



Entertainment- Robots

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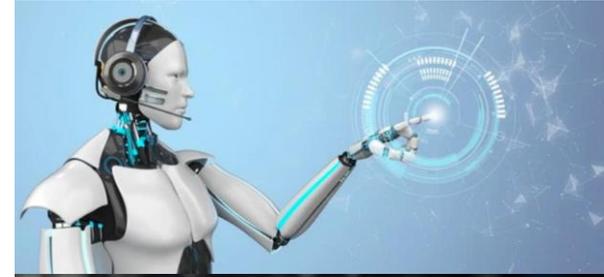
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Entertainment-Robots

what are they?

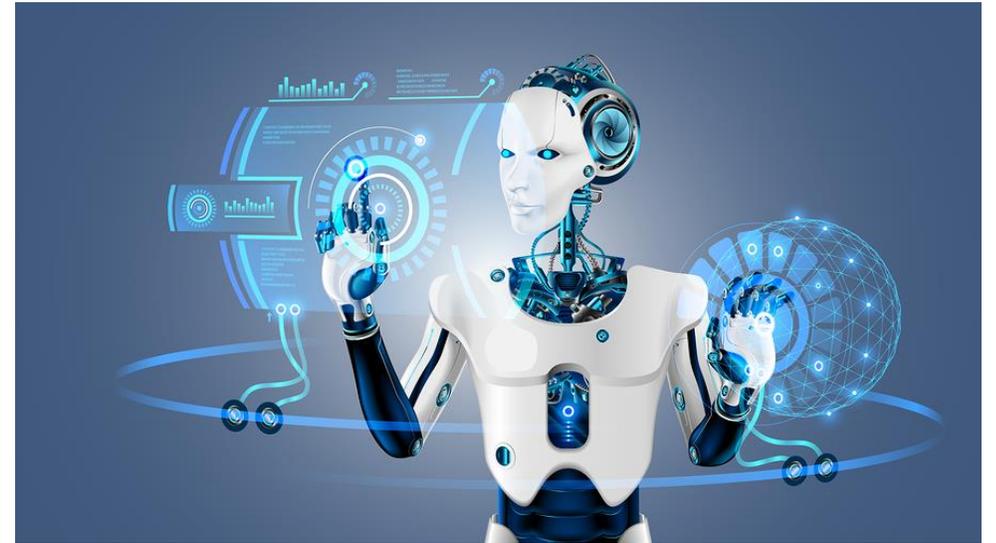
- built/designed/programmed purely for pleasure
- “serves” human owner or his guests/clients
- not for utilitarian use (e.g. production, construction, research, etc.)
- different types of entertainment-robots
 - ↳ toy/pet-robots, robots as personal partners, robots as crowd attractions, etc.
- robots used by companies working in the entertainment branch
 - ↳ e.g. in the film industry
- AI → development of computer systems to perform “human intelligence tasks” by sorting and remembering data, also to self-develop



Entertainment-Robots

development:

