

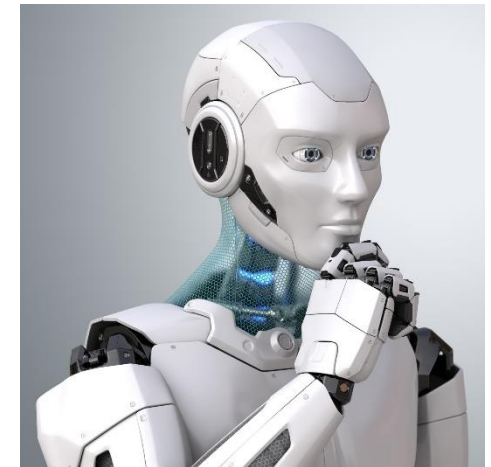
Autonomous AI without Androids

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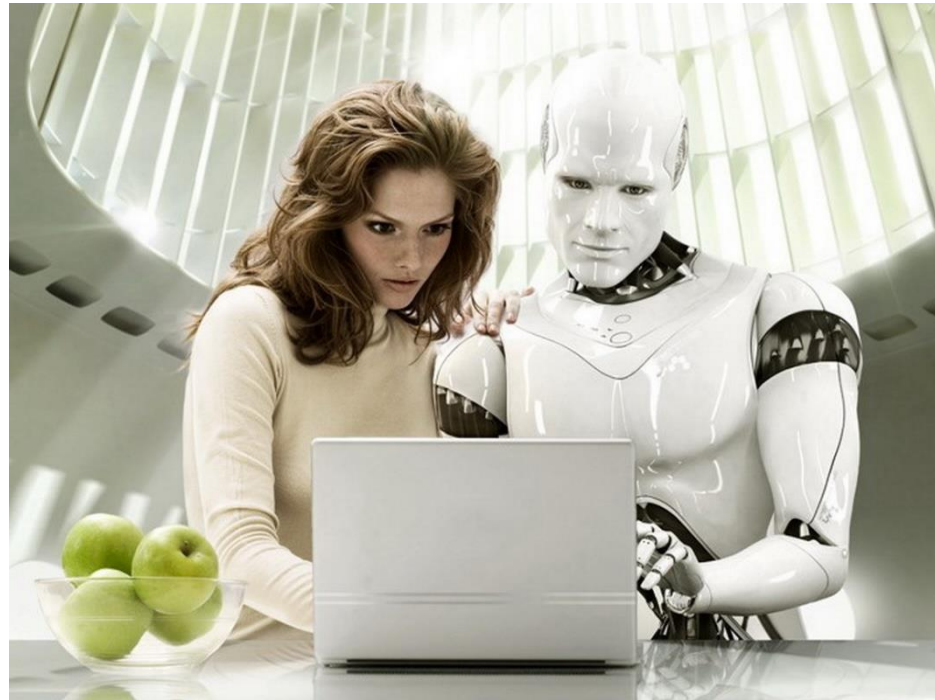
Robots vs. androids

- Robot =
 - a machine capable of carrying out a complex series of actions automatically
 - *Especially when programmed by computer.*
 - *From a Czech word for serf labor.*
- Android =
 - a robot resembling a human
 - *From the Greek for “resembling a man.”*



Robots as coworkers

- Coming: a future of working with robots.
 - Rather than humans.
 - We may treat robots as companions.
 - *Particularly if they are **androids** that can read and anticipate human emotions & reactions.*



