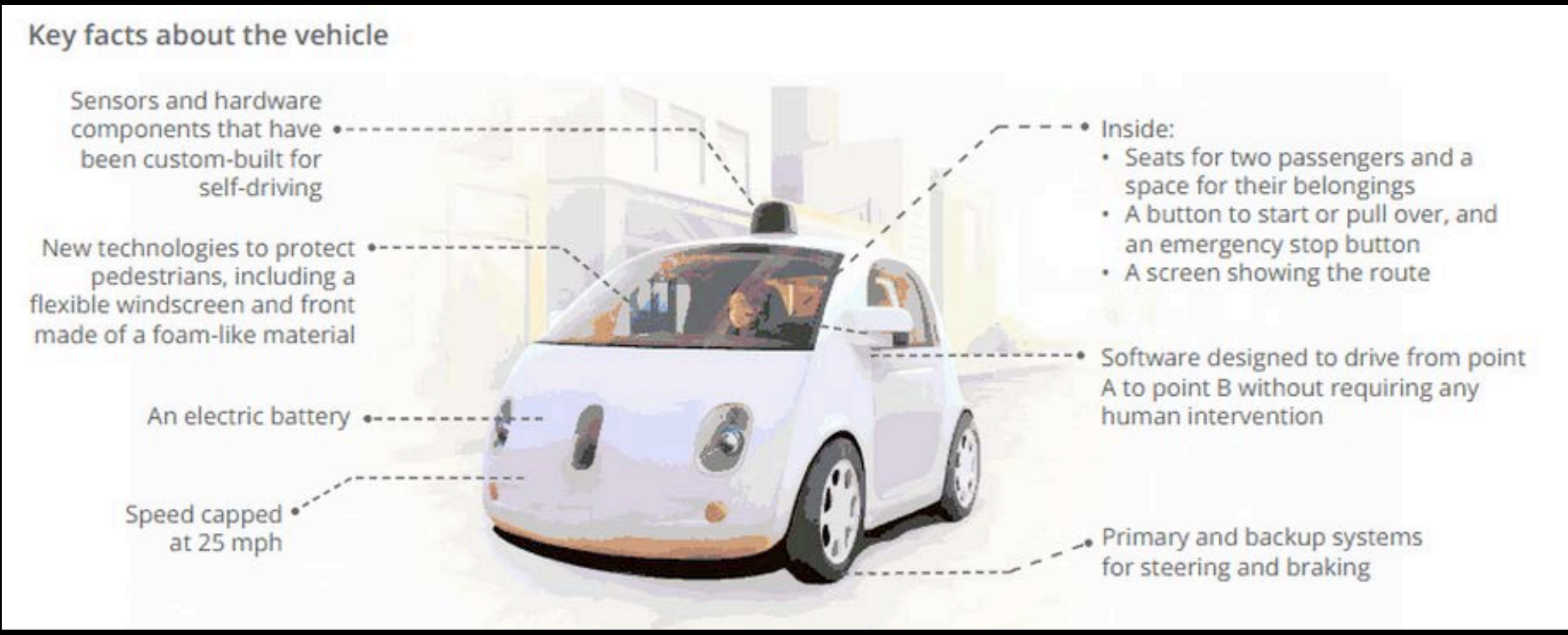
http://www.conscious-robots.com/en/conscious-machines/machine-consciousness-projects/consscale.-a-scale-for-measuring-machine-consciou.html

Passing the Test

David Deutsch argues that Artificial General Intelligence (AGI) is not only possible but also such entities will indeed be self-aware and are most assuredly ‘people.’

David Deutsch, “Philosophy will be the key that unlocks artificial Intelligence,” *The Guardian*, October 3, 2012, http://www.theguardian.com/science/2012/oct/03/philosophy-artificial-intelligence.

Quality Assurance



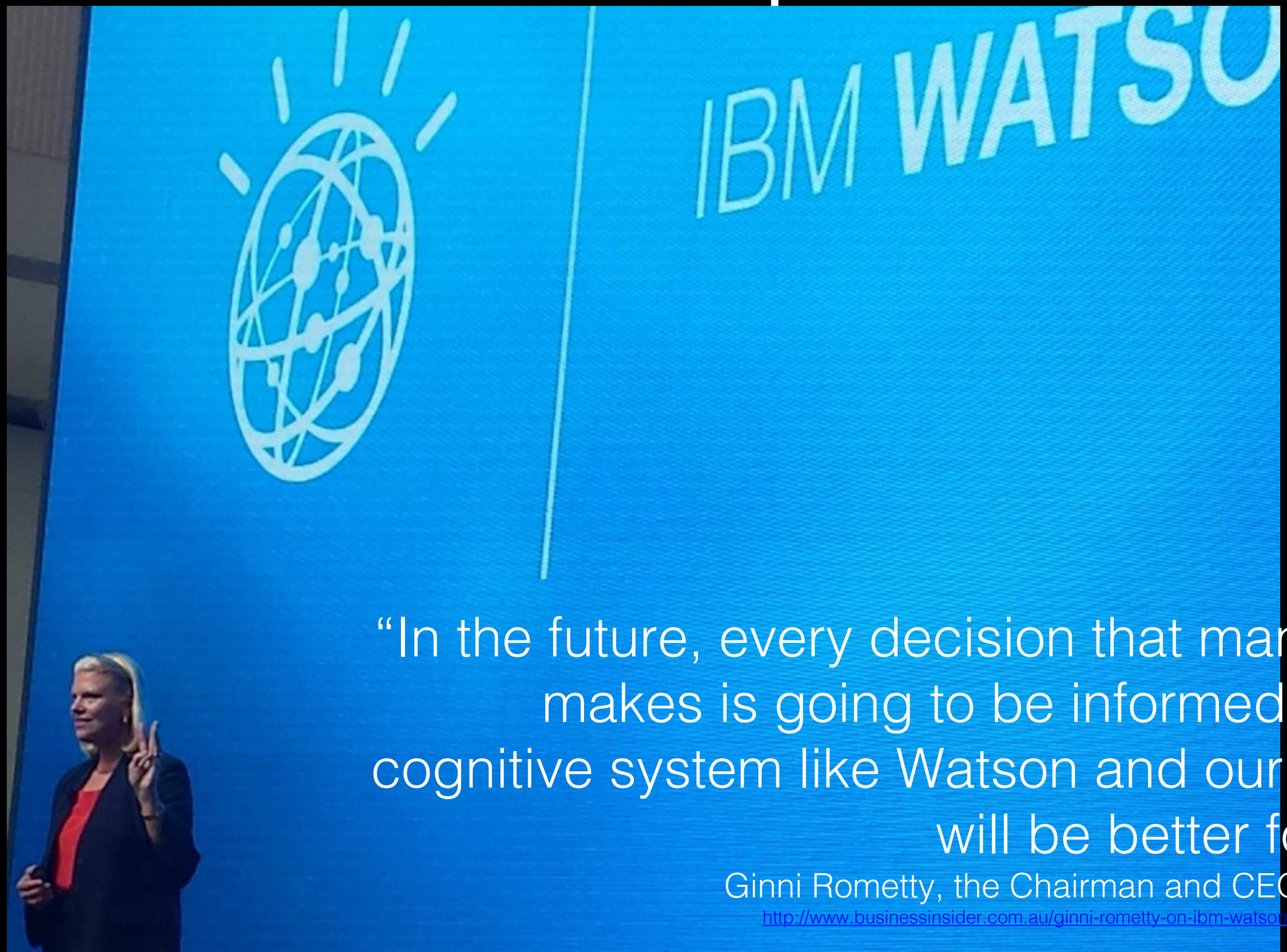
http://cdn1.tnwcdn.com/wp-content/blogs.dir/1/files/2014/05/0528_googlecar_2.jpg

Quality Assurance: A Well Adjusted Functioning Member of Society

The first ‘self-improving’ robots and AIs may become psychotic and it will take “generations of theories and experiments to stabilize them.”

Marvin Minsky, “Computer Science and the Representation of Knowledge,” in The Computer Age: A Twenty-Year View, ed by Michael Dertouzos and Joel Moses, (Cambridge and London: MIT Press 1979), 392–421.

Utilitarian Utopian View



"In the future, every decision that mankind makes is going to be informed by a cognitive system like Watson and our lives will be better for it."

Ginni Rometty, the Chairman and CEO of IBM

http://www.businessinsider.com.au/ginni-rometty-on-ibm-watson-and-ai-2015-5

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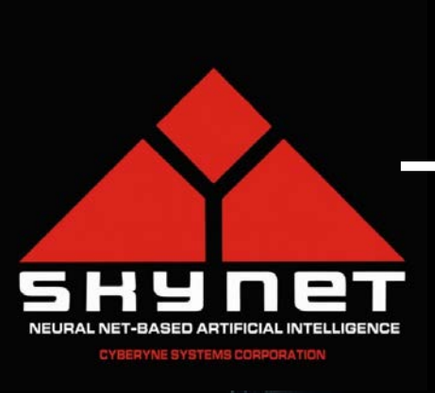
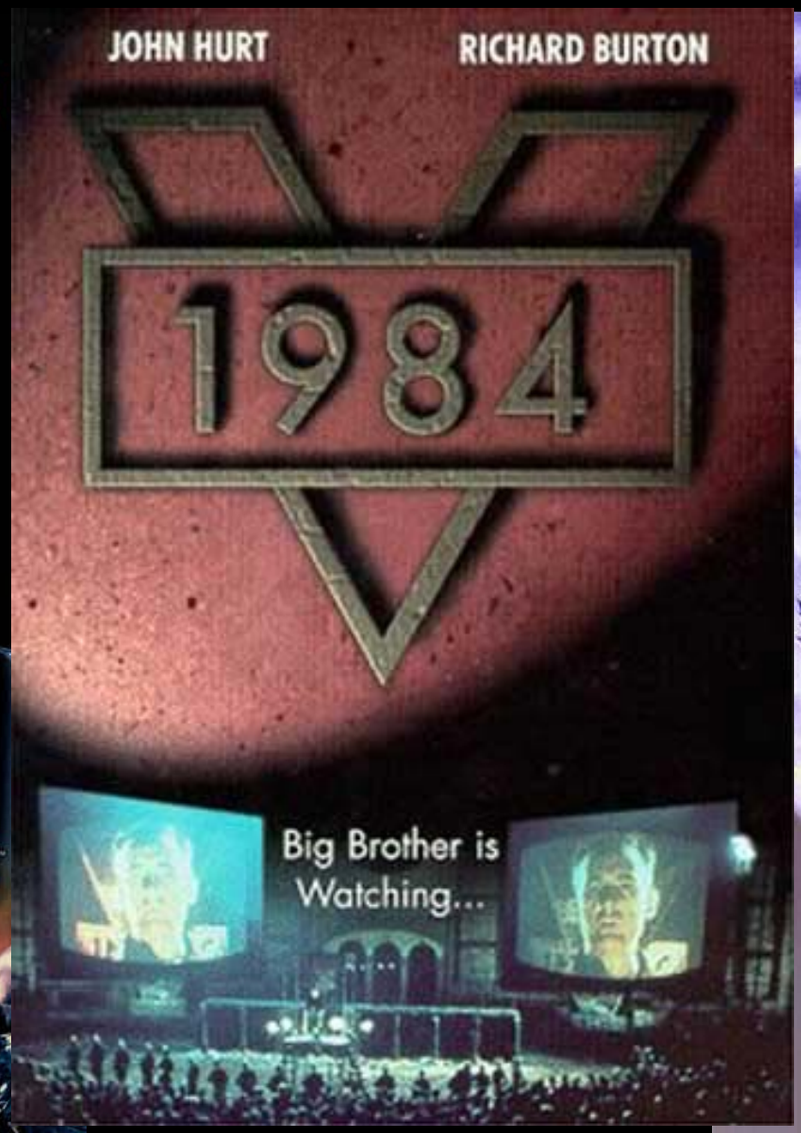
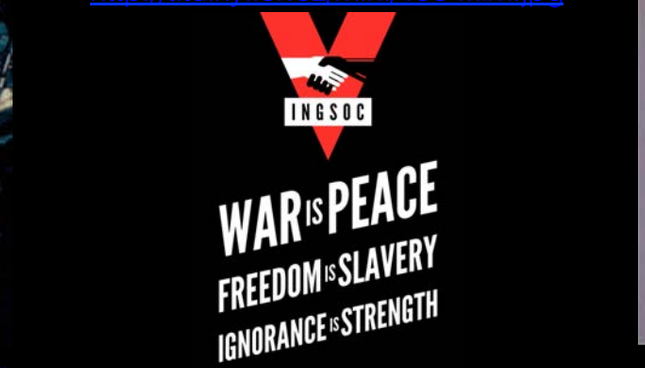
The Distopian Imaginary



http://img2.wikia.nocookie.net/__cb20071221013941/terminator/images/archive/2/20/20110513040803!Terminator_3_poster.jpg



http://titulky.icr.cz/mini/1984film.jpg



http://www.74gazette.com/wp-content/uploads/2013/12/poster19.jpg&w=940&zc=1

Good Cyborg? / Bad Robot?

Cyborg / Robot / Bot / AI

A cyborg is essentially a man-machine system in which the control mechanisms of the human portion are modified externally by drugs or regulatory devices so that the being can live in an environment different from the normal one.

Manfred E. Clynes, and Nathan S. Kline, (1960) "Cyborgs and space," Astronautics, September, pp. 26–27 and 74–75; reprinted in Gray, Mentor, and Figueroa-Sarriera, eds., The Cyborg Handbook, New York: Routledge, 1995, pp. 29–34.

http://stephan.barron.free.fr/technoromantisme/images/stelarc_3_main.jpg

The Cyborg Manifesto

Donna Haraway from The Cyborg Manifesto // Marc Jacobs

http://altcrit.tumblr.com/post/46914318552/top-10-nyfw-2013-outfits

(an) Artificial Intelligence

"As Watson gets smarter, his ability to reason is going to exponentially increase,"

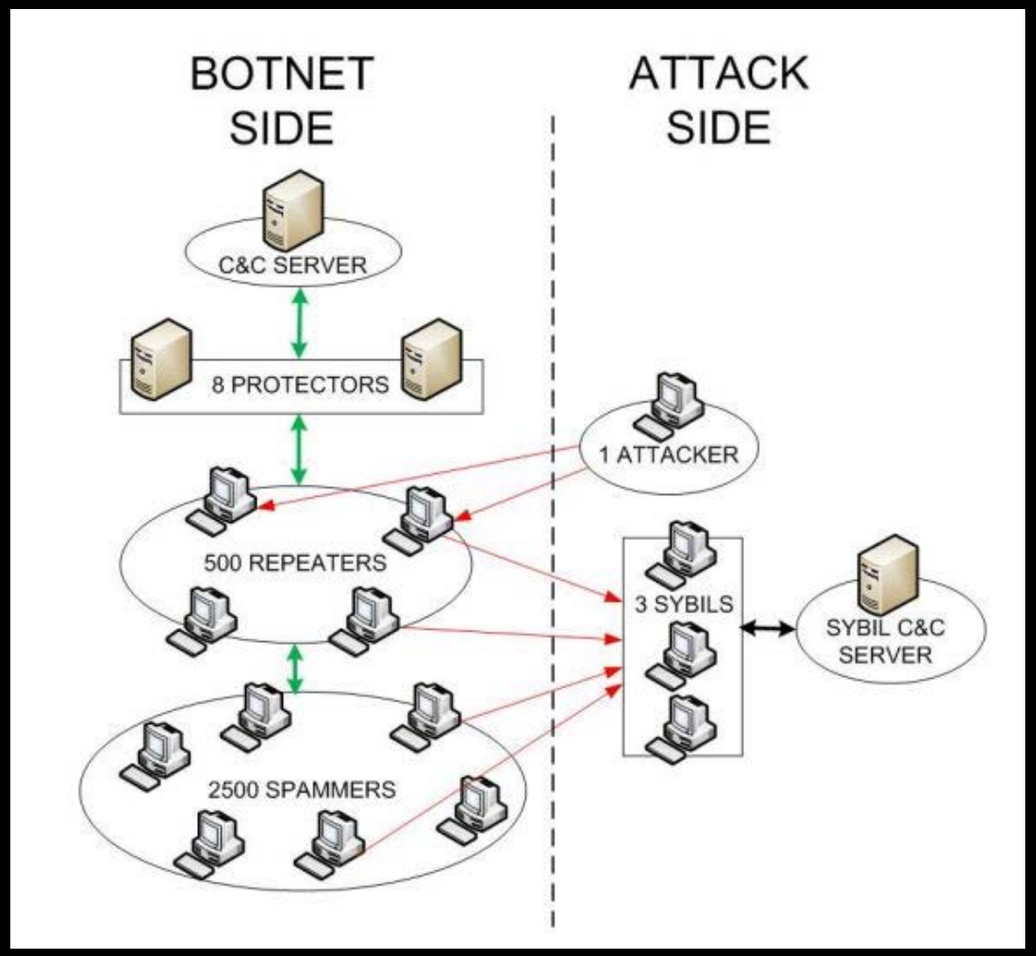
Ginni Rometty, the Chairman and CEO of IBM

http://www.businessinsider.com.au/ginni-rometty-on-ibm-watson-and-ai-2015-5

http://www.businessinsider.com.au/ginni-rometty-on-ibm-watson-and-ai-2015-5.

