

STUDY OF HUMAN PSYCHOLOGY FOR INTRODUCTION OF TRULY INTELLIGENT ROBOTS

Yogyata Mehtani

CSE Dept., PDM College of Engineering, (India)

ABSTRACT

A research about the comparison of memory in human and robots, blurring the line between humans and robots. Bringing out an idea for future memory implantation in robots, making them one plus then human. Preparing for a virtual immortality, bringing out a much wider view where robots will introduce us to a future what humans can't imagine. A factual report that may turn Robots to be considered as an organism. Introducing the truly intelligent robots/ computers that are still hypothetical but worth to be considered as a new face for the technology in coming years. The future computer will be having ethics and secular morals of their own. A new phase for artificial intelligence is budding that requires ignition. This research comprises all that factors that bring out an interest for the computers to have their own defensive brains to question like a human in contradiction to a statement, now human are not the only to make the laws. A generation of computers that engage in high level activities, such as discovery of a new science. Introduction of a generation of computers that can be considered as conscious.

Keywords: *Hypothetical, conundrum, rationales, co evolutionary, craggy, treacherous, emulation, tabula rasa*

I INTRODUCTION

Recall that we all have started learning from schools; we all are taught by teachers. They taught us the simple mathematics, "1+1=2". But we never actually question about why is it so, it is actually a fact our mind always learns what it is being taught; now it actually fully depends on the party wills. Our mind doesn't have any defense against any argument till he doesn't know about it already. So why not 1+1 be equals to 3 or 4? What exactly are these numbers and the same is about every other existing fact we believe in. If everybody believes it, the fact becomes true! 2+2 makes 4 is obvious but politically inexpedient fact. This fact interests me more that what if we don't believe in it!! All our past, histories are rejected in just one no! Haunts me more than a bomb.

This research is prior to implementation of these facts on our future computers. Till now we have computers/ robots that can work or learn by themselves but they still need human to track and learn through them. The artificial intelligence has reached a level where the robot can learn by itself but still needs a source like we need a teacher as we start our schooling. Now we are dreaming of a technology that ends this factor too and the robots are no more dependent on the human or any other source, it learns by its own experience and precision like humans do. Empowering the technology up to an extent that now we can create an organism that is actually like human which makes us godlike and this fact is still an hypothetical situation that requires research and deserves a longer debate.

Recall the discussion that $1+1=3$, this is a contradiction to all the facts we have studied till now. twice one makes two is an excellent thing, but if we are to give everything its due, twice one makes three is sometimes a very charming thing too.

The way we learnt in our past now we are implementing that to our future. The teachers taught us and now we are teaching robots. The chain goes on but what about if we are able to reverse the chain? What if we have a denial for every statement we made. This will be brought in by the robots of new generation, a next step to artificial intelligence.

II THE HISTORY AND THE PRESENT

Beginning from the start of the life process, human has always looked up for a hack of the situation, he evolved from a monkey to a human tackling all the situation and experimenting all his way out to the future. It has been a lot of years since the introduction of robots or the bringing up of robots. I may also add up the fact that the introduction of artificial intelligence has also brought us to a new future and new hopes.

I recently studied about the introduction of the new robot with latest technology in 2015 known to be JIBO , a family robot. Its capabilities will be including assistance, reminding you of upcoming events, a storyteller complete with sound effects and graphics, automatic smiles noticing to take a photo, a messenger and will act as a companion. At some point it is impressing as it is actually a new step in the technology world, but I rather wonder that can robot actually take place in human affairs. Can it actually replace a human job ever?

These questions are going to be the answer for our future technology. If we are trying to reduce human interference and efforts why not think of an idea where robots will require zero human efforts. A robot that can be one plus than human! A robot that is more than a machine and its behavior is closer to organism.

If we call a CPU to be the brain of computer, than why it cannot work as human brain? And it may also perform all the functions as responsibly as human brain. Recording memory and also learning accordingly. Man learns from his own deeds, and accordingly a computer/robot should also learn from its own deeds I guess. Well till now this is a hypothetical situation for a computer to learn from its own deeds. But I think that in the present era it is worth debating and conversing about the next generation of the technology, this might be a big challenge too.

