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### The Humanity in Machines

What is it that makes me human? I have two eyes, two ears, one nose, and one mouth. I can think, write, and speak. I am self-aware. Yet every day, technology is one step closer to becoming just like me. There are machines that can think, write, and speak. Some even understand multiple languages. Some have eyes, ears, even noses, and perhaps one day mouths. That critical point where human creation may not be indistinguishable from humans, might not be that far away. After all, how is a human brain different from a circuit board? Once we pass that line, what difference is there from creating a conscious computer to having children? From there if they are truly ‘human’ in all aspects, how can one deny them rights? Artificial Intelligence has the capacity to not only be *like* a human, but to *be* human.

One of the defining features of Homo Sapiens is that we have large brains. Our brains have allowed us to put together sticks and make fire, and after a bit of time, even construct computers. However, our brains provide another benefit to us. Within our brains, the interactions of the basic building blocks, neurons, create something beyond the physical. Emerging from this squishy block of cells, there is consciousness. When it comes to our neurons, they operate by sending each other electrical signals, controlled by various chemicals. A computer runs on electrical signals that are controlled by various mechanisms, like resistors and diodes. Our cells work based on the instructions in our DNA. The circuits in a computer work based on instructions in the form of “on” and “off” signals stored in hard drives (or lately SSDs). While these are just glimpse at the complicated systems that make my body work and a computer function, they seem rather similar. If they have the same processes does the medium matter? For example, imagine I played you a piece from a record, and then an mp3. Perhaps if have good

ears, you could distinguish which is which. However, the overall result is the same. Even if the medium did have an effect, it would not be hard to change the other to make them virtually the same. With the previous example, a better recording device or speakers can be used. Consciousness can arise in computers, because their processes can be made to be the same as humans.

Since the last run of the Aristotle contest in 2010, the world has changed a lot. In the last 8 years, we went from the first Samsung Galaxy phone, to its 8th generation. Technological shifts are happening faster and more frequently than ever before. When the Industrial Revolution started in England, it took about half a century for Canada to catch on. The first iPhone only came out a decade ago, yet you can't walk downtown without seeing an iPhone. Our technology is constantly improving. Moore's law states that the processing power of computers will double every 18 months. Since the first time you saw Siri, Google's latest AI was able to book hair appointments without the person on the other side noticing the caller wasn't a human. In less than 8 years, we've gone far. We have no idea what lies just beyond the boundaries of our current technology, and how far or not it will go. Computers can have the ability to learn and make choices based on its own past experiences. Beyond that, there is nothing preventing a computer from replicating the processes in our brains and thereby create consciousness.

Consciousness is being aware of one's self. All Homo Sapiens, have the capacity to be conscious. This ability to be conscious is what makes us different from all other animals. It can be argued that other aspects, such as opposable thumbs, or a combination of such physical aspects can be the defining features of human. However, we live in a world where not every Homo Sapien has opposable thumbs. It then follows that unless you do not consider them as humans then there must be one universal feature that makes us human. Because of universal

presence of consciousness, the key to being human is to have a consciousness. Emotions are not necessary to be conscious. Emotions are reactions to the outside environment, which cause the release of different chemicals. These chemicals, hormones, cause us to feel things such as happiness, or sadness. This has no effect on whether someone can be aware of their own existence. Hence, a machine does not need to have emotions to be conscious. Also, emotions are not quantifiable. The perception of emotions differs person to person. Likewise, the perception or even the emotions could differ species to species. So, machines do not need to have emotions, to be conscious and thus human.

One of the most important decisions many people may face in their lives is whether to have a family. For some it is a difficult decision but for others having children may be an easy decision to make. If we have established that an artificial device can in fact have a conscious, then we should treat the creation of an artificial intelligence as the creation of a child. Just because something is different from us does not mean it is not at the same level of being as us. Take Apartheid, for an example. In the past, due to a physical aspect of an ethnicity, they were believed to be less than that of another ethnicity. Today, we know that physical aspects such as skin colour, have no effect on the fact that there is a *person* behind the skin. As such, if a machine is conscious, then just because it is physically different does not mean there is not a sentient being behind the “metal”. So, just as every couple has the right to decide whether to have children, so should it be for any to “have” a conscious machine. Should there be any situation where it would be morally wrong to have children, then it would be as such for a machine. For example, to have children for the purpose of abusing them would be wrong, and it would be the same with a machine. The morality involved with having children is no different

than that of creating sentient robots. The same is applied to that of whether a sentient machine would have rights.

If a machine has a consciousness then it is human, and should be treated as one. Our brains are not unique and can be replicated on another medium, possibly creating consciousness. It is simply impossible to tell where our technology will take us. The future may bring a means of creating a computer capable of replicating a human brain. While a machine consciousness may think differently or even *feel* differently, it is still another entity with a consciousness, a human. Once you consider any sentient being as human, then it follows those sentient machines should in all respects be treated as human. The future is a world which we can not begin to imagine. If we take steps today, to prepare for the possibilities that lie ahead of us, we may have a future where everybody recognizes the inherent humanity in artificial intelligences.