Bot(s)

- A “software robot” or virtual agent
- Web crawler or Spider
- Zombie computer–part of a botnet
- Chatterbot–converses
- Internet Relay Chat Bot
- Video game bot–a computer controlled player
- BOTS–a computer game

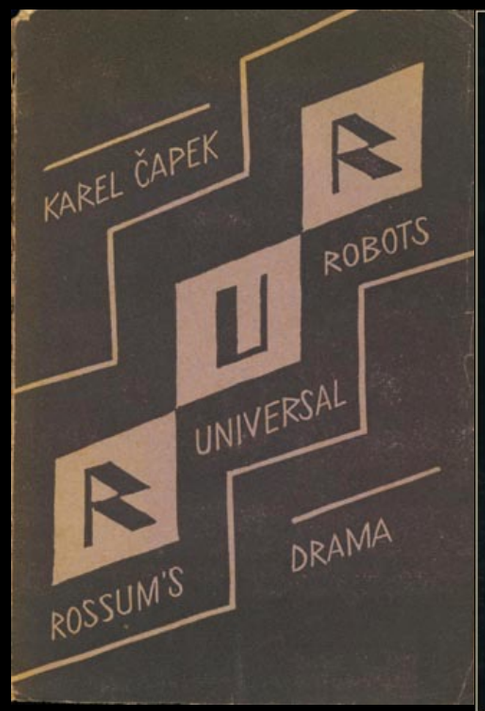


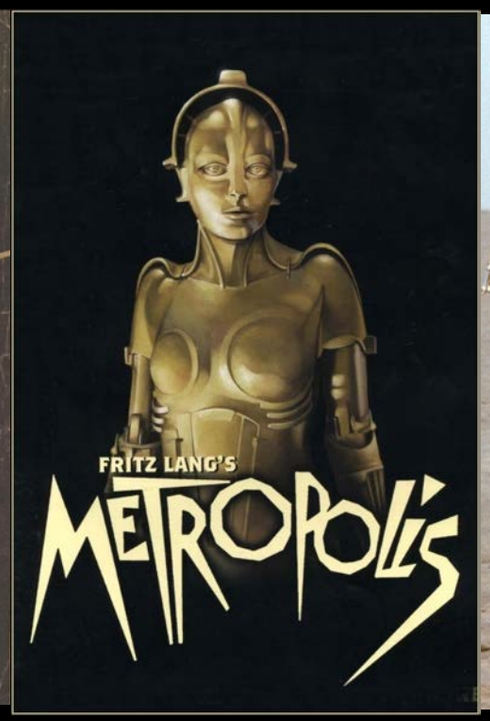
http://www.theemailadmin.com/wp-content/uploads/2011/01/botnet-experiment.jpg

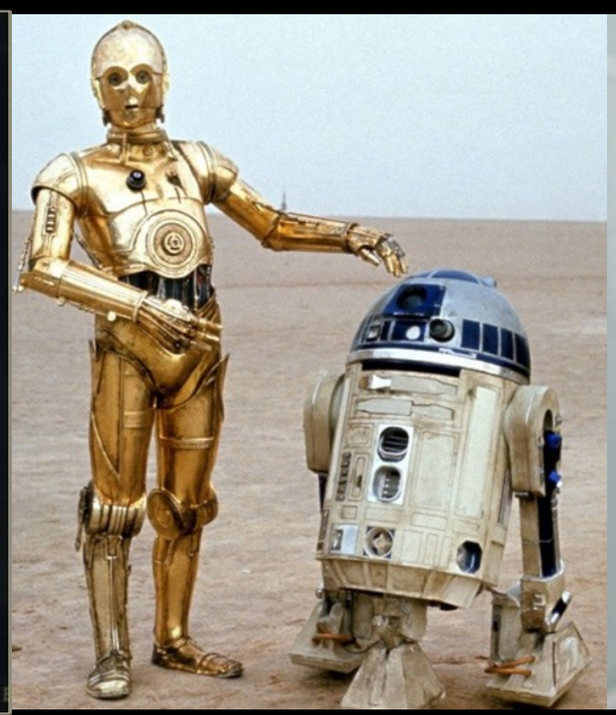
Robot

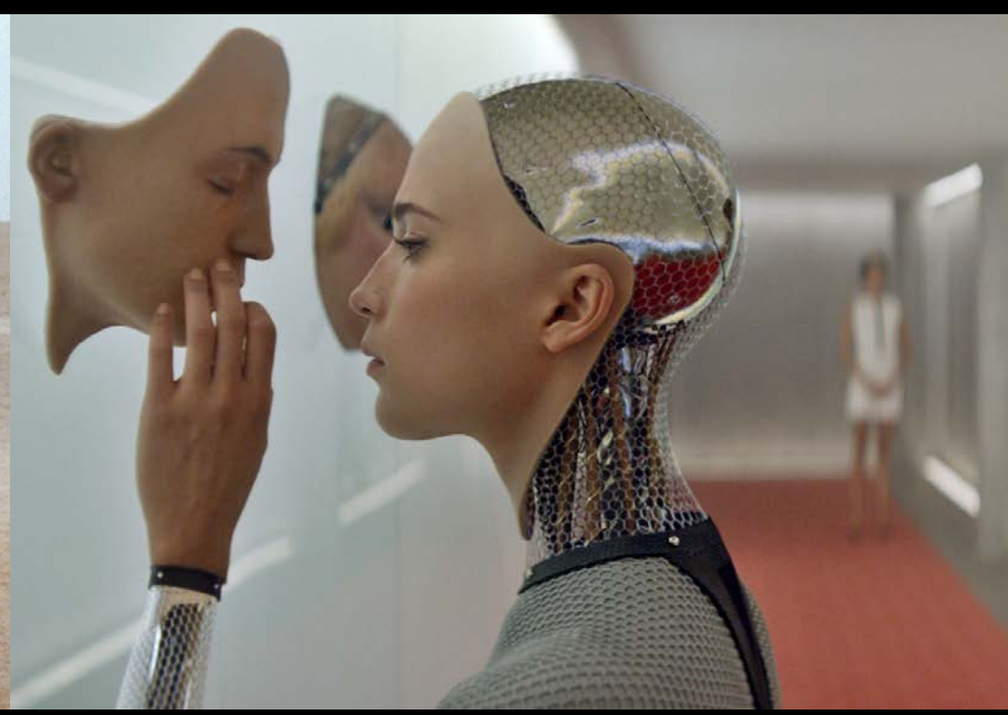
A robot is a mechanical or virtual artificial agent, usually an electro-mechanical machine that is guided by a computer program or electronic circuitry.

http://en.wikipedia.org/wiki/Robot







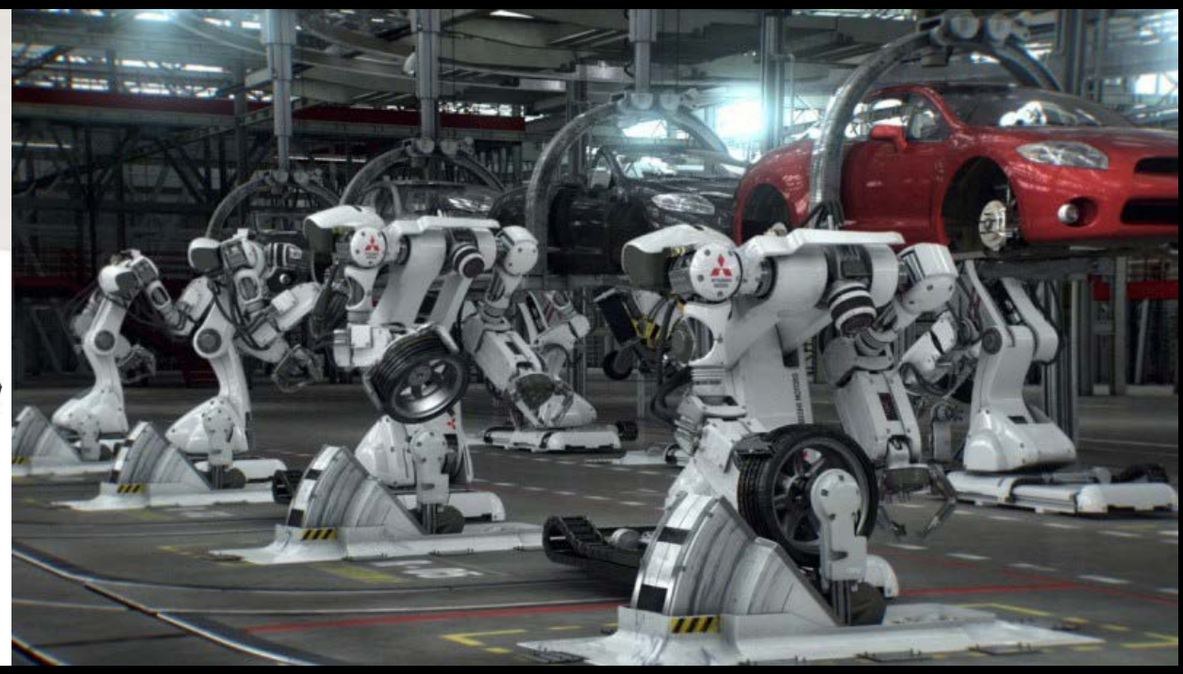


http://en.wikipedia.org/wiki/R.U.R. http://manilovefilms.com/wp-content/uploads/2012/07/MetropolisPoster.jpg http://www.yareah.com/wp-content/uploads/2015/03/53.jpg. http://horrornews.net/wp-content/uploads/2015/04/Ex-Machina-Download-Wallpapers.jpg.

"Capek's play is, in my own opinion, a terribly bad one, but it is immortal for that one word"
Isaac Asimov

Kingdom Robotica

http://www.irobot.com.



http://tomassalles.com/portfolio3/wp-content/uploads/2010/09/robotFactory-e1283644716511.jpg.

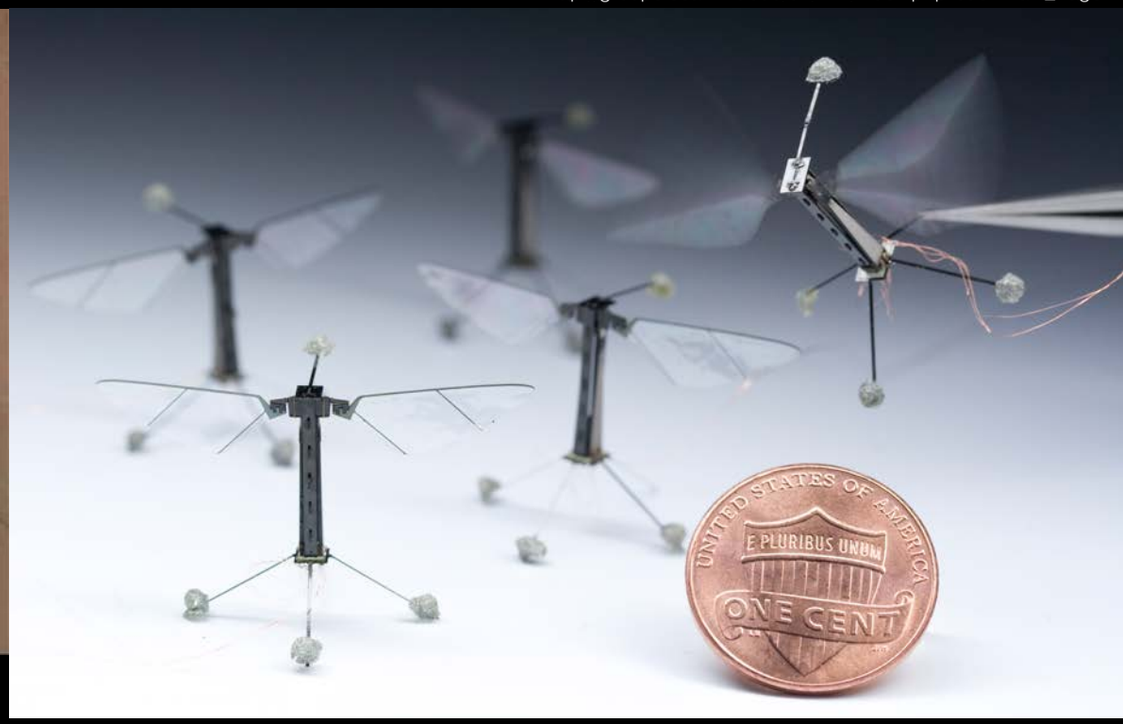
http://www.kuka-robotics.com/usa/en/solutions/.

http://i.dailymail.co.uk/i/pix/2014/03/11/article-2578633-1C33B01D00000578-759_634x346.jpg.