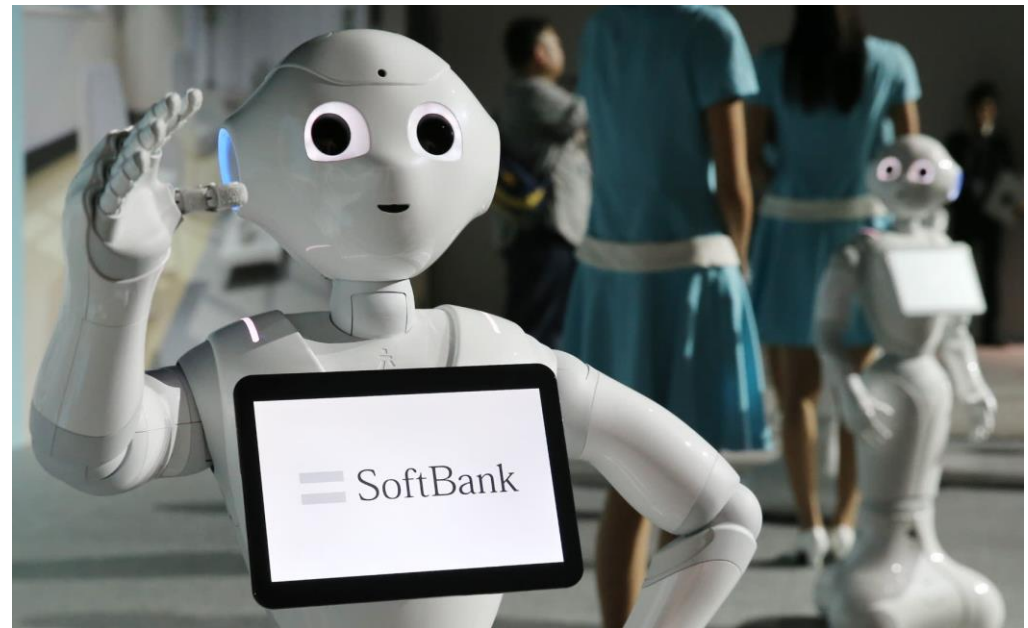
Robots as coworkers

- Coming: a future of working with robots.
 - Qihan Technology's Sanbots.
 - *Voice and facial recognition.*
 - *Video chat*
 - *Speech recognition in 26 languages*
 - *AI capabilities powered by IBM Watson.*



Robots as coworkers

- Coming: a future of working with robots.
 - This is Pepper.
 - *Can wait tables, work with employees.*
 - *In thousands of Japanese homes, where it serves as surrogate child or grandchild.*



Robots as coworkers

- Coming: a future of working with robots.
 - These are IBM Soul Machines
 - *“Digital humans” with “ability to sense, learn and adapt.”*
 - *Used for customer care, onboarding, wellness coaching, employee training.*



