MORAVEC'S PARADOX

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SUMMARY

A **paradox** is a seemingly absurd or contradictory statement or proposition which when investigated may prove to be well founded or true. According to the Moravec's paradox,**"it is comparatively easy to make computers exhibit adult level performance on intelligence tests or playing checkers, and difficult or impossible to give them the skills of a one-year-old when it comes to perception and mobility".**
His idea was supported by **Hans Moravec, Rodney Brooks and Marvin Minsky** who articulated that **unconscious** human skills are the toughest to **reverse engineer**.He wrote that "In general, we're least aware of what our minds do best" and "we're more aware of simple processes that don't work well than of complex ones that work flawlessly".

- **The evolution of human skills :**
  Moravec proposed that years of **evolution, experience and the process of natural selection** has optimized and preserved the most adaptable ,tried and tested skills of the humans necessary for their survival in this world .He expressed his argument as follows:

  1. Reverse engineering of a human skill is proportional to the amount of time after its evolution.
  2. The older the skill is , the more unconscious it becomes and hence lesser the effort required to perform it.
  3. The more effortless a skill appears,the more difficult it is to reverse engineer.

- **Early years of AI research:**
  In the early yearsof AI , intelligence was supposed to be something that highly educated male scientists found challenging like chess, symbolic integration, proving mathematical theorems and solving complicated word algebra problems. And since the leading researchers at that time were successful in building programs that used logic, solved algebra and geometry problems and played games like checkers and chess, they were very optimistic for creating thinking machines (referred to as the "easy" problems of vision and commonsense reasoning)in just a few decades.

- **Inference:**
  Linguist and cognitive scientist **Steven Pinker** proposes that 35 years of AI research narrows down to a single statement stating that **"the hard problems are easy and the easy problems are hard".**
  In other words the skills that appear easiest and that have evolved for millions of years like recognizing a face, moving around in space, judging people's motivations, catching a ball, recognizing a voice, setting appropriate goals, paying attention to things that are interesting; anything to do with perception, attention, visualization, motor skills, social skills and so on are the most difficult to attain artificially as compared to the apparently hard and recently acquired skills of mathematics, engineering, games, logic and scientific reasoning.

  And hence it is not the gardeners, receptionists, and cooks whose jobs are endangered with the advent of intelligent devices in the upcoming years but the stock analysts and petrochemical engineers and parole board members.