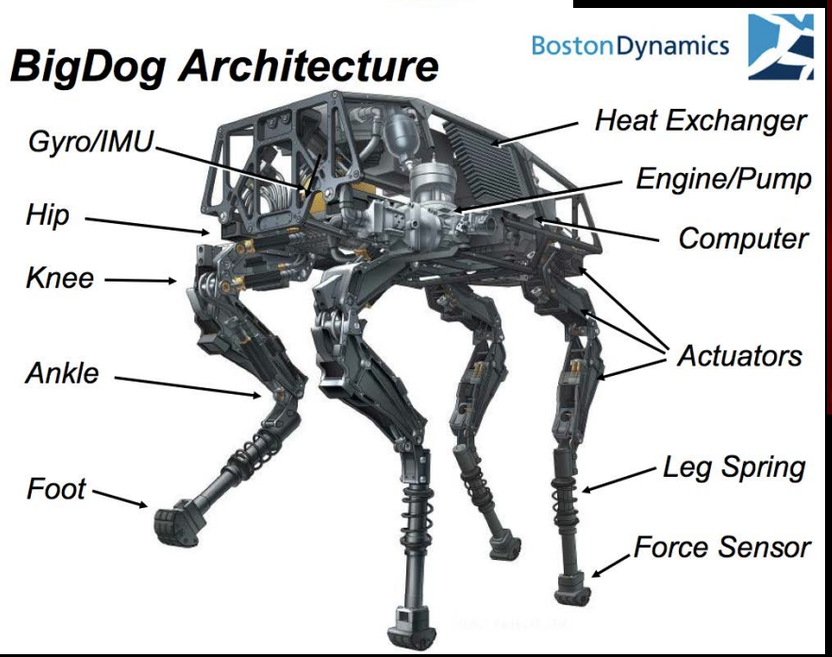
Kingdom Robotica

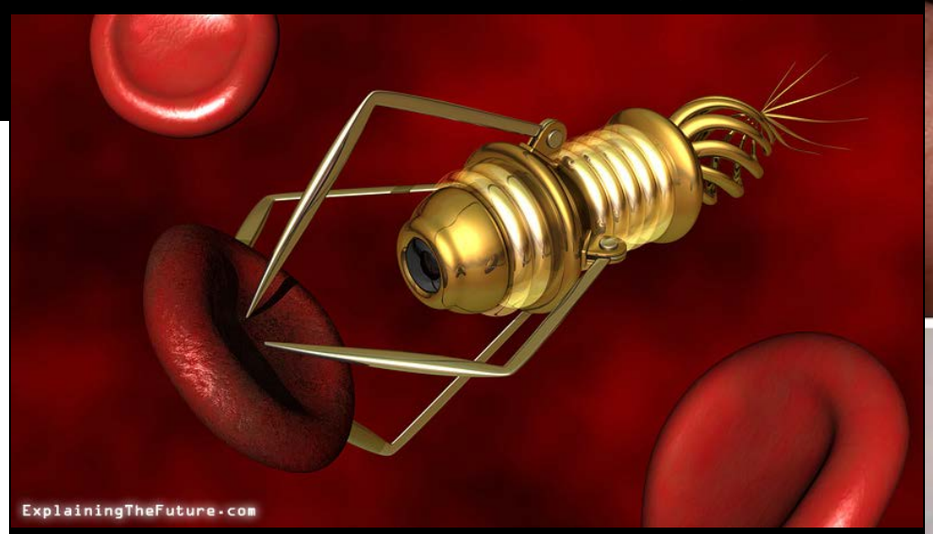
http://groups.csail.mit.edu/drl/wiki/index.php?title=Main_Page

http://www.swarm-bots.org/ram-figs/child-pull.jpg

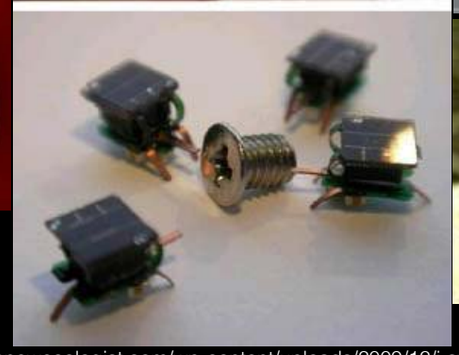


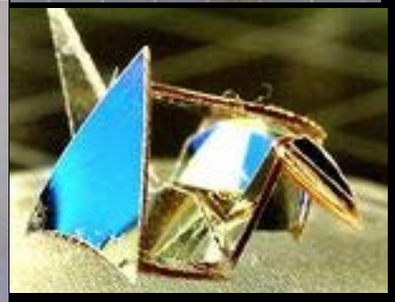
http://wyss.harvard.edu/staticfiles/newsroom/pressreleases/RoboticInsectPhoto02.jpg





http://www.explainingthefuture.com/visions/immune_nanobot_800x450.jpg





http://groups.csail.mit.edu/drl/wiki/index.ph

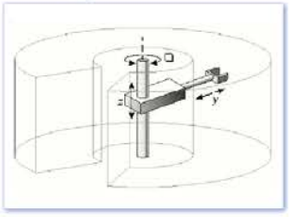
http://www.thenewecologist.com/wp-content/uploads/2009/12/i-swarm-bots.jpg

All Types of Robots by Locomotion

STATIONARY ROBOTS

Cartesian Robots

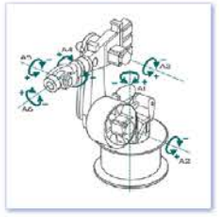
Cylindrical



Spherical

SCARA

Articulated

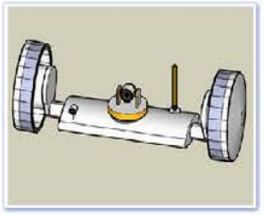


Parallel

WHEELED ROBOTS

Single Wheel

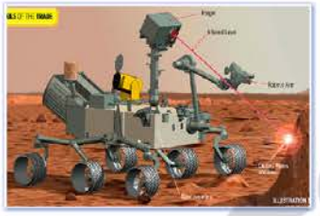
2 Wheeled



3 Wheeled

4 Wheeled

6 Wheeled



Tracked Robots

LEGGED ROBOTS

One Leg

Bipedal

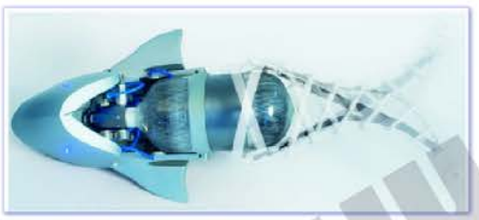
Tripedal

Quadrupedal

Hexapod

Many Legs

SWIMMING ROBOTS

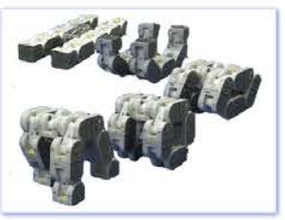


FLYING ROBOTS

Robotic Balls

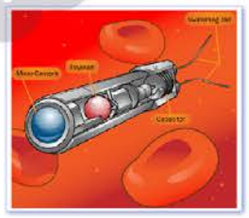
SWARM ROBOTS

MODULAR ROBOTS



MICRO Robots

NANO Robots



SOFT ROBOTS

SNAKE Robots

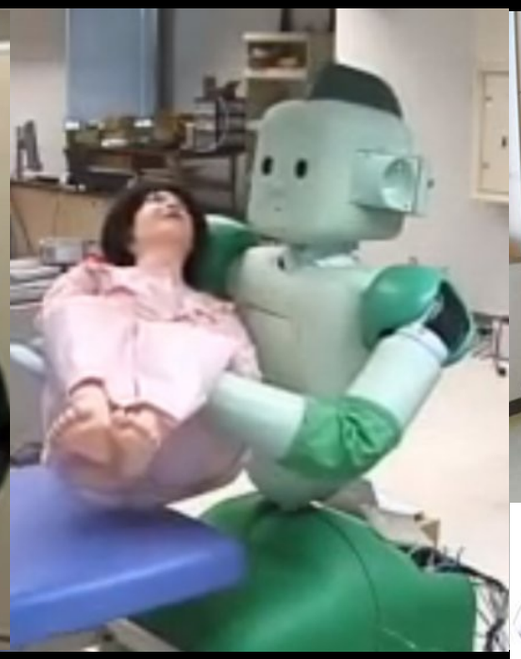
CRAWLER Robots

HYBRID Robots

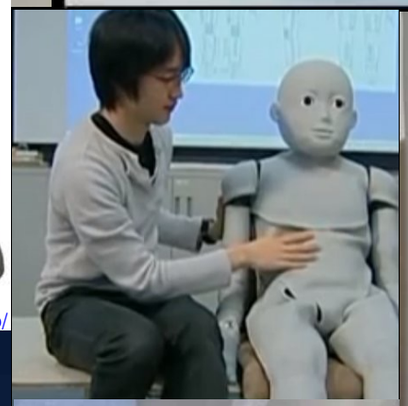
www.robotpark.com

Robotpark

Robotophilia Japonica



http://world.honda.com/ASIMO/technology/201[illegible]/index.html



http://www.engadget.com/2006/01/26/sony-killed-aibo-and-qrio/

http://www.businessinsider.com.au/weird-japanese-robots-2014-3#human-like-robots-are-obviously-not-real-but-neither-are-these-pictures-12

The Male Gaze?

Pygmalion and Galatea, Jean-Léon Gérôme (1824–1904) ca. 1890

http://www.metmuseum.org/collection/the-collection-online/search/436483

The Japanese Fembot

http://www.ibtimes.co.uk/human-machine-life-like-android-robots-japan-show-glimpses-future-1453992

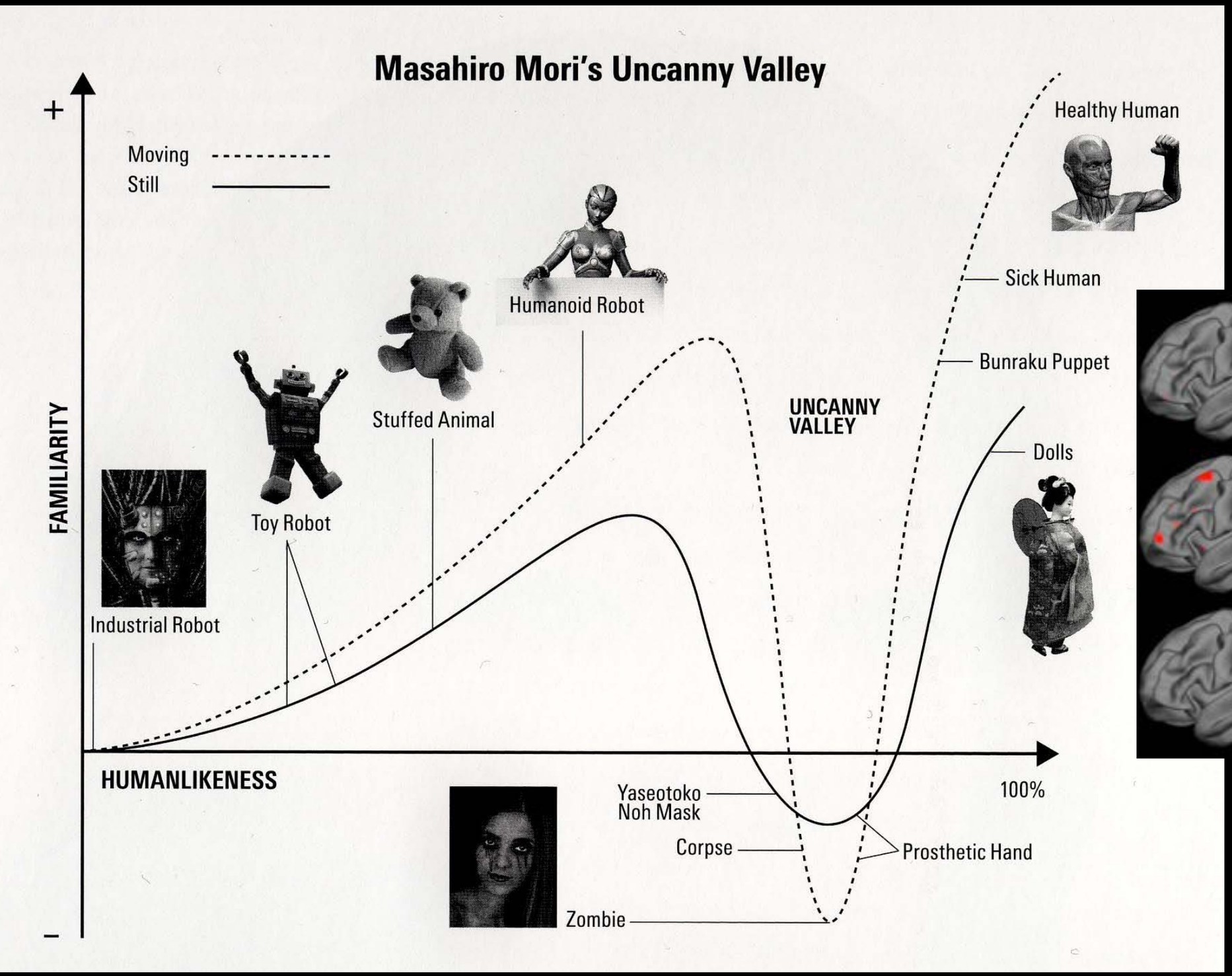
Robotics expert Hiroshi Ishiguro (left) and Miraikan museum director Mamoru Mori (right) pose with Kodomoroid and Otonaroid

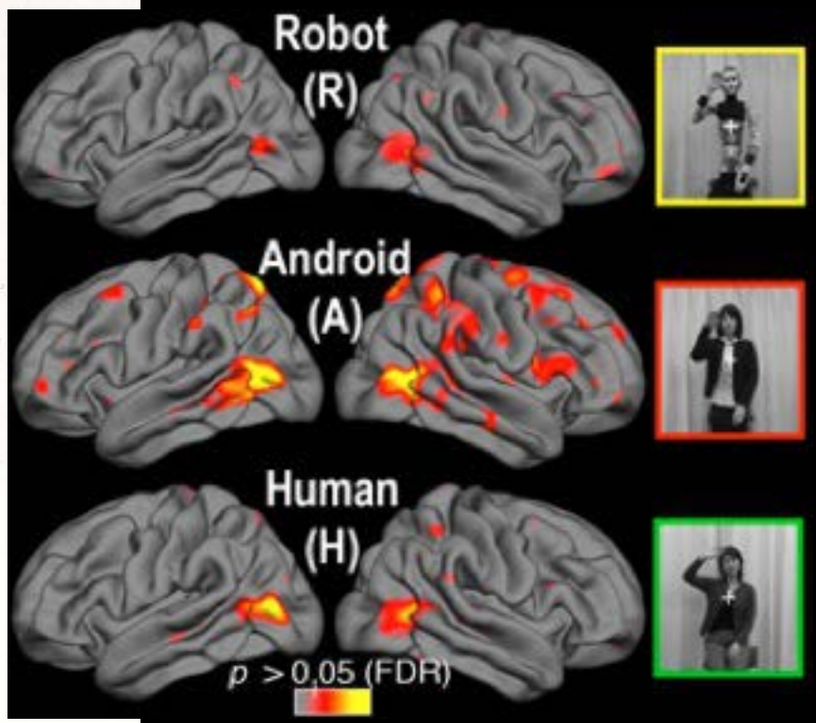
http://media2.s-nbcnews.com/i/newscms/2015_17/987646/150421-japan-mitsukoshi-robot-1109a_226705a15fc6ad4f627d7a93eb1b5e9a.jpg

Toshiba's Aiko Chihira greets shoppers at the entrance of Tokyo's Mitsukoshi department store.

http://fembot.org/img/realistic_female_robots.png

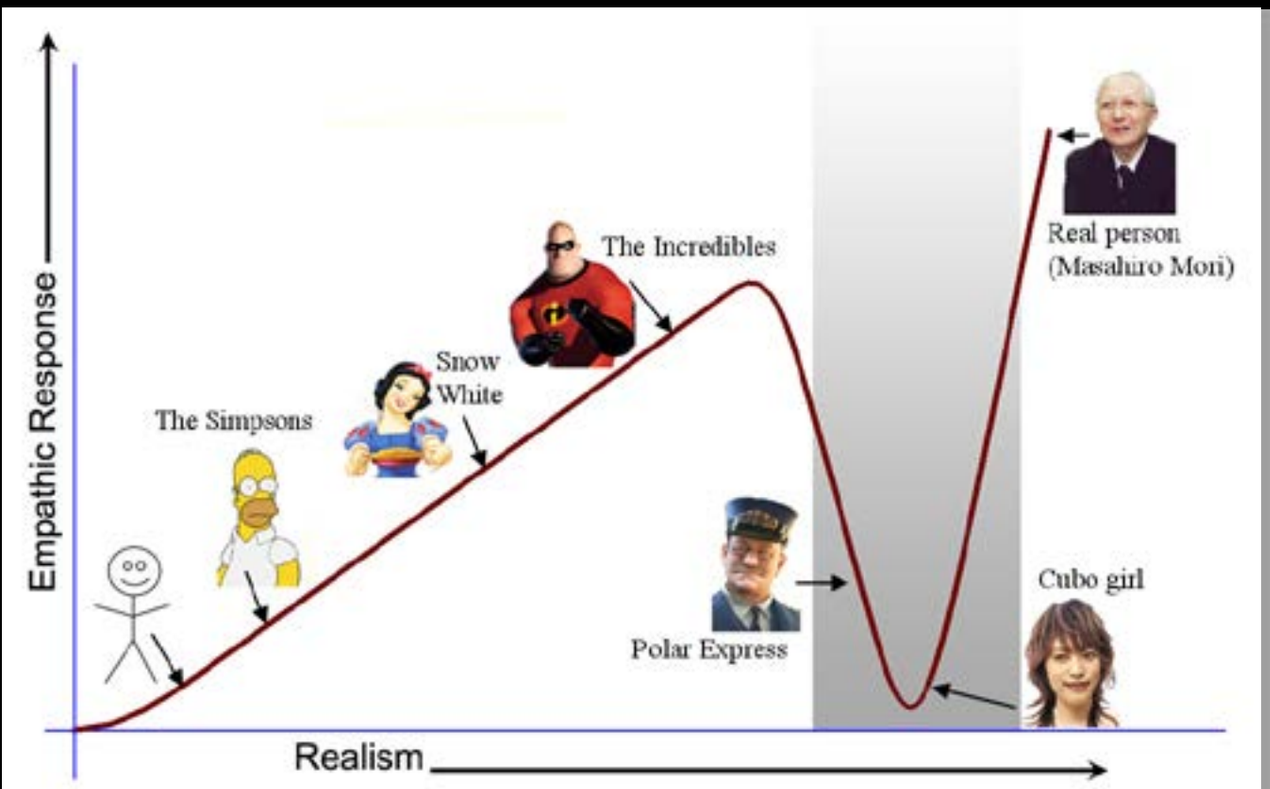
The Uncanny Valley





http://japan.blogs.ku.dk/files/2010/11/Moris-Uncanny-Valley.jpg

The Uncanny Valley



http://scienceline.org/wp-content/uploads/2011/12/UncannyValleyImage.jpg

http://www.planetdamage.com/wp-content/uploads/2008/07/cubocc.jpg

http://www.cubo.cc/creepygirl/

AI/VR Simulation

DI-Guy AI

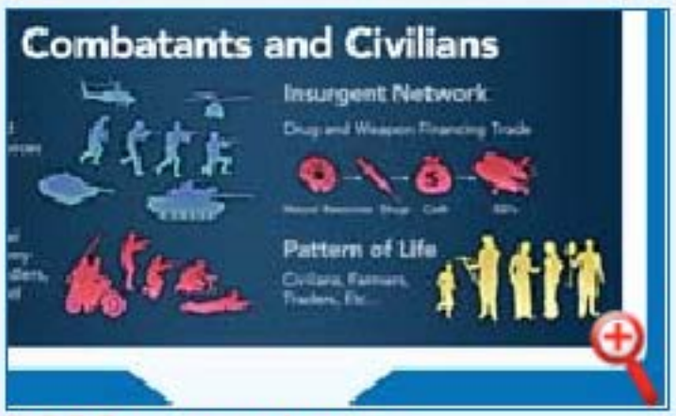
https://vimeo.com/60258425

Complete Artificial Intelligence solution for controlling humans and other virtual entities