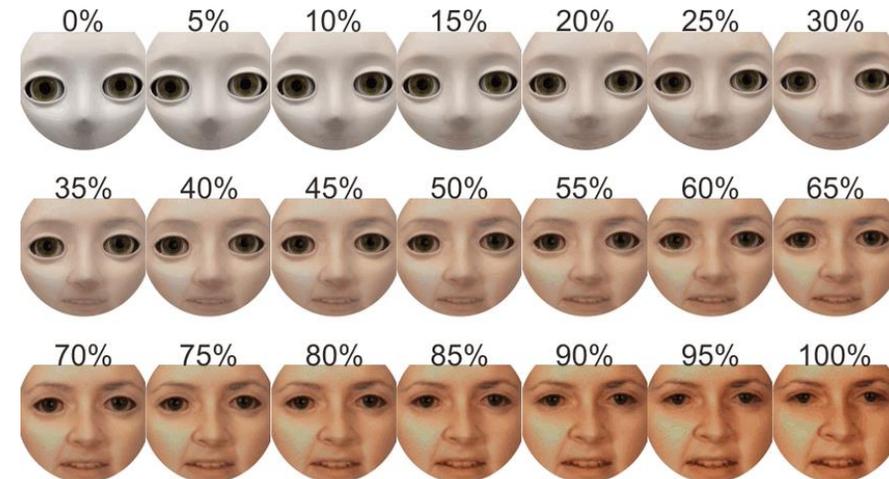
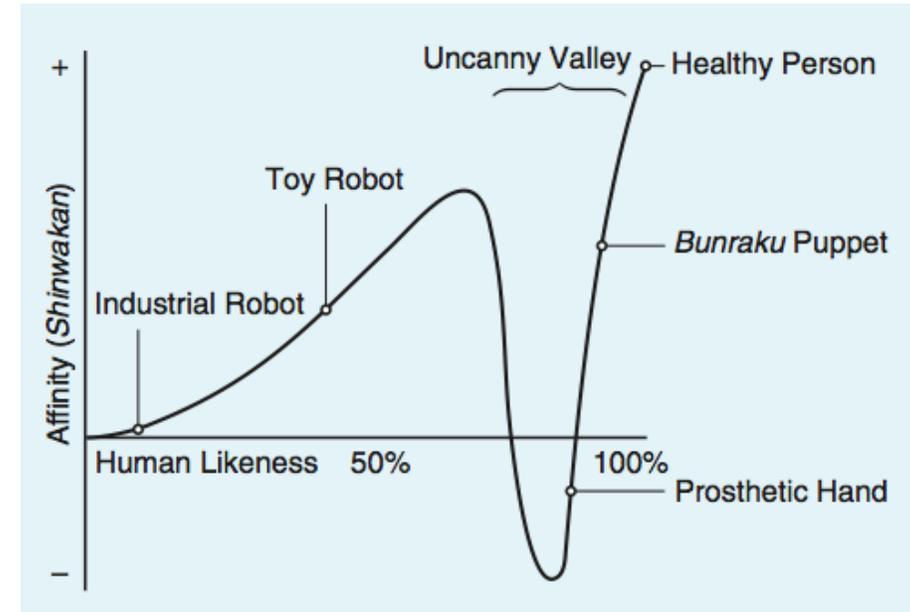
- branch grew 32% in 2019
- sales rose 13% in 2019
- potential of expanding for another 10% throughout 2023
- progress may partially be on account of Covid-19 pandemic
- Japan is biggest manufacturer with 52% in 2018



Entertainment-Robots

“uncanny valley”

- concept introduced by Masahiro Mori in the 1970s
- observation of human affinity/appeal towards humanoid robots
- affinity grows with human likeness up to certain point (around 60%)
- “uncanny valley” describes part of graph below highpoint (especially falling y-values and lowpoint)
 - ↳ gap of acceptance by research subjects
- scientists think this effect is paradox



Specific Examples

robots in Disneyland:

- electric figures as an ambition since the 60s
- Na'Vi Shaman → most advanced animatronic figure since 2017
 - ↳ very polished performance, is a “loop-robot”
- cost: \$10 million, with 9000 parts, 3500 screws and weight of 170 kg
- Vyloo → small, furry, cute creatures
 - ↳ autonomous, interactive, show “emotions”
- positive and excited feedback of guests
- robot coaster rides → robotic “arm” steering
 - ↳ unpredictable, intense maneuvers, yet high safety
- further development to adapt movements to passengers reaction

[Amazing Shaman animatronic in Na'vi River Journey, Pandora - The World of Avatar, Walt Disney World - YouTube](#)



Specific Examples

robots in the film industry:

- still visioned as new and “futuristic”
- robotic stunt double as competitor for CGI
 - ↳ used for dangerous, aerial stunts
- “Stickman Project” by Disney
- either remotely controlled or pre-programmed
- adjustable position midair with help of guiding lasers, accelerometer and gyroscope
 - ↳ very precise and yet realistic actions, without injury risk
- ‘often still fall in “uncanny valley” ‘ ; says Morgan Pope
- robots as topic in movies since 1960
 - ↳ e.g. Wall-E, Transformers, iRobot, Robocop, Starwars, etc.

