Artificial Intelligence Can Predict Human's Learning and Attention?

Carla Sofia Silva*

Universidade Nova of Lisbon, Portugal

Submission: June 08, 2018; **Published:** June 22, 2018

*Corresponding author: Carla Sofia Silva, PhD Science European Education, Professor at Intelligent Systems and Educational Department, Institute of Intelligent Systems and Behavioural Science (ISCIAC), Pos Doctoral Researcher in UNINOVA at Universidade Nova of Lisbon and researcher in Center of Intelligent Systems, Institute Lisbon, Portugal, Email: carlasilva@isciac.pt

Abstract

There is amount of publish research about Artificial Intelligence and different perspectives that defines intelligence. Although there is a near universal agreement among researchers that some aspects of our abilities depend on experimental histories and genetics, but in a person's cognitive abilities there is a combination between nature and vinculation. From this perspective machine learning is quite different than human intelligence. However the major goals of education are acquisition, understanding and user knowledge and skills. And this is similar in what machine can do, because there is certain kind of problem solving in which memory is quite useful. Computer systems can have very large rote memories that can be designed so that the memorized material is retained for days, week, months, or years. Siri [1]; Thus, our analysis should include our insights into the value of this type of learning for people and for machines. Artificial Intelligence can provide a library of well-understood mental structures to be used in psychological theories. These structures may provide the basic terms within precise theories of particular psychological processes. Stewart [2]. In the present time, I believe that intolerance tends to hinder rather to help scientific progress and reason is essential for the growth of knowledge. We must face the evolutionary pathways to understand in which way we must address and what goals we want to achieve.

Keywords: Knowledge; Artificial intelligence; Machine learning; Human intelligence; Attention and learning

Introduction

When I think about the future of Intelligent Systems or even in the possible interaction between Humans and Machines, some tensions come to my mind. Indeed, technology connects us together like never before, however we are most exposed like never before too, in ways that our ideas and identities have ceased to belong to us in order to promote a wider path and broad knowledge. From an evolutionary point of view we'll see the effects and pressures in Artificial Intelligence research area. Some of them will develop, others will failed, however what Artificial Intelligence will be doing in 20 or even 10 years from now will be determined by interactions between financial factors that dictate the subareas that receive funding, technical factors, especially genuinely useful applications and scientific factors, such as the areas where we achieve the greatest intellectual progress Sikl [3]. Valuable applications and scientific breakthroughs will attract funding, which will in turn drive expansion of those areas, and uninteresting and unprofitable areas will decline, despite some funding inertia and lobbying Chrisley [4].

Even some researchers worry about new forms of human oppression that could stem from greater reliance on artificial intelligence. The known entrepreneur Elon Musk, for example, has warned that artificial intelligence presents the "biggest existential threat" to society or even Stephen Hawking has said that "the development of full artificial intelligence could spell the end of the human race." Yudowsky [5]. We're now moving from a period when all subarea as practical and theoretical movements on a relatively equal footing testing their potential impact. In a long scale or maybe in a next future, we'll see a kind of sociobiological competition among intelligent entities, resulting kind of replication of particular autonomous systems and intelligent applications Jones [6]. However machines haven't mind yet, but they are quickly taking attributes that we use to think, like reason, reaction, interaction, adaptation and even language and learning. This can lead us to how we see ourselves and what it means to be Human. We see ourselves as social creatures and no human mind can exist in isolation, but we faced a period of Darwinian Nature of Technological Gregory [7] Evolution Kay [8]; Howard [9].

AI today can be usefully grouped around basic thematic families, each with distinctive evolutionary prospects: building systems, possibly with superhuman abilities, for specialized

applications in Expert Artificial Intelligence and Autonomous robots, with the goal would be Turing Test AI plus perception, learning, and action Holtzman [10]. Algorithms are not new, this covers specialized methods that come from AI but have taken on a life independent of their initial inspiration. This type of research is sometimes justified by its potential for advancing one of the other goals listed here, but often the justification is implicit. For decades, they have served as integral components of every computer program. But today, advanced machine-learning algorithms are creating a vastly automated society, transforming many facets of life. However, Artificial Intelligence can also be applied for predicting mental processes Gardner [11]. Attention is a cognitive function that allows focusing their limited resources on relevant parts of the environment as perform various tasks, while remaining reactive to unexpected events. Without this ability, alertness to events in the environment while performing an important task, or multiple simultaneous tasks has received surprisingly limited focus and is not even commonly seen as a central cognitive function Howard [12]; Holland [13]. This is surprising given that any system expected to operate in real-world environments will face exactly the same problem as living beings, and require a similar solution to be possible.