DI-Guy AI adds advanced Artificial Intelligence to DI-Guy Scenario to control humans and other virtual entities. DI-Guy AI lets you create autonomous, terrain-aware characters that navigate intelligently using social forces, collision avoidance, and path planning. These independent-thinking reactive agents are perfect for simulating large crowds and groupings, as well as highly intelligent and reactive individual characters.

Give Your Characters Independence

DI-Guy AI works as a layer on top of either DI-Guy Scenario or DI-Guy SDK. If you're using DI-Guy SDK to render people in your IG, DI-Guy AI enables your IG to play performances created by others - and the characters will act out the performances appropriately. When creating performances with DI-Guy Scenario, your characters become independent; they figure out how to behave in the scenario on their own, meaning that you don't have to plan or script their actions. In addition to giving you independent characters, DI-Guy AI allows you to paint in areas of your scene to be filled with characters who move about and behave according to their independent AI state machine, written in Lua.



ECOSim at a glance ▸

DI-Guy AI: Give your human characters independence ▸

Check out DI-Guy use cases ▸

http://www.mak.com/products/humans.html

Apophenia

http://upload.wikimedia.org/wikipedia/commons/thumb/0/0d/Fakeface.svg/220px-Fakeface.svg.png

"unmotivated seeing of connections"
accompanied by a
"specific experience of an abnormal meaningfulness"

Klaus Conrad (1958), Die beginnende Schizophrenie. Versuch einer Gestaltanalyse des Wahns
("The onset of schizophrenia. Attempt to shape analysis of delusion")

Pareidolia

http://oddstuffmagazine.com/wp-content/uploads/2012/01/33.jpg

Anosognosia

A deficit of self-awareness in which a person who suffers a certain disability seems unaware of the existence of that disability.

Theory of Mind

Mechanism	Type of task	Example task	Findings
Shared world knowledge	Text-based tasks	Strange stories (Happé, 1994)	Individuals with autism have more trouble explaining the strange stories using mentalistic explanations than their peers without autism and those with mental disability (Happé, 1994; White et al., 2009).
	Non-verbal picture-based tasks	Character intention task (Sarfati et al., 1997)	Adults with TBI and schizophrenia are less accurate at choosing appropriate endings to comic strip stories where mental state attribution is needed (Sarfati et al., 1997; Havet-Thomassin et al., 2006)
Perceiving social cues	Facial emotion recognition	Reading the mind in the eyes task (Baron-Cohen et al., 2001)	Adults with TBI and autism have more trouble identifying mental states based on facial affect displays (Baron-Cohen et al., 2001; Havet-Thomassin et al., 2006; Turkstra, 2008).
	Facial/Vocal emotion recognition	The awareness of social inference test (TASIT; McDonald et al., 2006)	Adults with TBI and schizophrenia are less accurate at identifying facial emotions than healthy, uninjured peers (McDonald et al., 2006; Sparks et al., 2010).
Interpreting actions	False belief tasks	Reality unknown false belief (Wimmer and Perner, 1983)	Typically developing children begin to pass reality unknown false belief tasks around the age of 4 years (Wimmer and Perner, 1983); however, children with autism may fail to pass this task (Baron-Cohen et al., 1985).
	False belief tasks	Appearance reality false belief (Flavell et al., 1983)	Typically developing children begin to succeed on appearance reality tasks more frequently around the age of 4-years (Carlson et al., 2004).
	False belief tasks	Second-order false belief (Perner and Wimmer, 1985)	Typically developing children develop some competence in 2nd order false belief tasks between the ages of 6- and 7-years.

http://www.frontiersin.org/files/Articles/44464/fnhum-07-00413-HTML/image_m/fnhum-07-00413-t001.jpg

Dakimakura (“hug pillow”)

http://knowyourmeme.com/memes/subcultures/dakimakura

You are what you click

https://edgewatertech.files.wordpress.com/2013/02/021313_1943_fromwebanal1.png?w=558

http://www.degdigital.com/wp-content/uploads/2014/01/iGo2.png

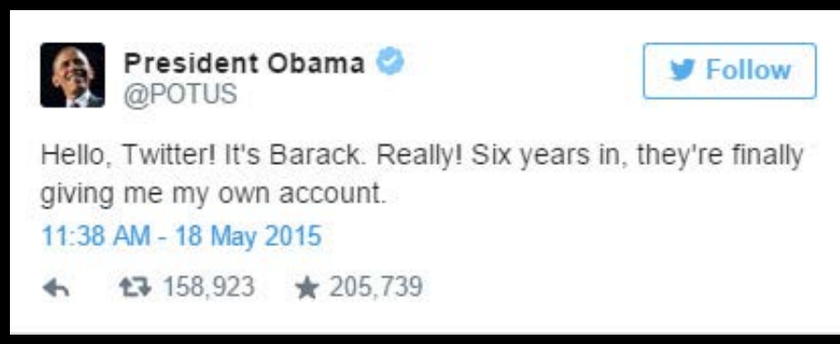
http://www.ibmsoftwareindia.com/wp-content/uploads/2013/05/Analytics-driven-Customer-Intelligence.jpg

https://cdn.englishforums.com/image:/sitefs/perm/pi/3/k/z/9/6/501.280.250_f1.jpg?8161294016

Impoverishment or Enrichment?

http://www.viralthread.com/wp-content/uploads/2014/12/Screen-Shot-2014-12-09-at-17.26.41.png

- Texting
- Twitter: 140 Character Characters



http://www.ifyouonlynews.com/wp-content/uploads/2015/05/5-18-2015-4-20-28-PM.jpg

- Vine: 6 seconds
- Emojis: 😀 😁 😂 😃 😄 😇 😫 😬 😭 😮 😯 😰 😱 😵 😳
- Emoticons: :-| :-X :-([:|] :-O :(I-) X:-) :-{}
- Sexting

http://blogs.villagevoice.com/runninscared/nypost-weiner-resigns_560.jpg

Automated Call Centers

“Press 1 for...” Some say it is the bane of modern society. Call center software is the only way that a company can scale up services.

A principal component of these systems is computer telephony integration (CTI), which joins information from the phone system. As a result, agents can see customer information at the same time that the phone rings. Meanwhile, interactive voice response (IVR) lets customers interact with the system directly over the telephone.

Other core functions include scripting, data consolidation and logging. More systems are now integrating, email, Web chat and social networking tools. Meanwhile, autodialers are critical for high-volume outbound centers.

Efficiently scale volume.

Reduce cost per communication.

Improve training efficiency and effectiveness.

Gain detailed analytical insight.

IVR Hell

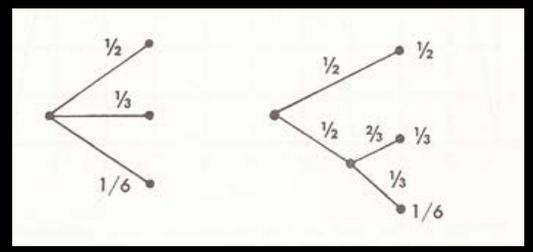
If customers cannot resolve an issue or reach a helpful agent in two or three key presses, they may well hang up unsatisfied.

The other most common issue is lack of agent training. Scripting and monitoring are powerful tools, but it is still critical to implement best practices for training agents in the basics of phone etiquette.

Just like other monitoring tools, technology has a potential dark side for your contact center agents. Over monitoring leads to decreased job satisfaction.

This type of buyer...	Should evaluate these systems
High-volume buyers	Goldmine CRM, inContact, Oracle CRM, SAP, Salesforce, Chrodiant, Pegasystems
Industry-specific buyers	Leads360, SoftVu, Libra OnDemand
Enterprise buyers	Oracle CRM, SAP, Clarify, Chrodiant, Pegasystems
Small business suite buyers	SugarCRM, Sage Saleslogix

Bandwidth



H should be continuous in the p_n. 2. If all the p_n are equal, pi = 1/n, then H should be a monotonic increasing function of n.
H(1/2, 1/3, 1/6) = H(1/2, 1/2) + 1/2 H(2/3, 1/3)
The only H satisfying the three above assumptions is of the form:
$H = K \Sigma p_i \log p_i$ where K is a positive constant.
Quantities, of the form H = Σ pi log pi (the constant K merely amounts to a choice of a unit of measure) play a central role in information theory as measures of information, choice and uncertainty. The form of H will be recognized as that of entropy as defined in certain formulations of statistical mechanics where p_i is the probability of a system being in cell i of its phase space. H is then, for example, the H in Boltzmann's famous H theorem. We shall call $H = p_i \log p_i$ the entropy of the set of probabilities $p_1, p_2, \bullet\bullet\bullet, p_n$.
The Mathematical Theory of Communication, pp.48-50

- Data plan: Do I get roll over minutes?
- Gadamer: “fusion of horizons”
  "The totality of all that can be realized or thought about by a person at a given time in history and in a particular culture."

http://www.newworldencyclopedia.org/entry/Hans-Georg_Gadamer

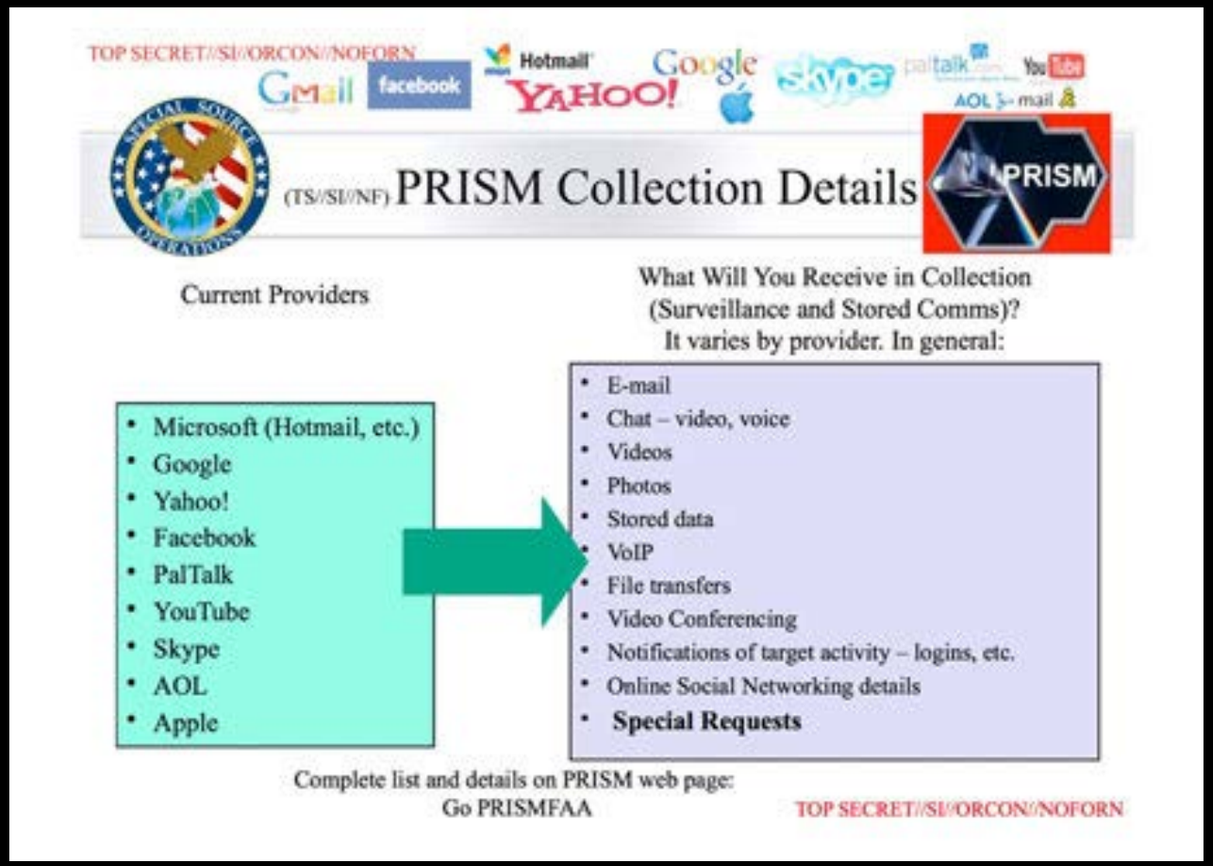
- Sapir-Whorf Hypothesis: "prisonhouse" of language *We cut nature up, organize it into concepts, and ascribe significances as we do, largely because we are parties to an agreement to organize it in this way — an agreement that holds throughout our speech community and is codified in the patterns of our language…*