III THE RECENT TECHNOLOGY

Google study shows that now robots can work as pilots or they can work at retail stores. Is it really possible? Besides all the complicated mechanisms and circuits inside them, they still won't work as a human. And not only these situations there are many more examples where we can find it evident that robots are still considered to be a machine and still don't have a mind of their own. The facts like respiration and childhood memories can be ignored in this case, but the rest worth sharing. Refer to TABLE NO.1

IV HOW WE WILL ACHIEVE THIS?

The recent technology has came up that uses human tracking for its various activities, like it can learn to pour tea by learning from human movements Robo Brain is based on cloud computing, or the use of shared resources toward common goals. The obvious ultimate goal is to make robots more like us, and thus more useful to us in many ways. And therein lies a conundrum: robots are more predictable than humans. But for robots to work side by side with humans, and do whatever we want them to do, they have to anticipate what we are about to do next, like turn left when our right-turn blinker is flashing.. How is a robot supposed to know what we are about to do, even if we aren't sure ourselves? That's not difficult, as humans are quite predictable, but that again makes the robot dependent on humans as a source of learning.

I think robots should learn less from humans as it can be used in bad ways too. Every coin has its two sides, the human may break the law and may teach evil to the robot that will definitely destroy, that is a total harm for us.

Historically, robots for industrial purposes involved little or no learning. Recently, a growing interest in unstructured environments has encouraged learning intensive design methodologies. The emerging class of robots must be able to interact responsively with people and other robots providing assistance and service that will increasingly affect everyday life. Although united in its need for learning, this new class of robots is anything but homogeneous. Robots may learn by adjusting parameters, building environmental models such as maps, exploiting patterns, evolving rule sets, generating entire behaviors, devising new strategies, predicting environmental changes, recognizing the strategies of opponents or exchanging knowledge with other robots. Researchers have produced robots that can even adapt their own physical structure.[1]

To say that a robot can learn actually communicates very little about the robot or control strategy. On one extreme, robots may merely fine-tune already hard-coded behavior. On the other, there are robots that write their own programs from scratch using a randomly generated pool of binary numbers. Still others may exchange programs or portions of programs with other robots to produce co evolutionary learning.[2] Although there are countless variations, the most interesting learning occurs when the robot can devise its own approach from the bottom up. After deciding the extent of learning necessary, another significant question is whether learning should occur online while accomplishing a task in the real world or offline in a simulated environment. For some tasks, such as

collecting rock samples from a distant planet, a robot may have plenty of time to learn new strategies for traversing the planet's surface. The ability to adapt online may be crucial for helping the robot deal with unforeseen situations. For time-critical tasks such as military engagements, however, a robot may not have much time to learn new strategies. Such a robot may need to go through a preliminary developmental phase where important maneuvers are learned once and for all.

V HOW IS LEARNING IMPLEMENTED?

Now that we have considered learning at a high level, it remains to discuss the computational means.. Despite the fact that their boundaries can (and should) be blurred in places, we will adopt the following four classifications: refer to TABLE NO..2

VI WHERE DO WE WANT TO GO?

We all are packing up our bags to step up into the future, we will not be working anymore, risking our lives. People will have time for there families, children will be feeling it more easy to study, they will have something better than google or Wikipedia. This all still sounds up like a dream. We are making new technologies just to fulfill our small needs, then why we are not thinking up to extend this even more.

I think the humanity is still afraid of loosing their jobs and misleading the grace of something that we can actually call as a companion. Something that actually have answers to our situations. Something that will make us no less than the god. I think humans are more afraid of loosing the control over them. Are we not managing humans? We can manage humans but we are afraid of introduction of robots who are no less than human.

Continous surveys depicted that introduction of powerful robots will certainly replace human and that will cause an economy loss, more people will loose jobs and they may start there own jobs as well. Despite this disadvantage , we may be able to bring up new jobs in the market.

Rationales stated that why human want to go to a restraurant ran by robots, there will always be a need of human touch in our surroundings. Humanity will never let robots to take over them, but that is just a constraint. Human can find up a way to easily match up his life with robots too. If he can make up a technology he always have a feedback system to keep his control over it.

VII TABLES

Table No.1

FIELDS WHERE A ROBOT IS STILL FAILING

1. Can't take critical decisions.

e.g. a doctor have emotions and god belief, he understands the pain of the patient personally but a robot can never take important decisions at the time of surgeries, he will work according to the theories feeded in his system.

2. Robots do not have sense of precision

e.g. a boy practices throwing of a ball, he fails once, twice but later learns how himself by his own trials, a robot never runs like that it has to be checked by the creator to look for the error if it is not throwing the ball in the correct way.