Without attention we would constantly be overloaded with stimuli, severely affecting our ability to perform tasks, make decisions and react to the environment. Every moment of our lives subjects our minds to an enormous data and furthermore, when faced with many simultaneous tasks, a role of attention is to enable performance where focus is maintained on tasks of greatest urgency while others are necessarily ignored or delayed. Attention Weizenbaum [14] can be viewed as resource optimization, enabling systems to perform tasks in complex environments while requiring insignificant amounts of resources and using existing resources only for information likely to be important or relevant. In this view, time itself can be treated as a resource. So when I asked if Artificial Intelligence can predict human's learning and attention of occurs it can take time in develop AI arquitecture to take place and this could be a goal to strive for. However any hypothesis to implement attention and learning as an isolated component will be problematic because their interaction within functionality and cognitive functions.

Conclusive Reflections

As machine learning transforms the world in which we live and improves many aspects of our lives, the legal, social, and ethical implications must be considered. The diverse applications of this technology Pei [15] will likely continue to expand and mature and are crucial to ensure that the pressing challenges of today are mitigated to allow continued growth in the future. The capability and learning characteristics (such as learning) of a system to improve control of attention over time, using the control parameters of the attention mechanism, is also an interesting research subject as it represents a complex meta-control problem Goldstein [16]. Approaches to evaluating attention mechanisms of intelligent systems in general have been discussed. In particular, the need for task-complexity metrics has been identified, representing another direction of possible future work.

The critical importance of attention and sophisticated, adaptive mechanisms for resource management has been highlighted for resource-bounded intelligent systems operating in open-ended everyday environments under time-constraints. In particular, I argued that according to behaviorism Neuwell [17], there are a small number of empirical laws that relate the behavior of an organism to the behavior of its environment. And we, as scientists, can predict a behavior by using empirical laws and to be inspired to control the environment of an organism. Artificial Intelligence can provide a library of well-understood mental structures to be used in psychological theories. These structures may provide the basic terms within precise theories of particular psychological processes. In the present time, I believe that intolerance tends to hinder rather to help scientific progress and reason is essential for the growth of knowledge and polemic is not. We are facing amazing times, evolutionary pathways and it is my strong believe that Artificial Intelligence is indeed in our way to stay.

References

1. Siri A (2015) Predicting students' dropout at university using artificial neural networks. Italian Journal of Sociology of Education 7(2): 225-247.

2. Stewart J (1985) Cognitive science and science education. European Journal of Science Education 7(1): 1-17.

3. Sikl L (1970) On the evolution of artificial intelligence. Information Sciences 2(4): 369-377.

4. Chrisley R (2003) Embodied artificial intelligence. Artificial Intelligence 149(1): 131-150.

5. Yudowsky E (2006) Artificial intelligence as a positive and negative factor in global risk. Artificial intelligence 1: 42.

6. Jones M (1985) Applications of artificial intelligence within education. Computers & Mathematics with Applications 11(5): 517-526.

7. Gregory TR (2009) Artificial selection and domestication: Modern lessons from darwin's enduring analogy. Evolution: Education and outreach 2(1): 5-27.

8. Kay J (2012) AI and education: Grand challenges. IEEE Intelligent Systems 27(5): 66-69.

9. Howard RA (1968) The foundations of decision analysis. In IEEE transactions on systems, man and cybernetics Part C: Applications and reviews.

10. Holtzman S (1989) Intelligent decision systems. Addison-Wesley publishing company, New York, USA.

11. Gardner H (1985) Frames of Mind: The theory of multiple intelligences. The theory of multiple intelligences.

12. Howard RA, Matheson JE (1967) Readings on the principles and applications of decision analysis. In: Matheson RA, Howard JE (Eds.), stategic decisions group, California, USA, pp. 445-475.

13. Holland O, Gamez D (2010) Artificial intelligence and consciousness. In encyclopedia of consciousness, Elsevier Inc, pp. 37-45.

14. Weizenbaum J (1976) Computer and human reason. San Francisco, USA.

15. Pei JHMKJ (2012) Data mining concepts and techiques. New York, USA.

16. Goldstein I, Papert S (1977) Artificial intelligence, language, and the study of knowledge. Cognitive Science 1(1): 84-123.

17. Neuwell A (1973) Artificial intelligence and the concept of the mind. In RS & KD Colby (Eds.), Computer models of thought and language. San Francisco, USA.

Your next submission with Juniper Publishers will reach you the below assets

- Quality Editorial service
- Swift Peer Review
- Reprints availability
- E-prints Service
- Manuscript Podcast for convenient understanding
- Global attainment for your research
- Manuscript accessibility in different formats
  (Pdf, E-pub, Full Text, Audio)
- Unceasing customer service

Track the below URL for one-step submission
https://juniperpublishers.com/online-submission.php