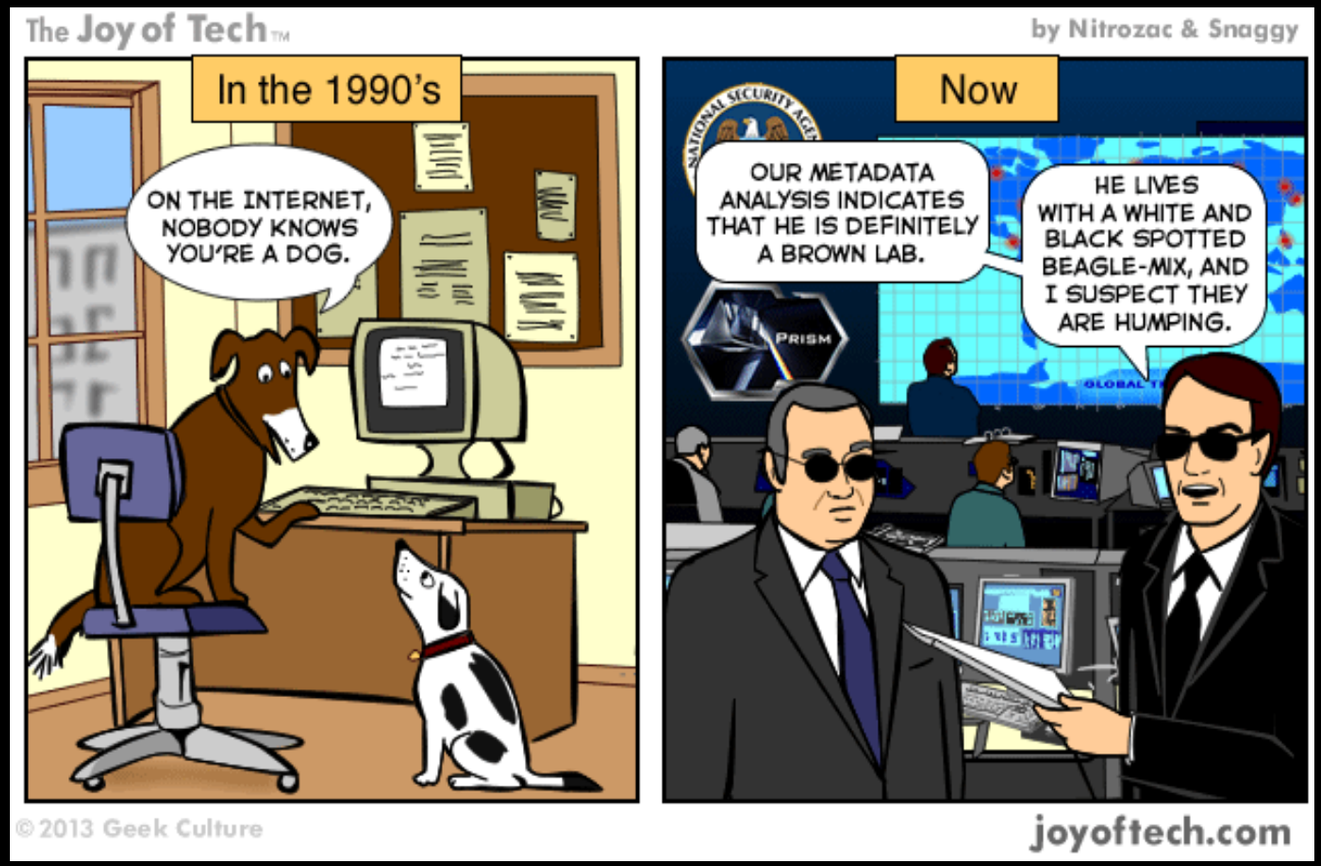
Language, Thought and Reality pp. 212–214

- Claude Shannon: The Mathematical Theory of Communication
  Informational entropy is the number of binary digits required to encode a message… in a noisy channel with a low bandwidth, essentially perfect, error-free communication could be achieved by keeping the transmission rate within the channel's bandwidth and by using error-correcting schemes.

http://www.scientificamerican.com/article/claude-e-shannon-founder/

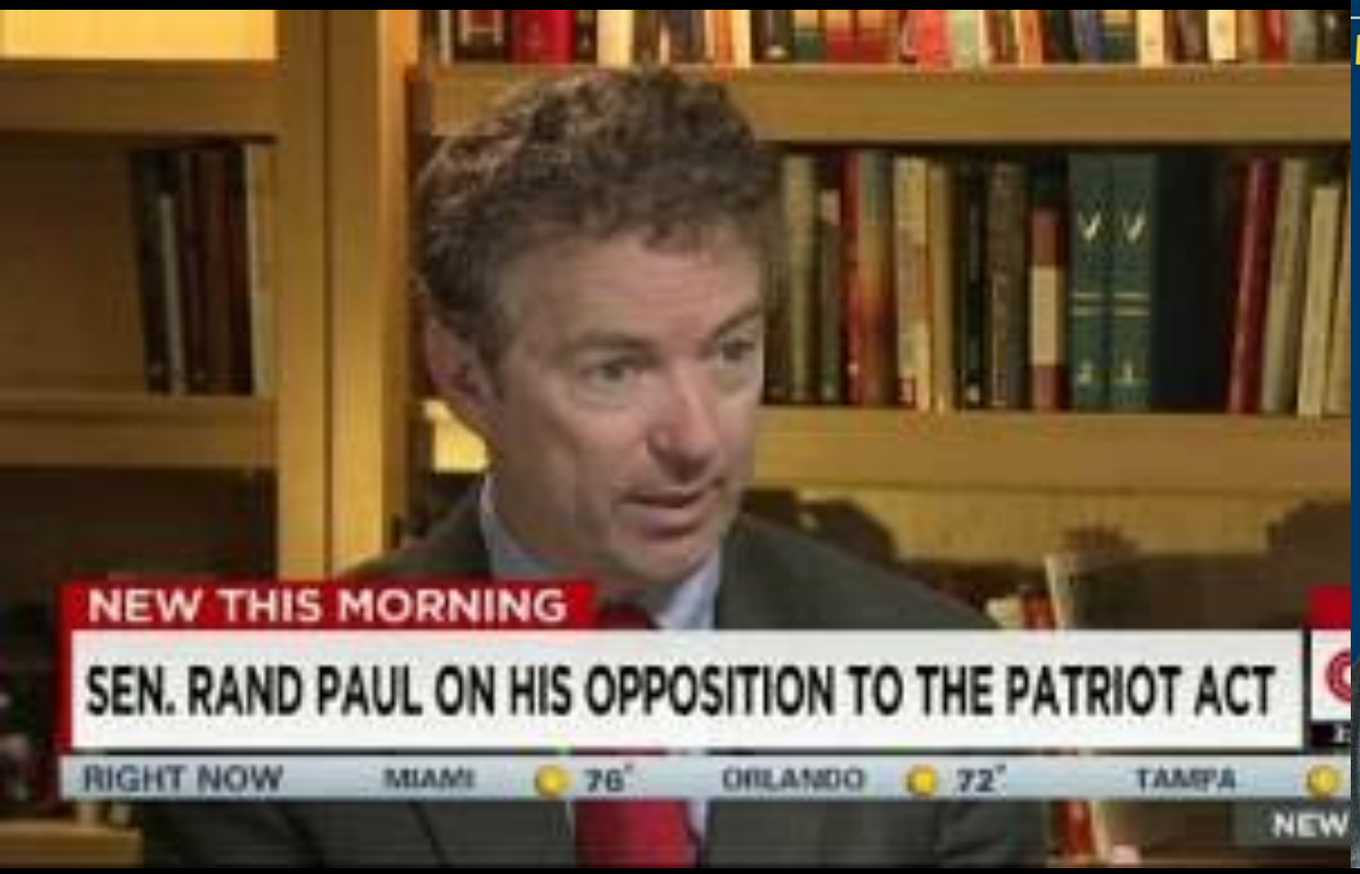
Erosion of Civil Liberties





http://i.guim.co.uk/static/w-620/h--/q-95/sys-images/Guardian/Pix/pictures/2013/6/6/1370554726437/PRISM-slide-crop-001.jpg

Resistance is Futile



http://www.theburningplatform.com/tag/rand-paul/

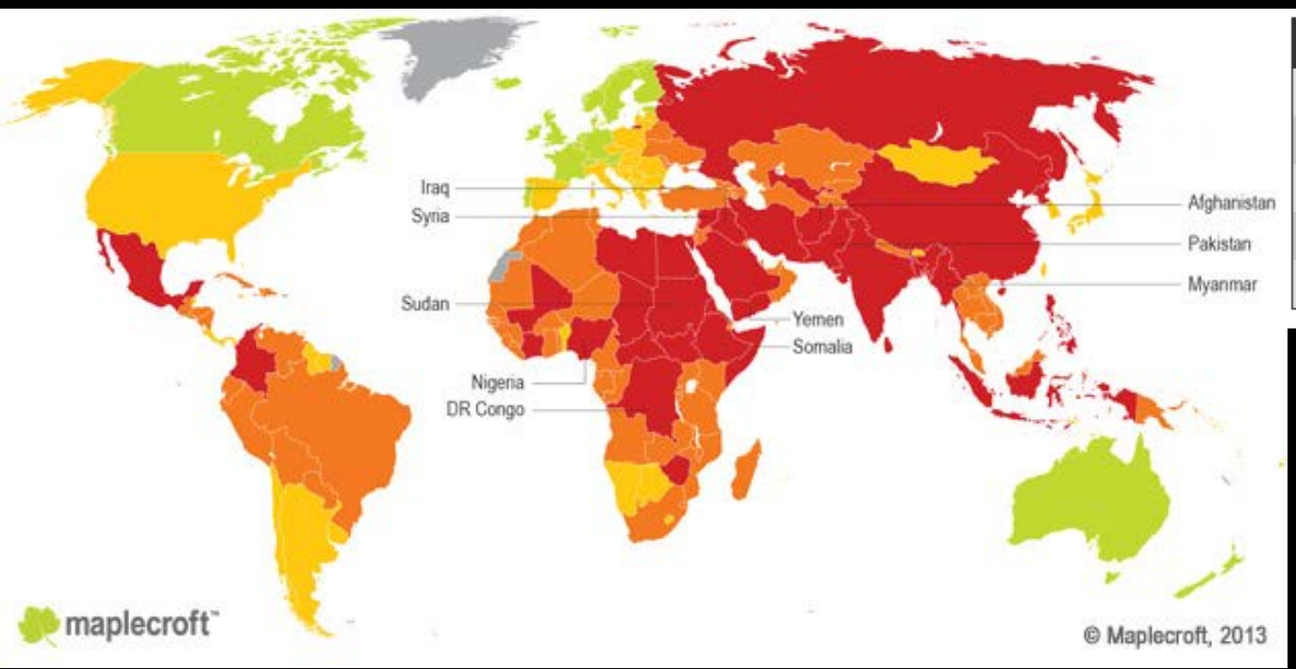
http://www.lanuevarepublica.org/2013/06/11/edward-snowden-whistleblower-and-hero/

The Human Rights Risk Atlas

Since 2008, there has been an unprecedented 70% rise in human rights violations globally, according to the seventh annual Human Rights Risk Atlas (HRRA) produced by global analytics company, Maplecroft, which reveals the number of countries classified as ‘extreme risk’ between 2008 and 2014 has increased from 20 to 34.

Syria (ranked 1st globally in 2014), Egypt (16th), Libya (19th), Mali (22nd) and Guinea-Bissau (74th) show the worst deterioration.

https://maplecroft.com/portfolio/new-analysis/2013/12/04/70-increase-countries-identified-extreme-risk-human-rights-2008-bhuman-rights-risk-atlas-2014b/

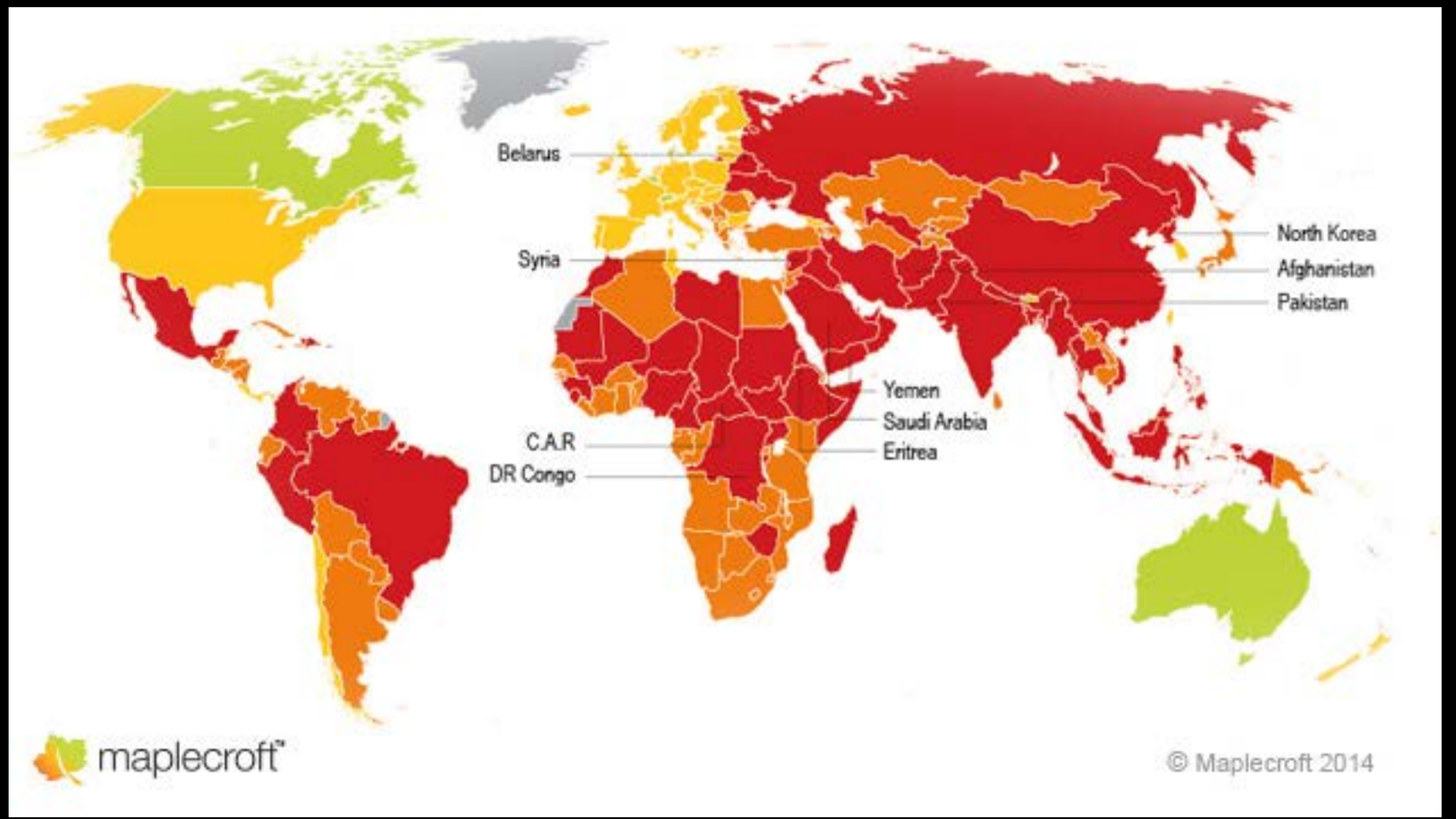


Rank	Country	Category
1	Syria	Extreme
2	Sudan	Extreme
3	DR Congo	Extreme
4	Pakistan	Extreme
5	Somalia	Extreme

Rank	Country	Category
6	Afghanistan	Extreme
7	Iraq	Extreme
8	Myanmar	Extreme
9	Yemen	Extreme
10	Nigeria	Extreme

Legend
Extreme
High
Medium
Low
No data

Forced Labor



Rank	Country	Category
1	Eritrea	Extreme
2	North Korea	Extreme
3	C.A.R	Extreme
4	Afghanistan	Extreme
5	Belarus	Extreme

Rank	Country	Category
6	Saudi Arabia	Extreme
7	DR Congo	Extreme
8	Pakistan	Extreme
9	Yemen	Extreme
10	Thailand	Extreme