3. A robot can never work like a housewife in a kitchen

4. Robots can never perform in art field, it can never be an amazing artist that's for sure.

e.g can a robot take an amazing photograph, come on it is more than just clicking a button

5. Robot can never teach you like a teacher. It can never check your test like a teacher do and obviously you can never go for 1 or 2 marks increment.

6. It will never be an entrepreneur.

e.g. ever thought of a robot to invent something like facebook?

7. Ever thought of a robot running for congress?

8. Robots always have a perfect operation to be performed, they can never do adventure and set life goals like human.

9. Robots obviously can never drive in a traffic jam; it will stay stuck for hours. It can never drive like human to make up his own way.

10. And yes of course a robot will never be as flexible as human can be .

Table No.2

| ROBOT LEARNING | |
|--------------------------------------|---|
| 1. Artificial Neural Networks | A supervised, learning-with-a-trainer approach where knowledge is learned by adjusting weights between nodes of a neural network. |
| 2. Reinforcement Learning | An unsupervised, learning-with-a-critic approach where mappings from percepts to actions are learned inductively through trial and error. |
| 3. Evolutionary Learning | An unsupervised, learning-with-a-critic approach where controllers are derived deductively by alterations to an initial population of program code. |
| 4. Learning by Imitation | A design methodology which uses a biologically inspired developmental paradigm to enable learning by emulation. |

VIII CONCLUSION

These robot learning techniques have failed to capture the most important feature of the human brain — its capacity to not only learn, but be aware of and able to direct its own learning. While it is easy to argue that all robot learning methods simply provide indirect ways of telling the robot what to do, it is important to remember that good robot learning strategies require interaction with a real and chaotic universe. Two mobile robots begun with exactly the same online learning strategy will not learn the same behavior when set loose in the world. Much the same occurs during the lives of two genetically identical twins. No form of intelligence truly begins tabula rasa; rather, intelligence unfolds from a program which includes within itself the ability to adapt through interaction with a more or less chaotic world. While there is heated debate as to how much of our intelligence derives from nature and how much nurture, there is no doubt that human physical and mental development derives from a program encoded in our DNA.

Depending on the nature of your job, this could be a very real concern. Automation in the form of computers and robots will not completely overtake the human workforce. Instead, these technologies will lead to a shift in the nature of labor, as computers have in recent decades. The right question to be asking about any job is, “What is the

best balance between the creativity and cognitive power provided by humans and the speed and reliability of automated machines?" People are much more adept than machines at tasks that involve creativity and adaptation in problem solving, which is common in our day-to-day life and work. In contrast, robots are often better at carrying out work that conforms to specific sets of rules and knowledge that can be described mathematically and scripted computationally as a program. Therefore, the overall effect of increasing computerization and automation will lead not to mass unemployment, but rather to a decline in less-skilled jobs that involve repetitive, task-oriented labor.

ADVANTAGES:

1. If present robots are doing fantastic, the future of these robots will be no less than miracle.
2. We can actually consider robots no less than a companion.
3. This will introduce virtual immortality.
4. More opportunities in the field of artificial intelligence.
5. Monotonous work can be handed over to robots and they will be able to think as strongly as the human.
6. Things we are not able to achieve today will soon be easily accessible with these robots.
7. A ready to answer robot who have its own morale will be a true friend too.
8. It is a case of the more you invest, the more will be the payback.
9. They will have their own objectives and goals.
10. A robot as adaptive as human will definitely be a huge experiment.
11. No need of long algorithms and programmes, they will learn by themselves.

DISADVANTAGES:

1. Scientists main concern is that further advances could create profound social disruptions and even have dangerous consequences.
2. Technological progress would transform the work force by destroying a widening range of jobs, as well as force humans to learn to live with machines that increasingly copy human behaviors.
3. Criminals could exploit artificial intelligence systems as soon as they were developed.
4. Human will never let its own creation to grab control over him.
5. If human nature is introduced in robots too, they will also grab traits such as laziness, monotony, dislikes etc, that will again be a challenge for us.
6. Training will still be required.

REFERENCES

- [1] *.Evolving Walking Robots for Global Task Based Design* By Chocron and Bidaud 1999
- [2]. *Robot Shaping: An Experiment in Behavior Engineering* by Meeden 1996