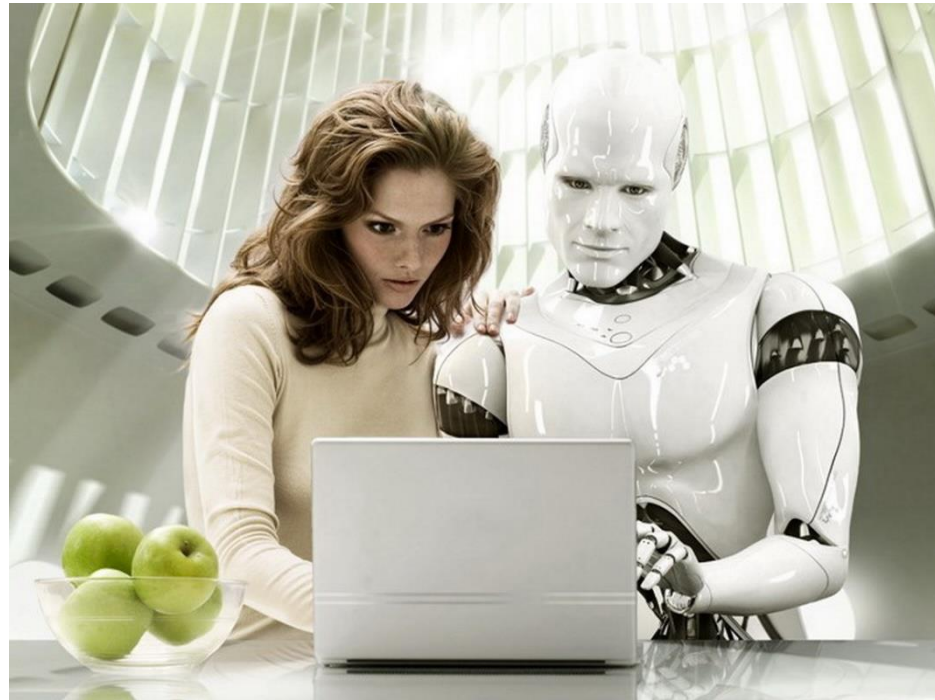
Robots as coworkers

- Rationale for working with humanlike “cobots.”
 - We can relate more effectively to robots like us.
 - *They can read our emotions and adjust accordingly.*
 - *This results in greater productivity.*



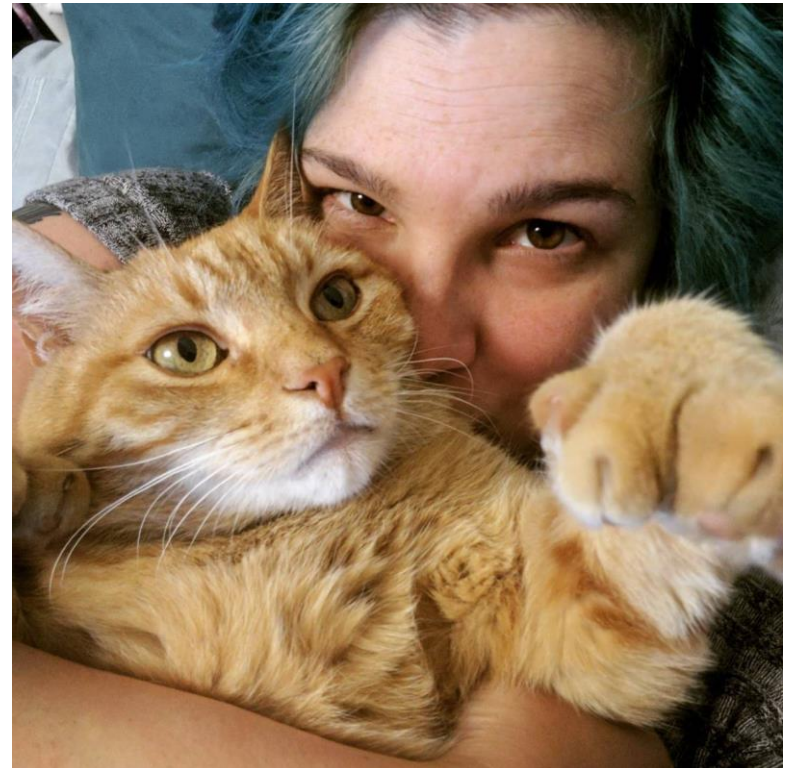
Robots as companions?

- Coming: a future of working with robots.
 - What does that do to us?
 - *Even very intelligent robots are **not human**.*
 - *Human companions have a sense of **irony & humor**, can feel **compassion**, question our **motives**, provide **pushback** against our **narcissism**.*



Robots as companions?

- Human already have a strong tendency to anthropomorphize.
 - With respect to both animals and machines.
 - *Pet hospitals.*
 - *Pet cemeteries.*
 - *We like pets partly because they don't question our motives and provide pushback as children do.*



Robots as companions?

- We anthropomorphize machines.
 - Boomer the battlefield robot.
 - *Deployed in Iraq to seek out explosives.*
 - *When destroyed on a mission, it received a funeral with 21-gun salute.*
 - *Was awarded Purple Heart and Bronze Star.*



Robots as companions?