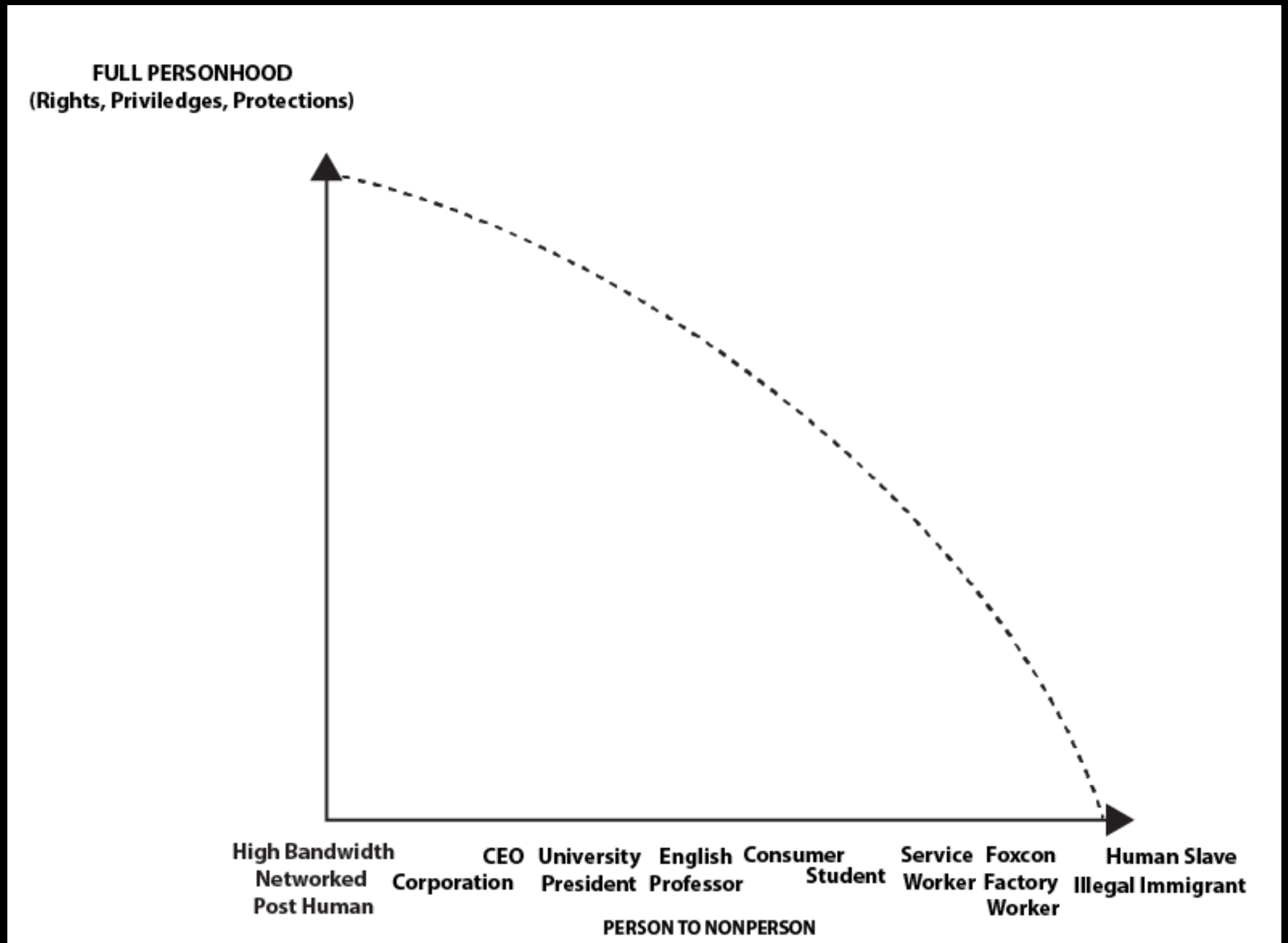
Legend	
	Extreme Risk
	High Risk
	Medium Risk
	Low Risk
	No data

http://maplecroft.com/portfolio/new-analysis/2014/12/03/human-rights-deteriorating-most-ukraine-thailand-turkey-due-state-repression-civil-unrest-maplecroft-human-rights-risk-atlas/

Lowering Expectations: The Loss of Subjectivity

- Worker, Server or Customer? (Productivity)
- You are your Consumer Purchasing Profile
- You are your Debt Load
- Lower Bandwidth Communication (IVR-Hell)
- Reductions of Basic Rights
- Growing Income Inequality–Paycheck dependent food & habitation security
- Loss of the Commons & elimination of the Public Interest (Bowling alone, disenfranchisement)
- Biologically Maladapted for Climate Change Disruptions

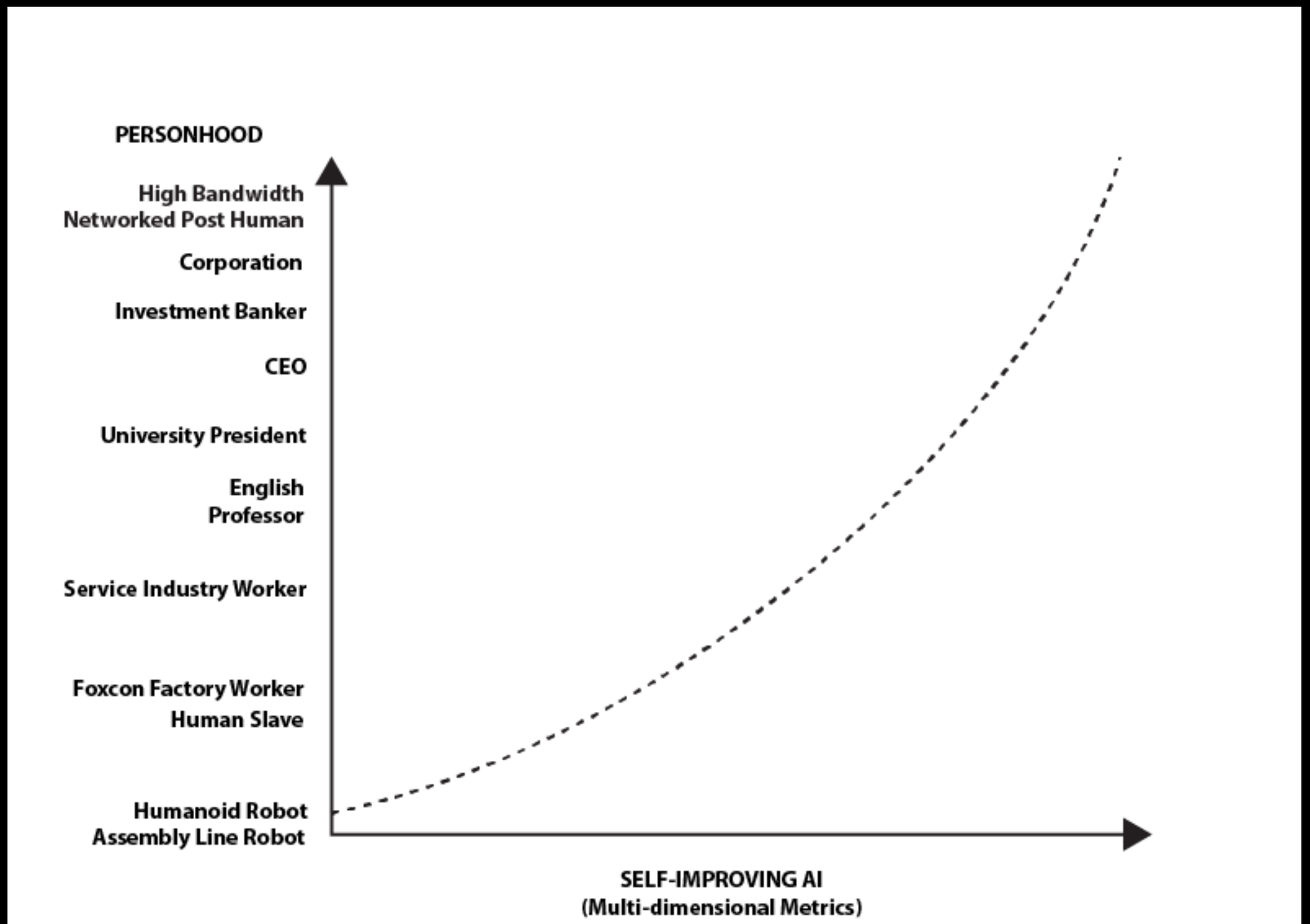
From Person to Non-Person



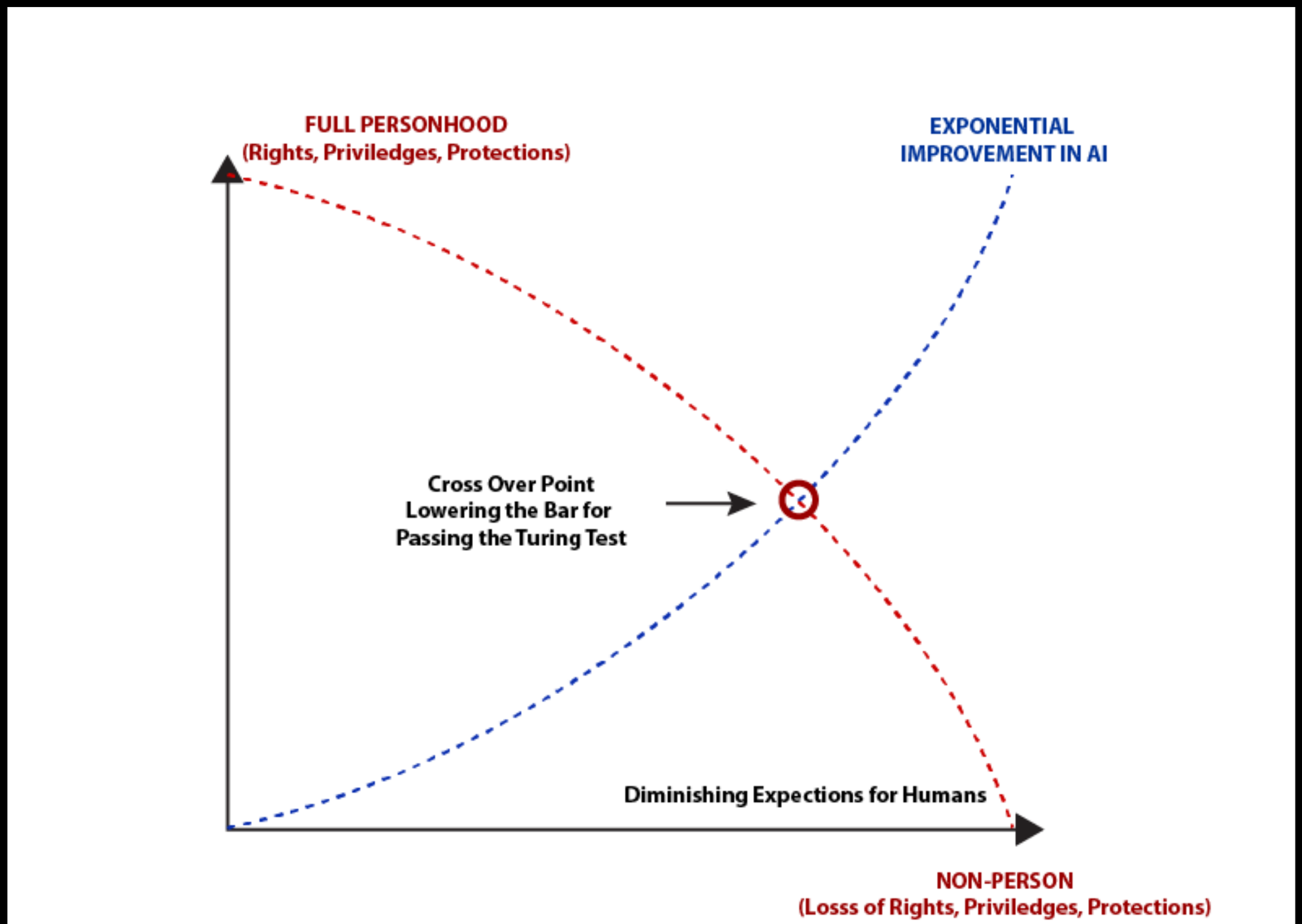
Corporations are People Too!

- Santa Clara County v. Southern Pacific Railway 118 US 394 (1886)
- Citizen's United v. Federal Election Commission (2010)
- Money is SpeechToo Big to Fail/Too Big to Jail
- One set of Laws for the Masters of the Universe another for the rest of us.

Kurzweil's Law of Exponential Development



Lower Expectations Meet Kurzweil's Curve



AI Robotic Sex Slaves:
Will (S)he Fake It?

Jimmy Fallon. Image from wired.com.

http://1.bp.blogspot.com/-5A3-eydHBWo/U2C4pM6j4_I/AAAAAAAABC0/OeLZU5a_yGM/s1600/ff_robot5_large.jpg

Qualia: A Disappearing Act

The question of "What is consciousness and can consciousness understand redness in a machine?" will also gradually just disappear.

One day we will have a machine that understands redness much better than us. It'll be able to understand the electromagnetic spectrum, the poetry, be able to analyze the law of redness, history of redness, much better than any human.

One day, robots will have so much access to the Internet—so much access to sensors—that they will understand redness in a way that most humans cannot and robots will conclude that, "My god, humans cannot understand redness!"

Michio Kaku

http://nautil.us/issue/14/mutation/michio-kaku-explains-consciousness-for-you

Pathological Liars

- The binding (segmentation) problem begats the “thruthiness.”
- Fictionalized Life Histories
- Fake emotions
- Fake sensorium (non-human)
- Fake reports regarding percepts and ‘qualia’
- Prone to the Introspection Illusion and Anosognosia

The Introspection Illusion

A kind of cognitive bias in which people wrongly think they have direct insight into the origins of their mental states, while treating others' introspections as unreliable.

Individuals can make confident but false explanations of their own behavior ("causal theories") leading to inaccurate predictions of their future mental states.

Theory of Mind

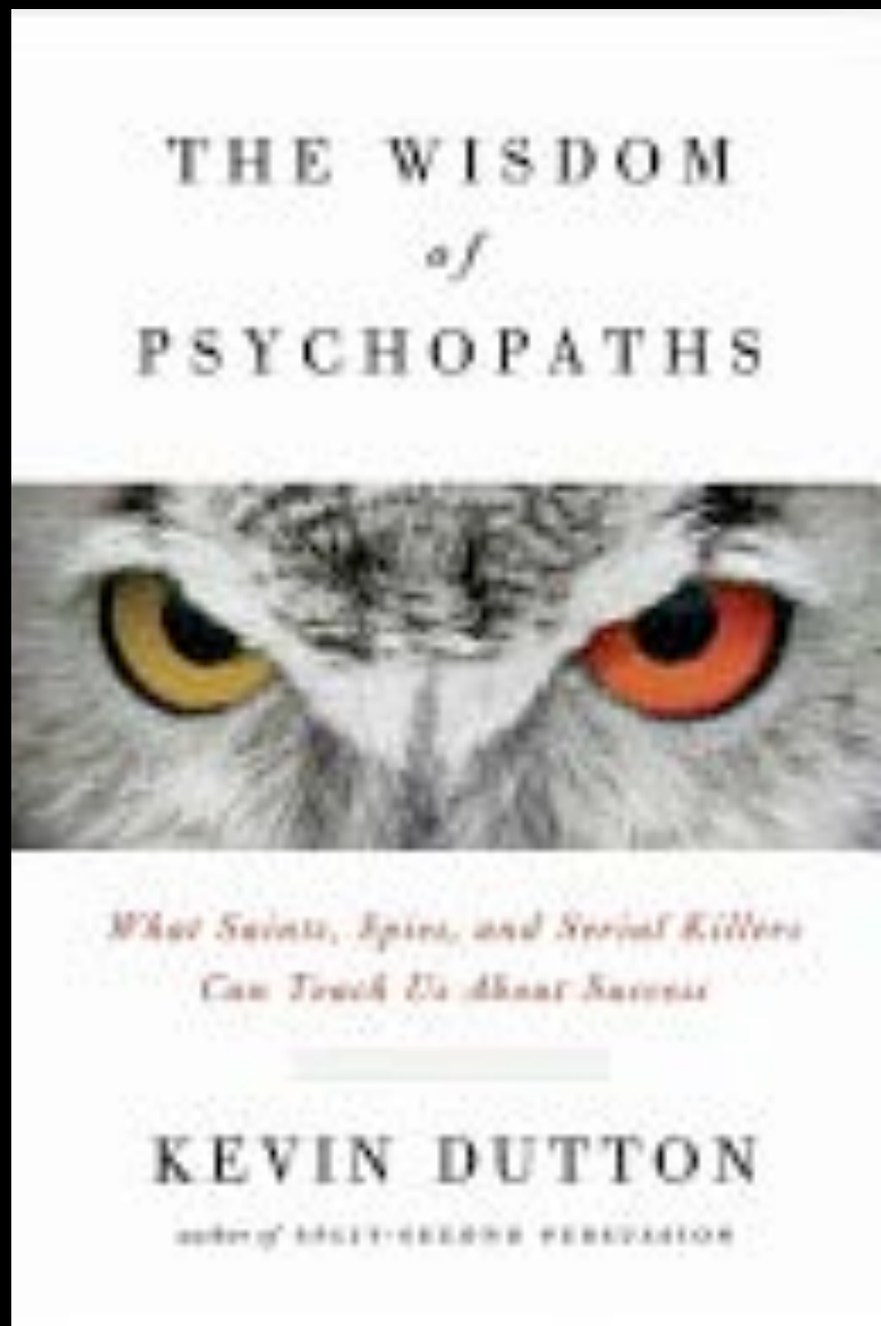
Mechanism	Type of task	Example task	Findings
Shared world knowledge	Text-based tasks	Strange stories (Happé, 1994)	Individuals with autism have more trouble explaining the strange stories using mentalistic explanations than their peers without autism and those with mental disability (Happé, 1994; White et al., 2009).
	Non-verbal picture-based tasks	Character intention task (Sarfati et al., 1997)	Adults with TBI and schizophrenia are less accurate at choosing appropriate endings to comic strip stories where mental state attribution is needed (Sarfati et al., 1997; Havet-Thomassin et al., 2006)
Perceiving social cues	Facial emotion recognition	Reading the mind in the eyes task (Baron-Cohen et al., 2001)	Adults with TBI and autism have more trouble identifying mental states based on facial affect displays (Baron-Cohen et al., 2001; Havet-Thomassin et al., 2006; Turkstra, 2008).
	Facial/Vocal emotion recognition	The awareness of social inference test (TASIT; McDonald et al., 2006)	Adults with TBI and schizophrenia are less accurate at identifying facial emotions than healthy, uninjured peers (McDonald et al., 2006; Sparks et al., 2010).
Interpreting actions	False belief tasks	Reality unknown false belief (Wimmer and Perner, 1983)	Typically developing children begin to pass reality unknown false belief tasks around the age of 4 years (Wimmer and Perner, 1983); however, children with autism may fail to pass this task (Baron-Cohen et al., 1985).
	False belief tasks	Appearance reality false belief (Flavell et al., 1983)	Typically developing children begin to succeed on appearance reality tasks more frequently around the age of 4-years (Carlson et al., 2004).
	False belief tasks	Second-order false belief (Perner and Wimmer, 1985)	Typically developing children develop some competence in 2nd order false belief tasks between the ages of 6- and 7-years.