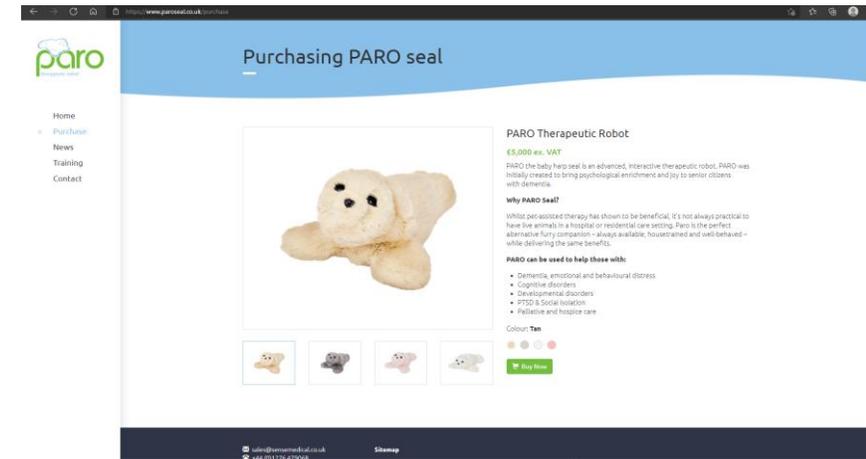
[Disney Imagineering has created autonomous robot stunt doubles - YouTube](#)



Pet-Robots

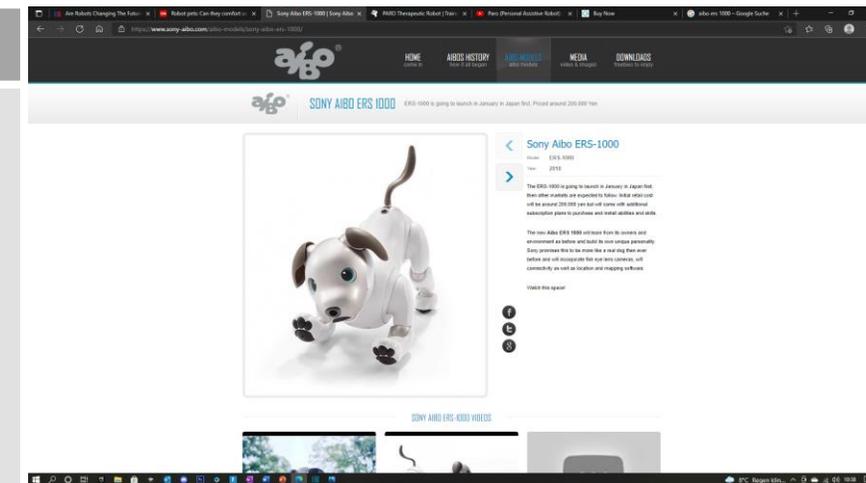
general:

- wide range of toy/pet-robots
- prices also differ depending on quality of AI
- pet-robots especially often have therapeutic effect
- two examples are the robotic toy-dog Aibo and the furry seal-robot Paro



[simpsons Paro - YouTube](#)

Aibo	Paro
<ul style="list-style-type: none"> - different prototypes - introduced in 1999 → latest model in 2018 - created for fun and as replacement - rather used by children - cost: \$1 800 	<ul style="list-style-type: none"> - different colors - created in 2004 - meant as psychological enrichment and joy in care facilities - rather used by the elderly - cost: \$6 900



[ROBO TOYS - SONY AIBO ROBOT DOG - MUSIC VIDEO - YouTube](#)

Pet-Robots

scientific studies:

- real pets offer variety of health benefits
 - ↳ can robotic pets provide the same?
- research at University of Auckland
 - half interacted with Paro, other half went on activity trips
 - decreasing loneliness in Paro group
- Paro preferred over real dog in same retirement home
- research at Perdue University
 - children interacted with Aibo and living dog
 - treated them equally, but Aibo still limited



Pet-Robots

dilemma:

Are pet-robots a beneficial/valuable replacement for real pets in our society?

Paro



Aibo



pro	contra
<ul style="list-style-type: none"> - decrease depression and loneliness and psychological enrichment <ul style="list-style-type: none"> ↳ could help with disorders like dementia → increases quality of life - less responsibility than real pet <ul style="list-style-type: none"> ↳ ethically the better choice? 	<ul style="list-style-type: none"> - does not work for every person - costs a lot
<ul style="list-style-type: none"> - highly developed AI - fun to play with - no “dirty work“ like with real dog 	<ul style="list-style-type: none"> - does not replace feeling of real dog <ul style="list-style-type: none"> → clumsy, limited in actions - false sense of responsibility

Sex-Robots

general:

- still in beginning stages of development
- Harmony & Realbotix → biggest producer
- variety of appearance and AI personality options
- personality/moods can be managed/controlled with smartphone
- also male robots (15% of total sale)
- cost around \$10 000
- brothel with sex-robots in Barcelona and Turin



