

AI and Ethical Dilemmas

In order to understand artificial intelligence and where it will head one must understand its various components. Artificial Intelligence is in itself a broad term referring to any form of intelligent processing performed by machines. This is circular as it uses intelligence in the definition. Intelligence is not how much someone or something knows, but rather their ability to learn. Therefore, an artificial intelligence machine is one that not only makes educated decisions, but also learns and in theory improves. Another assumption is that artificial intelligence requires little or no human interaction, because the more a human controls a machine the less it is a separate entity, and the more it is just a normal tool. AI can be applied to almost anything ranging from suggesting you shows on Netflix, to helping diagnose cancer. Over the years there have been various things that have restricted AI's development whether it be cost, man power, or feasibility of implementing the system. As the applications of AI grow, the potential future for it becomes more and more endless. One seemingly inevitable dilemma is whether or not more AI will always be a good thing. There are some applications in which AI raises philosophical and ethical dilemmas.

One application of AI that is questionable is in medicine. Specifically, machines are slowly assisting more in surgery. For example the Da Vinci robot is used because it provides more dexterity, accuracy, and precision than a doctors wrist and muscles could provide. It is still controlled by a human who essentially controls 4 different machine arms that can rotate 360 degrees. This enables a doctor to control more than 2 things at once, while having full maneuverability which his/her own wrists wouldn't provide. In the future it is predicted that machines like this will slowly be able to do more of the surgery until a doctor is not needed at all. This is a concept that will only be adopted through rigorous testing and proof that a machine can outperform a human consistently. The ethical dilemma is that a machine might not know when to take risks to save someone, or if something goes wrong how to make that split second call about how to adapt. The "judgement" call is what machines will arguably never have. This concept can be applied not just to medicine but rather to the idea of a machine protecting and preserving human life in any way.

There are situations in which decisions that should be personal should not be made by a machine. One film that I think captures this concept really well is "I, Robot."

In the beginning of this film, Will Smith gets trapped in a car with a young girl when a robot sees them and intervenes. The ethical dilemma was that the robot calculated who had a better chance of living (Will Smith had ~ a 95% chance while the girl had ~ a 33% chance) and saved that person. However, Will Smith personally wanted to sacrifice his own life for the small chance that the girl would live. This split second choice to sacrifice himself even if logically it might not have made sense was one the AI took away from him. It is arguably this ability to feel and make emotional decisions that might prevent AI from ever completely replacing humans in some applications.

Some would argue that an AI machine's greatest ability is that it is unbiased and acts based on how it is programmed to think. This raises the question of whether or not a machine could ever really "think." If a machine is programmed to return a particular response based on a specific input then that is not really thinking. However, if a machine is trained to form its own rules based on experiences it encounters and assumptions it makes from a core set of rules then it is getting closer and closer to pure artificial intelligence. An example of this is, again from "I, Robot" how the robots must all follow 3 laws. However, it is from these laws that a robot could in theory create new rules from its own individual experiences and conclusions. So if a machine is able to create rules from its own experiences and react completely unbiased based on facts its perceived then that could be viewed as a huge positive. It would remove any situation in which a human was accused of doing something incorrectly in the heat of the moment. For example, if police officers were all robots then in the face of an emotional crisis they would act rationally and without emotion. Artificial intelligence in regards to police and military also raises some ethical dilemmas.

As artificial intelligence improves, its application in the military or police force also grows. It is hard to oppose something artificial that would save human life by either being a weapon that works from a distance, or being an actual replacement for a soldier. An example that speaks to this is from the movie "Stealth." In this movie, the military has developed a fighter jet that can fly as well as any human, doesn't need a pilot, and can carry out missions. The reason the General in the movie was pushing so hard for this piece of AI was because it was something that would enable a soldier to not have to fight. In the future, there could be entire armies that are all made up of either remote devices or completely artificial autonomous weapons/soldiers. However, humans will never completely give up control.

As a result of AI becoming more and more powerful and easier to control, it will be easier and more likely for humans to refuse to give up control. There will always be a mistrust between humans and artificial intelligence. This doesn't mean that humans

won't trust the machines in the same way a human wouldn't trust a human. Rather it would mean that humans will never be 100% confident that a machine won't make a mistake, and that will be especially evident when it comes to preserving human life. Eventually, in the future there will be machines that can perform full surgeries without human aid, but it will take them doing it faster, more efficiently, and with more success for humans to concede that they should be used. In the movie "Starship Troopers" it shows the main character floating in a giant tank as these 2 metal arms basically regrow his muscle. Applications like this that seem completely unrealistic now will probably be made possible by artificial intelligence in the future.

The amount of positives that result from Artificial Intelligence will outweigh the negatives that arise from these errors in a machine's ability to make a human-like decision. Both quality of life and our overall lifespan will improve. Artificial Intelligence should and will be adopted very slowly and only after very extensive testing in these questionable fields like the military and medicine, but once it is accepted it will change the world as we know it.