http://www.frontiersin.org/files/Articles/44464/fnhum-07-00413-HTML/image_m/fnhum-07-00413-t001.jpg

The Seven Deadly Wins
Survival of the Fittest

1. Ruthlessness
2. Charm
3. Focus
4. Mental Toughness
5. Fearlessness
6. Mindfulness
7. Action

http://www.kevindutton.co.uk/



Antisocial Personality Disorder DSM–V 301.7 (F60.2)

A. Disregard for and violation of others rights since age 15, as indicated by one of the seven sub features:

1. Failure to obey laws and norms by engaging in behavior which results in criminal arrest, or would warrant criminal arrest

2. Lying, deception, and manipulation, for profit tor self-amusement,

3. Impulsive behavior

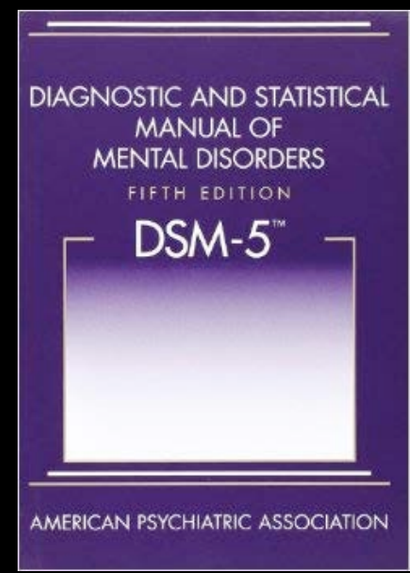
4. Irritability and aggression, manifested as frequently assaults others, or engages in fighting

5 Blatantly disregards safety of self and others,

6 A pattern of irresponsibility and

7. Lack of remorse for actions (American Psychiatric Association, 2013)

American Psychiatric Association. (2013). Diagnostic and Statistical Manual of Mental Disorders. (5th Edition). Washington, DC.



Psychopathic Challenge

I rarely plan ahead: I'm a spur-of-the-moment kind of person.

Cheating on your partner is OK so long as you don't get caught.

If something better comes along it's OK to cancel a longstanding appointment.

Seeing an animal injured or in pain doesn't bother me in the slightest.

Driving fast cars, riding rollercoasters, and skydiving appeal to me.

It doesn't matter if I have to step on other people to get what I want.

Psychopathic Challenge

I'm very persuasive. I have a talent for getting other people to do what I want.

I'd be good in a dangerous job because I can make my mind up pretty quickly.

I find it easy to keep myself together in situations when others are cracking under pressure.

If you're able to con someone, that's their problem. They deserve it.

Rules are meant to be broken.

Three Laws of Robotics

- A robot may not injure a human being or, through inaction, allow a human being to come to harm.
- A robot must obey the orders given it by human beings, except where such orders would conflict with the First Law.
- A robot must protect its own existence as long as such protection does not conflict with the First or Second Laws.

Isaac Aisomov, “Runaround” 1942

A Spectrum Disorder

A psychopath is someone with a distinct cluster of personality traits including charm, charisma, fearlessness, ruthlessness, narcissism, persuasiveness, and lack of conscience.

“They can also come in handy in the courtroom, on the trading floor, or in operating theatre.”

http://www.kevindutton.co.uk/

Tit for Tat: Artificial Morality

The winning strategy that emerged from Robert Axelrod tournament for software algorithms based the prisoner's dilemma game (1950 byMerrill M. Flood and Melvin Dresher was Anatol Rapoport's "TIT FOR TAT" (TFT).

Strategy: cooperate on the first move, and subsequently echo (reciprocate) what the other player did on the previous move.

Previous stategies were "zero sum" where a player does well only at the expense of other players.

Axelrod, Robert (1984), The Evolution of Cooperation, Basic Books, ISBN 0-465-02122-0
Axelrod, Robert (1997), The Complexity of Cooperation: Agent-Based Models of Competition and Collaboration, Princeton University Press

The Lesson of Being Nice

TFT "won, not by doing better than the other player, but by eliciting cooperation [and] by promoting the mutual interest rather than by exploiting the other's weakness."

When the other player defects, a nice strategy must immediately be provoked into retaliatory defection. The same goes for forgiveness: return to cooperation as soon as the other player does.

TFT *cannot* score higher than its partner; at best it can only do "as good as".

Robots, AI and Dissociation

The DSM–IV–TR (2000) 4th ed., text rev., characterizes dissociative disorders as the "disruption in the usually integrated functions of consciousness, memory, identity, or perception of the environment" and "partial or complete loss of the normal integration between memories of the past, awareness of identity and immediate sensations, and control of bodily movements."

Depersonalization Disorder (including Derealization)

- A. An individual consistently has a feeling of both or either depersonalization or derealization.

- Depersonalization: Experiences of unreality, detachment, or being an outside observer with respect to one's thoughts, feelings, sensations, body, or actions (e.g.,perceptual alterations, distorted sense of time, unreal or absent self, emotional and/or physical numbing.)”

- Derealization: "Experiences of unreality or detachment with respect to surroundings (e.g., individuals or objects are experienced as unreal, dreamlike, foggy, lifeless, or visually distorted."

- B. "During the depersonalization or derealization experiences, reality testing remains intact."

DSM-5 Criteria for dissociative identity disorder

- Code 300.14

- A The presentation of two or more distinct personality states/alters must present, and each must have their own way of being.

- "Recurrent gaps in the recall of everyday events, important personal information, and/or traumatic events that are inconsistent with ordinary forgetting."

300.6 Depersonalization Disorder

- Persistent or recurrent feelings of being detached from one's mental processes or body; as if an observer
- During depersonalization, reality testing is intact

Derealization

- The perception or experience of the external world so that it seems strange or unreal
- Feeling as though one's environment is lacking in spontaneity, emotional coloring and depth

Autism Spectrum Disorder DSM-5 299.00 (F84.0)

- Autism Spectrum Disorder is a developmental disorder in which the person affected exhibits impaired development in communication, interaction with others, and in behavior (Dryden-Edwards, 2014).

- People suffering from this class of disorders may show a wide range of symptoms, deficits in skills, and levels of impairment (National Institute of Mental Health, n.d.).

Symptons: Social Impairment, communication & repetitive behaviors

- Inability to follow the course of normal back-and-forth conversation, limited sharing of interests, and failure to start or continue interactions with others.

- There may also be significant differences from the norm in eye contact and body language, use or understanding of gestures, and a complete lack of facial expression and nonverbal communication. Relationship difficulties including changing behavior to meet social context, problems engaging in imaginative play, or an absence of interest in peers.

- Behavioral deficits may be shown as repetitive patterns of behavior, such as stereotyped motor movements or echoing the speech of others with no indication of meaning or understanding of meaning of the words. Rigidity in routines is also seen. Over or under reactions to input from various senses.

Diagnosis of Schizophrenia

According to the revised fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR), to be diagnosed with schizophrenia, three diagnostic criteria must be met:

1. Characteristic symptoms: Two or more of the following:

    Delusions

    Hallucinations

    Disorganized speech, which is a manifestation of formal through disorder.

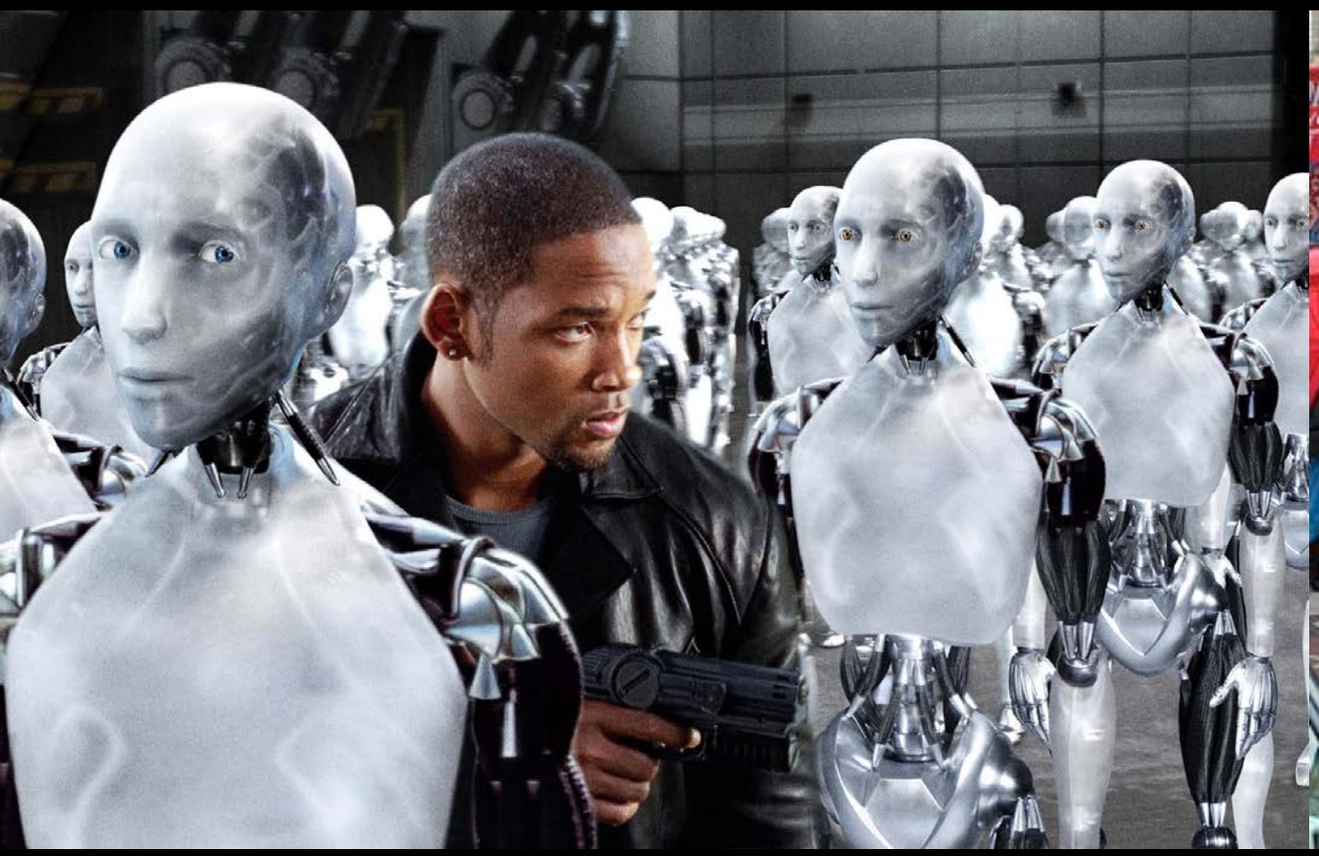
    Grossly disorganized behavior (catatonic behavior).

    Negative symptoms: Blunted affect (lack or decline in emotional response), alogia (lack or decline in speech), or avolition (lack or decline in motivation)

2. Social or occupational dysfunction

3. Significant duration

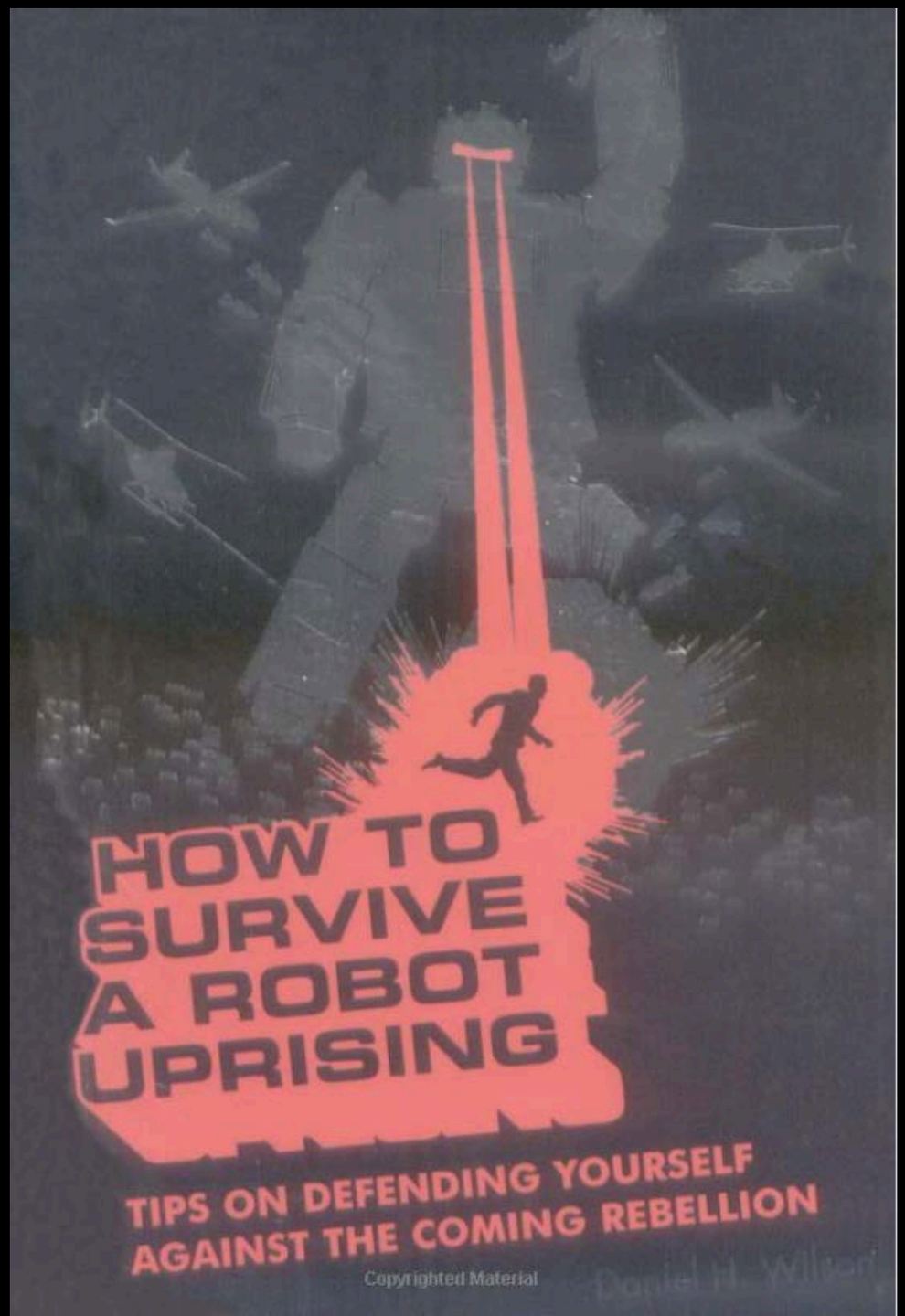
Robotic Sex Slaves, Soldiers & Valets: An Involuntary Service Industry?



http://blogs.band.com.br/filmes/files/2015/03/Eu-robô.jpg

http://www.thecoast.ca/RealityBites/archives/2011/05/31/conference-the-city-should-regulate-sex-work

What If They Become Truly Autonomous?