Sex-Robots

politics and scientists views:

- marriage with robots in 2050
- CDU & SPD no position yet
- Ethics Council doubts its's relevance at the moment
- "Creper Act" in the USA
- "Campaign against Sex-Robots" from Kathleen Richardson
 - ↳ invisions dystopia
- 'with the right balance, we can profit', says Aimee van Wynsberghe



Sex-Robots

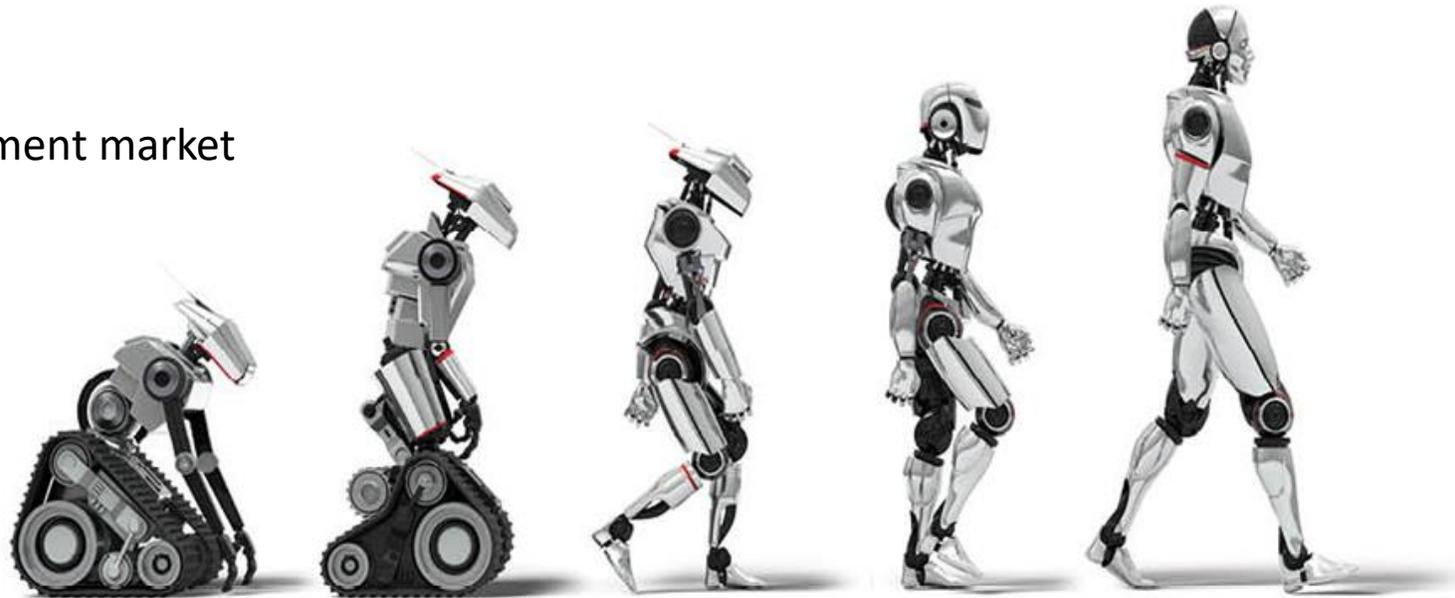
dilemma:

*Does the increasing production/use of sex-robots
promote the well-being of our society?*

pro	contra
<ul style="list-style-type: none"> - fulfills needs/urges/wishes for people who have trouble finding partners <ul style="list-style-type: none"> ↳ e.g. seniors, disabled/handicapped → (not only sexual intercourse itself but also intimacy and love relationships) - sex-robots as a replacement of (illegal) prostitution - children-alike sex-robots as a measure to control pedophiles actions? 	<ul style="list-style-type: none"> - could strengthen stereotypical gender-roles and sexism in sexual intercourse - adaption of negative attributes/traits in sexual behavior (e.g. violence fantasies) - dehumanisation of “real” relationships - companies will produce anything that sells without taking moral values into consideration

Conclusion/Future Visions

- more research needed
- high relevancy
- mainly beneficial for society
 - ↳ differentiate between different types
- thought out/calculated transition in entertainment market
- laws are extremely necessary
- communication and transparency is key



Sources



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