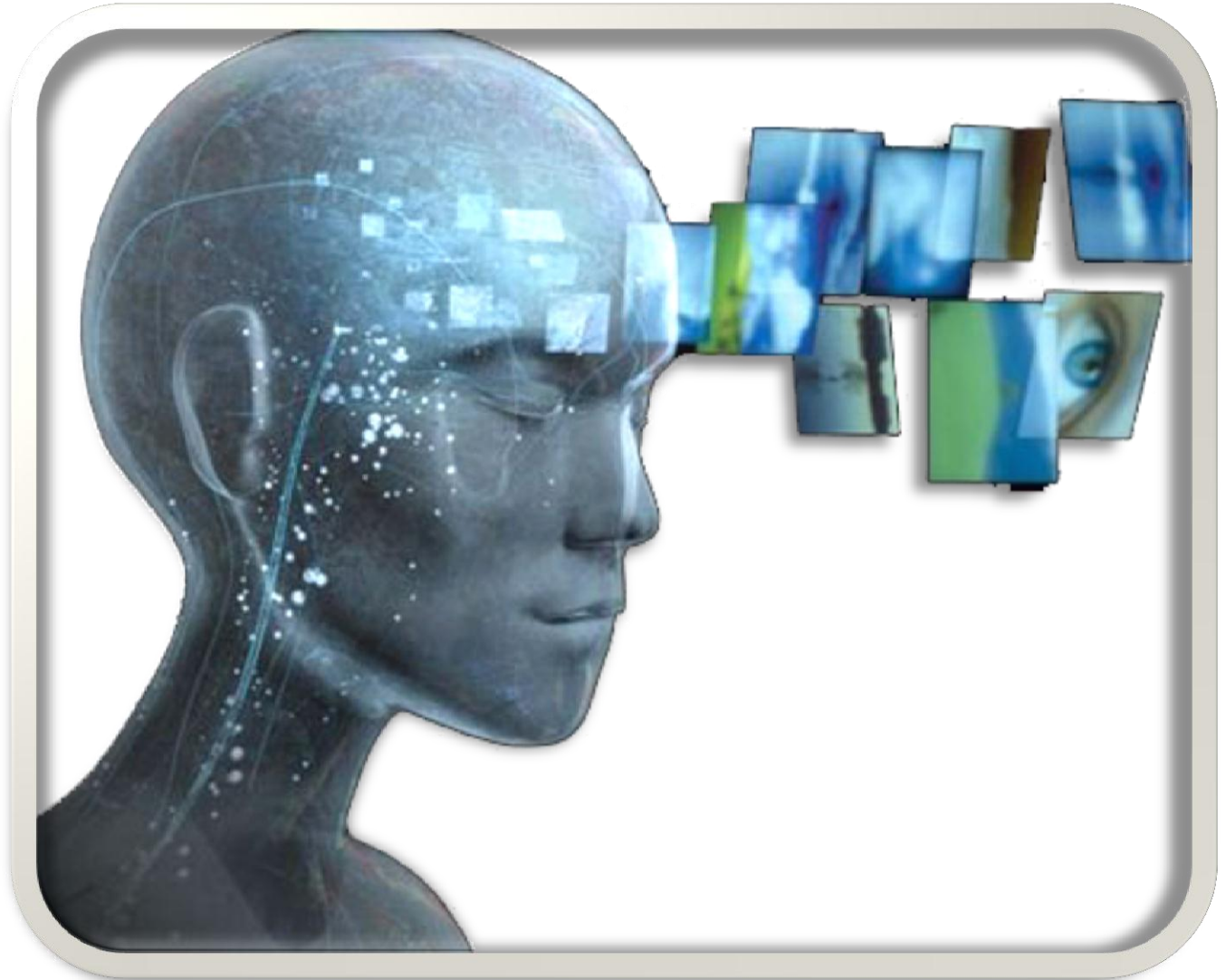


FUTURE REVOLUTION



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Robotics Revolution

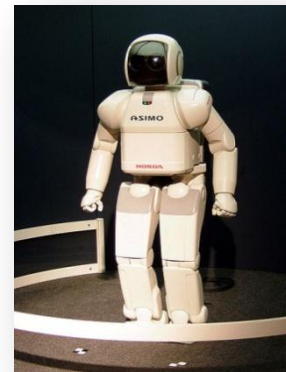
Robotics is the art and commerce of robots, their design, manufacture, application, and practical use. Robots will soon be everywhere, in our home and at work. They will change the way we live. This will raise many philosophical, social, and political questions that will have to be answered. In science fiction, robots become so intelligent that they decide to take over the world because humans are deemed inferior. In real life, however, they might not choose to do that. Robots might follow rules such as Asimov's Three Laws of Robotics that will prevent them from doing so. When the Singularity happens, robots will be indistinguishable from human beings and some people may become Cyborgs: half man and half machine.

Humanoid robots:

- Lara is the first female humanoid robot with artificial muscles (metal alloy strands that instantly contract when heated by electric current) instead of electric motors (2006).
- Asimo is one of the most advanced projects as of 2009.

Recognition technology:-

With 2000's ASIMO model Honda added features that enable ASIMO to interact better with humans. These features fall under 5 categories:



- Moving objects
- Postures and gestures
- Environment
- Distinguishing sounds
- Facial recognition

Projected robotics timeline (present and future)

- **Robots capable of manual labor tasks**
 - 2009 - robots that perform searching and fetching tasks in unmodified library environment, Professor Angel del Pobil (University Jaume I, Spain), 2004
 - 2015-2020 - every South Korean household will have a robot and many European, The Ministry of Information and Communication (South Korea), 2007
 - 2018 - robots will routinely carry out surgery, South Korea government 2007
 - 2022 - intelligent robots that sense their environment, make decisions, and learn are used in 30% of households and organizations - TechCast
 - 2030 - robots capable of performing at human level at most manual jobs Marshall Brain
 - 2034 - robots (home automation systems) performing most household tasks, Helen Greiner, Chairman of iRobot
- **Military robots**
 - 2015 - one third of US fighting strength will be composed of robots - US Department of Defense, 2006
 - 2035 - first completely autonomous robot soldiers in operation - US Department of Defense, 2006
 - 2038 - first completely autonomous robot flying car in operation - US Department of Technology, 2007
- **Developments related to robotics from the Japan NISTEP 2030 report :**
 - 2013-2014 — agricultural robots (AgRobots).
 - 2013-2017 — robots that care for the elderly
 - 2017 — medical robots performing low-invasive surgery
 - 2017-2019 — household robots with full use.
 - 2019-2021 — Nanorobots
 - 2021-2022 — Transhumanism

