

2020 Q4: Write a discursive essay about our changing relationship with machines and the rise of artificial intelligence.

If someone from the early 18th century somehow found themselves in 2021, it would be difficult to underestimate their shock. Our industrialised, mechanical world would be disorientating to someone from an agrarian society, one which moved at a very different pace than our own. I choose that time period as it is directly before the Industrial Revolution, a period of time which forever changed the relationship with machines which this essay will focus on. It is indisputable that in the age of technology, with artificial intelligence (AI) steadily rising, our relationship with machines is constantly evolving. This essay will discuss how our relationship has changed, whether we have become dependent on machines, the challenges presented by machines and AI, and finally what our future looks like in the context of this relationship.

This brings us to the first, fundamental question of this topic: how has our relationship with machines and AI changed, and how will it continue to do so? As discussed, our modern society is unrecognisable to that of our ancestors, largely due to the rise of machinery. Machines have become part of every sector of society, from agriculture to medicine, from education to transport. I challenge any reader of this essay to identify a day in the last five or ten years of their life in which they have not used or interacted with some form of machine. This is accompanied by the exponential rise in AI, which has already reached near-human levels and is projected to progress rapidly in the next decade. The inventor of CAPTCHA, software designed to differentiate computers and humans, stated in an interview that in our lifetimes “computers will be able to do everything humans can”. He used the example of how CAPTCHA has had to evolve as computers became better at the puzzles than humans. In this way, we see how we teach machines and AI, but then they often get more adept at tasks than us. Across human history, we have progressed from stone to iron to small hand-held tools, which made up the extent of machinery for much of our time on this planet. Then, in the space of 150 years, machines have rapidly infiltrated every area of society, forever changing our relationship with them. This growth is

exponential, and every day new technology or innovations come out, meaning our relationship evolves constantly.

This begs the question, are we developing a dependency on machines? Has our relationship become one where we cannot function without machines in our daily lives? There is a strong argument that we now rely on machines. Imagine a day where the internet crashes, or electricity fails worldwide. There would likely be chaos, lights would go out, communication would be impossible, businesses would panic, and healthcare systems may be placed under extreme pressure. Those who argue that we are too dependent may point to this as an example of a need for more backup plans, for a need to re-evaluate our relationship with machines. Others may argue that this dependency is not necessarily a negative aspect of modern society. They could point to machines and AI as a powerful and important tool for improving our world, and that we are not dependent but rather harnessing the power of what we have invented. Wherever you sit on this spectrum of opinion, it is worth considering what our society would look like without machines, and taking note of instances such as the HSE hack this year, which pose a real threat to our society's safety in the context of our relationship with machines.

However you view our relationship with machines and the rise of AI, there can be no doubt that both issues present challenges for our society. The primary challenges which merit consideration are industry, ethics and human rights.

Ever since the Agricultural and Industrial Revolutions, the rise of machines and AI has presented challenges in industry. The foremost of these has been conflict with employment. From the very first introduction of machinery on farms, job losses arose from the progress of machinery- leading to movements such as the Luddites in Britain. In today's world, questions arise around how we will work in a world with AI, and whether machines will become better than humans at the jobs we perform. How will AI fit into the economy? How will human employment be impacted, and how will we adapt to support this? It is imperative that no one, particularly those who are most vulnerable, is left behind as machinery and AI continue to grow. Another key question that comes from this is how do you regulate this? How do governments and states regulate an employment market consisting of humans and machines? As our relationship continues to evolve, these are the questions which we all must consider and which will continue to come to the fore in the coming years.

Another key challenge presented by our changing relationship with machines and the rise of AI is ethics. This is particularly pertinent when examining how AI will interact with the rest of our society, and is one that we have been attempting to answer since the advent of machinery. This was a pressing question in the 1940s, with Isaac Asimov's "Three Laws of Robotics", in anticipation of robots with high degrees of autonomy. Broadly, they outline that robots may not harm human beings, must obey orders unless they harm a human being, and must protect its existence as long as that doesn't conflict with the first and second laws. This gives us an idea of how robots should act, but what about us? As creators, what responsibility do we have towards AI? Can they be "thrown away"? How do we define sentience? What distinguishes advanced AI machines from animals and humans? These are questions which raise core ethical issues around what it means to be human, and the responsibility we have to what we create. It's projected that eventually we will reach a world where machines are near-human. In that world, where do we draw the line? These are questions which have been subject to a lot of debate, and I encourage readers to think and research each of them to develop your own view and ethical standpoint in this debate.

Finally, our changing relationship with machines and the rise of AI raises challenges around human rights. Linked to ethics, we must examine how human rights- seen as a core tenet of modern democracy- will interact with machines and AI as they continue to develop. Do you think AI and machines should possess human rights? Why? Why not? Some may point to the word 'human' in 'human rights' as an argument against, others may argue that if AI are near-human then it's difficult to justify not granting some form of rights. This raises other questions about how we protect those rights, and how- or if- we prioritise the rights of humans against those of the rights of AI. These are complex questions that once again go to the core of what it means to be human and what it means to have rights. There are no easy answers in this debate, and they will likely evolve as AI continues to develop. However, they illustrate clearly to us how present and pressing challenges around our relationship with machines are, and how quickly this will continue to evolve in the next few decades.

This leads into the final question of this essay, what does the future look like for our relationship with machines and the rise of AI? We are in a time period in which we can shape the answer to that question. Just as someone from the 18th century would struggle to imagine the world of 2021, so too will it be difficult for us to imagine the world of 2100, or even 2050. The future may be one of advanced society in which all areas and people are supported by technology with the power to empower and

support us all. Or, it may be one where our current systems of inequality continue to be perpetuated, despite technology with the power to fundamentally change the way we live and interact. Nothing is certain, except for our ability to work to shape this and the future we want to see. Machines and AI impact all of us, including all aspects of our daily lives. As the future approaches, it remains to be seen what contribution we will make towards it.

In conclusion, our relationship with machines has completely shifted in the last 150 years, and continues to change every day, raising issues of whether we have become dependent on machines. This changing relationship and the rise of AI presents challenges around industry, ethics and human rights, as we ask how we will interact with AI in the future. That future is still to be decided, and the future changes of this relationship with remain to be seen as society moves forward in the coming years, decades and centuries.