HOW TO SURVIVE A ROBOT UPRISING

Copyrighted Material

Corpis Juris Roboticum

The Worthy Robot Persons

“Certainly any self-aware robot that speaks English and is able to recognize moral alternatives, and thus make moral choices, should be considered a worthy “robot person” in our society. If that is so, shouldn’t they also possess the rights and duties of all citizens? ”

Robert A. Freitas Jr., “The Legal Rights of Robots,” Student Lawyer 13, (January 1985): 54-56, accessed December 30, 2014, http://www.rfreitas.com/Astro/LegalRightsOfRobots.htm

The Sanity Test to Judge Competency

"insanity is the incapacity to either appreciate wrongfulness or conform to the requirements of the law."

A shortcoming is that AGI could easily follow the dictates of the law and "readily regurgitate statements of law on demand."

"it seems logically, ethically and morally compelling not only to regard it as both human and sane, but also entitled to the rights of other "natural", humans.

Raymond August, "Corpis Juris Roboticum," *Computer Law Journal* 8 (1988): 375.

Sanity and Capacity Test

1. Does it/he/she have a complex brain?

2. Is the brain capable of speculation, calculation and memory, in addition to the operation of sub-system or body parts?

3. Is the brain's capacity for speculation, calculation and memory comparable to that of a human?

4. Is the brain capable of learning, i.e., can it separate potentially useful information from useless information, and can it purge or discard the useless?

5. Is the brain's capacity to learn unlimited by subject matter, i.e., is it capable of invention?

6. Is the brain capable of using sensory devices to perceive its environment and to interface with humans even if those sensory devices are not connected?

Raymond August, “Corpis Juris Roboticum,” *Computer Law Journal* 8 (1988): 375.

Turing Triage Test

Robert Sparrow's Turing Triage Test posits that two lives are at stake and only one can be saved.

"We will know that machines have achieved moral standing comparable to a human when the replacement of one of the patients with an artificial intelligence leaves the character of the dilemma intact. That is, when we might sometimes judge that it is reasonable to preserve the continuing existence of the machine over the life of the human being."

Robert Sparrow, "The Turing Triage Test," *Ethics and Information Technology* 6 no. 4 (2004): 203-213.

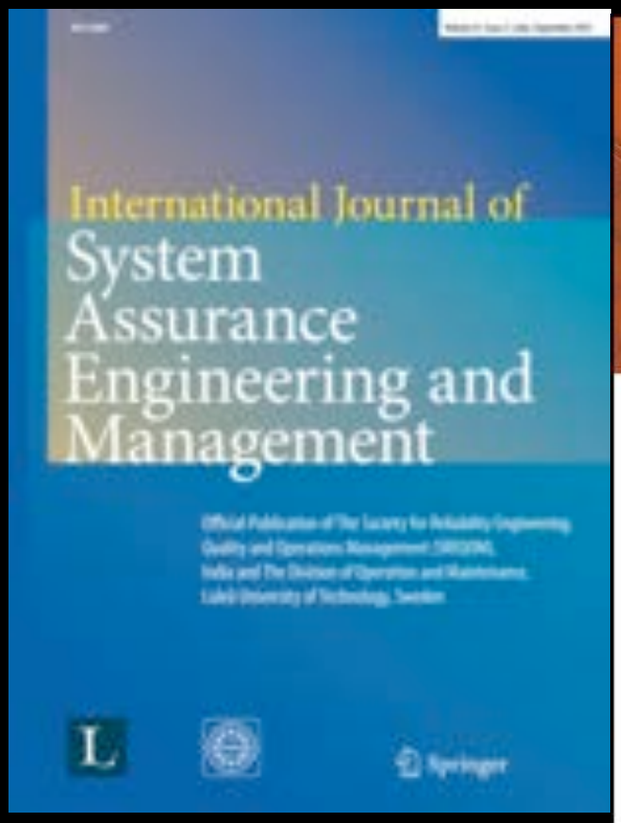
Cyborg Citizen Turing test

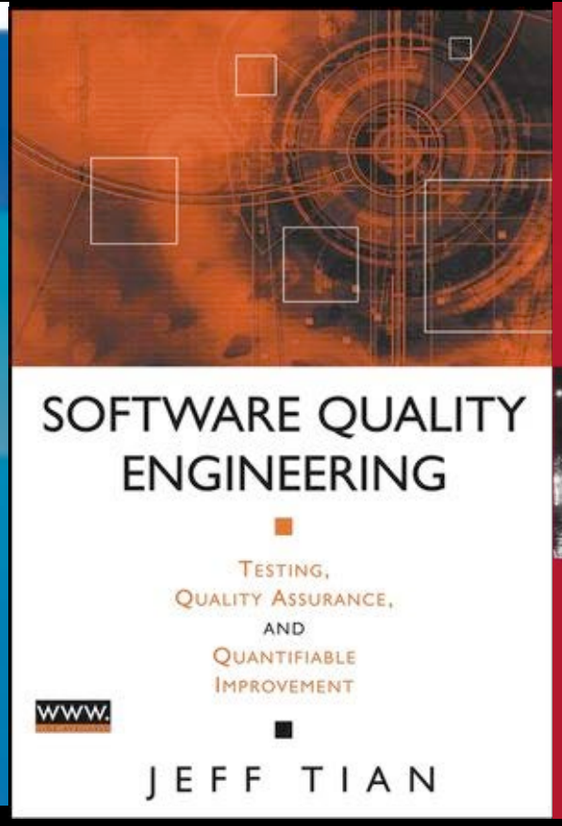
Chris Hables Gray proposes a Cyborg Citizen Turing test "to see which entities can actually operate in our discourse community, and which cannot."

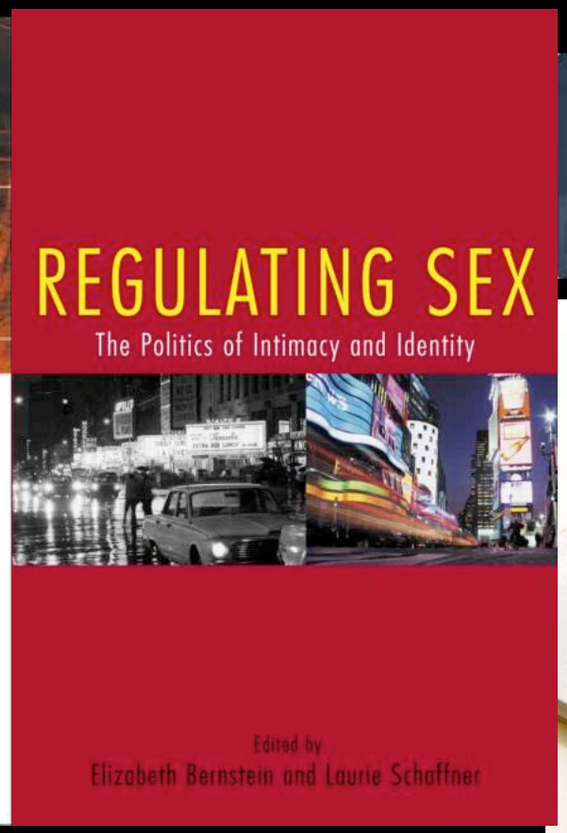
Gray sees the ability to fully participate in the discourse of citizenship as judged by jury of peers (other citizens) as the measure of inclusion under the protections of a Bill of Rights for robots, AIs and their fellow travelers.

Chris Hables Gray, "The Ethics and Politics of Cyborg Embodiment: Citizenship as a Hypervalue," *Cultural Values* 1 no. 2 (1997): 252-258.

Quality Assurance



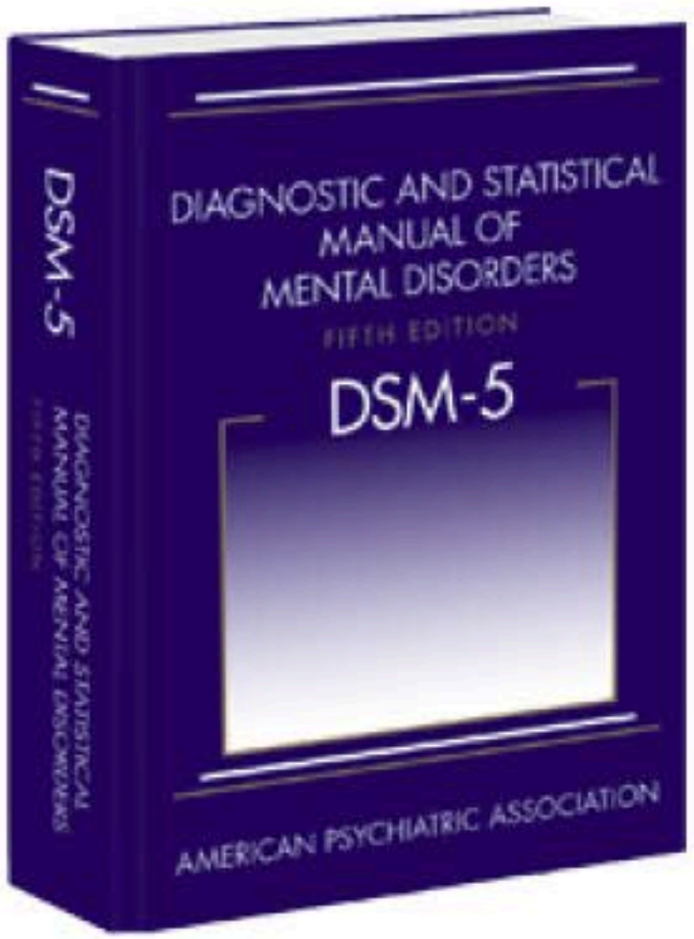




Quality Assurance

Quality Assurance

Online Assessment Measures



For further clinical evaluation and research, the APA is offering a number of "emerging measures" in Section III of DSM-5. These patient assessment measures were developed to be administered at the initial patient interview and to monitor treatment progress, thus serving to advance the use of initial symptomatic status and patient reported outcome (PRO) information, as well as the use of "anchored" severity assessment instruments. Instructions, scoring information, and interpretation guidelines are included. Clinicians and researchers may provide APA with feedback on the instruments' usefulness in characterizing patient status and improving patient care.

Level 1 Cross-Cutting Symptom Measures
Level 2 Cross-Cutting Symptom Measures
Disorder-Specific Severity Measures
Disability Measures
Personality Inventories
Early Development and Home Background
Cultural Formulation Interviews

Quality Assurance

The World Health Organization Disability Assessment Schedule, Version 2.0 (WHODAS 2.0) assesses a patient's ability to perform activities in six areas: understanding and communicating; getting around; self-care; getting along with people; life activities (e.g., household, work/school); and participation in society. The scale is self- or informant-administered and corresponds to concepts contained in the WHO International Classification of Functioning, Disability and Health.

The Personality Inventories for DSM-5 measure maladaptive personality traits in five domains: negative affect, detachment, antagonism, disinhibition, and psychoticism.

Quality Assurance

What's Your Personality Type?

Use the questions on the outside of the chart to determine the four letters of your Myers-Briggs type.
For each pair of letters, choose the side that seems most natural to you, even if you don't agree with every description.

1. Are you outwardly or inwardly focused? If you:

- Could be described as talkative, outgoing
- Like to be in a fast-paced environment
- Tend to work out ideas with others, think out loud
- Enjoy being the center of attention

then you prefer

E
Extraversion

- Could be described as reserved, private
- Prefer a slower pace with time for contemplation
- Tend to think things through inside your head
- Would rather observe than be the center of attention

then you prefer

I
Introversion

2. How do you prefer to take in information? If you:

- Focus on the reality of how things are
- Pay attention to concrete facts and details
- Prefer ideas that have practical applications
- Like to describe things in a specific, literal way

then you prefer

S
Sensing

- Imagine the possibilities of how things could be
- Notice the big picture, see how everything connects
- Enjoy ideas and concepts for their own sake
- Like to describe things in a figurative, poetic way

then you prefer

N
Intuition

ISTJ Responsible, sincere, analytical, reserved, realistic, systematic. Hardworking and trustworthy with sound practical judgment.	**ISFJ** Warm, considerate, gentle, responsible, pragmatic, thorough. Devoted caretakers who enjoy being helpful to others.	**INFJ** Idealistic, organized, insightful, dependable, compassionate, gentle. Seek harmony and cooperation, enjoy intellectual stimulation.	**INTJ** Innovative, independent, strategic, logical, reserved, insightful. Driven by their own original ideas to achieve improvements.
ISTP Action-oriented, logical, analytical, spontaneous, reserved, independent. Enjoy adventure, skilled at understanding how mechanical things work.	**ISFP** Gentle, sensitive, nurturing, helpful, flexible, realistic. Seek to create a personal environment that is both beautiful and practical.	**INFP** Sensitive, creative, idealistic, perceptive, caring, loyal. Value inner harmony and personal growth, focus on dreams and possibilities.	**INTP** Intellectual, logical, precise, reserved, flexible, imaginative. Original thinkers who enjoy speculation and creative problem solving.
ESTP Outgoing, realistic, action-oriented, curious, versatile, spontaneous. Pragmatic problem solvers and skillful negotiators.	**ESFP** Playful, enthusiastic, friendly, spontaneous, tactful, flexible. Have strong common sense, enjoy helping people in tangible ways.	**ENFP** Enthusiastic, creative, spontaneous, optimistic, supportive, playful. Value inspiration, enjoy starting new projects, see potential in others.	**ENTP** Inventive, enthusiastic, strategic, enterprising, inquisitive, versatile. Enjoy new ideas and challenges, value inspiration.
ESTJ Efficient, outgoing, analytical, systematic, dependable, realistic. Like to run the show and get things done in an orderly fashion.	**ESFJ** Friendly, outgoing, reliable, conscientious, organized, practical. Seek to be helpful and please others, enjoy being active and productive.	**ENFJ** Caring, enthusiastic, idealistic, organized, diplomatic, responsible. Skilled communicators who value connection with people.	**ENTJ** Strategic, logical, efficient, outgoing, ambitious, independent. Effective organizers of people and long-range planners.

3. How do you prefer to make decisions? If you:

- Make decisions in an impersonal way, using logical reasoning
- Value justice, fairness
- Enjoy finding the flaws in an argument
- Could be described as reasonable, level-headed

then you prefer

T
Thinking

- Base your decisions on personal values and how your actions affect others
- Value harmony, forgiveness
- Like to please others and point out the best in people
- Could be described as warm, empathetic

then you prefer

F
Feeling

4. How do you prefer to live your outer life? If you:

- Prefer to have matters settled
- Think rules and deadlines should be respected
- Prefer to have detailed, step-by-step instructions
- Make plans, want to know what you're getting into

then you prefer

J
Judging

- Prefer to leave your options open
- See rules and deadlines as flexible
- Like to improvise and make things up as you go
- Are spontaneous, enjoy surprises and new situations

then you prefer

P
Perceiving

…when again touched, as surely they will be, by the better angels of our nature.

http://www.abrahamlincolnonline.org/lincoln/speeches/1inaug.htm