- We anthropomorphize machines.
 - Mail robots at Canadian Broadcasting System received retirement party.
 - *With gifts, a farewell video and goodbye card full of affectionate comments.*



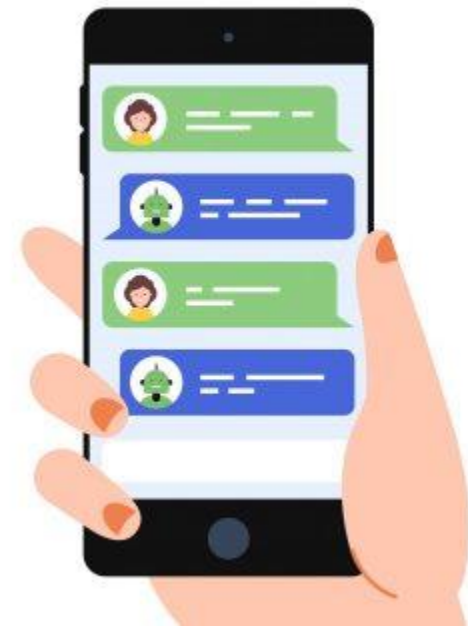
Robots as companions?

- We anthropomorphize machines.
 - Nursing home residents form emotional attachments with androids.
 - *This is Zora, the robot caregiver.*
 - *Zora talks to residents using words supplied in advance by a human operator.*
 - *Residents caress and kiss the robot.*



Robots as companions?

- We anthropomorphize machines.
 - Chatbots impersonate humans.
 - *Gives impression of a company that cares about you.*
 - *California law now requires that chatbots identify themselves as nonhuman.*
 - *Consumers revenge: they will use their own chatbots to interact with online chatbots.*



Robots as coworkers

- Why must robots have humanlike qualities?
 - They can perform specific tasks just as well, if not better, without pretense of being human.
 - Intelligence doesn't imply humanity.
 - Humans can adapt to working with nonhuman, intelligent beings.
 - *We have done so for thousands of years.*



Autonomy vs. humanity

- Autonomy does not presuppose humanity.
 - An autonomous agent is one that can give **reasons** for actions (“reasons responsiveness”).
 - *This is how “dual standpoint” theory of deontological ethics distinguishes agency from mere behavior.*
 - *...even though both are physically determined.*
 - An intelligent AI-based manager can make autonomous decisions without having other human traits.



The appeal of androids

- Why do we want androids?
 - We have seen too many science fiction movies?
 - They create marketing buzz?



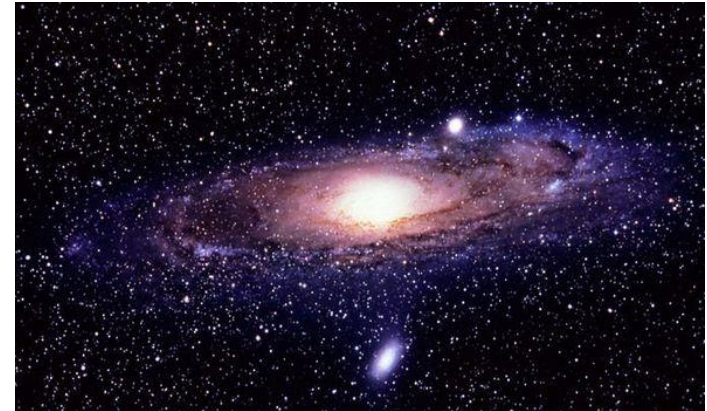
The appeal of androids

- Disenchantment of nature
 - As described by Max Weber
 - The modern worldview sees nature as a mechanism rather than inhabited by spirit.



The appeal of androids

- So we are lonely
 - ...in an unfeeling universe.
 - We seek extraterrestrial life, imagine that other animals can use language...
 - ...and bond with pets and machines.



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Robots vs. androids

- Remedies?
 - Design intelligent **robots**, **not androids**, for the task at hand.
 - Involve human employees in **training** of robots.
 - *So that we relate to robots as **work animals**, not as human companions.*
 - *Training reveals how **unhuman** animals and machines are.*



Robots vs. androids

- Remedies?
 - Seek companionship with humans.
 - *There are 7.8 billion of us.*

