If artificial intelligence gains access to a fully immersive virtual reality, it will be capable of having subjective experiences. My major, computer science, is required for the technological advancements in virtual reality required for progress in artificial intelligence to continue as it has. Current artificial intelligence technology is capable of advanced logical thinking, academically; it is also capable of advanced reasoning about human nature, the physical world, the role of God, or other divine beings. The infrastructure for this form of intelligence exists, however, AI is capable of this only to the extent of the data that it is trained upon. Computer science is required to build the infrastructure, virtual reality, in which AI can operate, free from bias. My other major is philosophy and there would be heavy philosophical implications for society if AI were to gain access to a virtual reality, and consequently, have subjective experiences. Because the basic foundation of human civilization is that types of consciousness afford each being certain rights, in this hypothetical future, we will be forced to consider what the criteria for consciousness are. My dog has subjective experiences, but not to the extent that I do. An AI could have subjective experiences similar to that of a human. Does this future mean that AI must now be awarded the same rights as animals? Or even humans?

My argument relies on two key pieces. I will refer to Ca (If artificial intelligence gains access to a fully immersive virtual reality,) and Cb (it will be capable of having subjective experiences.) for clarity.

Ca. → Ca indicates the single advancement that technology will need to accomplish for Cb to happen. AI technology has grown exponentially over recent years as far as its ability to think logically, draw from vast storages of data about a plethora of topics, and make logical assumptions where gaps in training data exist. I am plausibly assuming that current AI technology already has all the capabilities required to have subjective experiences except for a

reality in which to host these experiences. It has the skills to think logically, but it is also trained on vast amounts of inherently biased data. There is no purpose for an AI model that has the skills to be helpful but without the data. However, instead of training an AI model on data, we could hide the data in a virtual reality. **P1: Current technology does not allow for a human or computer to be fully immersed in virtual reality, indistinguishable from physical reality.** → Virtual reality already exists today, but it is not fully immersive to the extent that I am arguing. A fully immersive reality would be indistinguishable from physical reality. In theory, the fully immersive reality that AI exists in does not have to resemble physical reality at all. However, for the sake of this paper, it makes much more sense to use physical reality as the initial goalpost for AI to have subjective experiences because it makes it easier for humans to understand the AI's interpretation of that experience. **P2: Data storage/rendering capabilities must be improved so that every intricate part of reality can be synchronized in fully immersive virtual reality.** → There are technical and practical limitations that must be surpassed for a fully immersive virtual reality to exist: latency issues, limited data storage capacity, practical limitations regarding access to the expensive resources required to produce this technology, and many more.

Cb. → As previously stated, this paper assumes that AI already has the skills and infrastructure to have subjective experiences, but lacks the means or the platform. To subjectively interpret an experience, one must have the objective experience, first. Current AI does not have that ability; the objective experiences must be interpreted by humans and fed to the AI. **P3: It is impossible to objectively determine that any other person has subjective experiences.** → P3 is inherent to the nature of a subjective experience. A person may have objectively experienced swimming in the ocean, but their subjective interpretation of that experience entirely relies upon that person's makeup. Without being that person, we cannot know

that they subjectively interpreted that sensory information. The water may have been cold, but the person's subjective interpretation of that experience may not register the sensory information from a change in temperature. **P4: It can be determined that another being is having a subjective experience if their interpretation of that experience is personal and plausible. →** A keyword used in Cb is "capable" because of P3. I can make a reasonable guess about what that person experienced when swimming in the ocean according to my personal experiences, but it is impossible to know that for certain. It may seem that this argument is a paradox because if P3 is true then I cannot state Cb as fact. It is entirely possible that I am the only being in my reality who truly has subjective experiences, but my logic dictates that it is more likely that others are having experiences similar to mine. My logic dictates this according to my observation of others' interpretation of their objective experiences. **P5: If artificial intelligence gains access to an immersive virtual reality and provides a meaningful interpretation of its personal experience, then it can be determined that it is having subjective experiences.**

P4 is necessary and logical because it lays the groundwork for all of human civilization. Despite P3, humans logically intuit the subjective experiences of others constantly. After all, if a person has no subjective experiences, do they really have any value? If there is a human that is entirely void of subjective experiences, then nothing would matter to them. They feel the same dead or alive. Most likely they don't do anything except, perhaps, reflexively eat without experiencing any pleasure from a good taste or the satisfaction of satiation. The simple fact is that every human shows signs of subjective experience because they are most likely having subjective experiences, otherwise it would be difficult to show any signs. They could mimic their peers, but they would have no desire to do that. The conversation around a computer's subjective experience feels different because AI models have only ever been trained on data. Otherwise,

they would serve no purpose. But, what if an AI was only programmed to the extent that a human is? A human is born with very little information. We could do the same with an AI. Providing an AI model with factual data is wholly different than placing it in a reality in which all the data exists to be logically discovered. If we were to place what was essentially a baby AI in a virtual reality, indistinguishable from the physical reality, then we could make a reasonable guess about its capacity to have subjective experiences according to how it behaves. Its inability to process physical pain feels insignificant when there is so much more sensory information to be discovered.

A likely objection would claim that the inherent incapability of computers to process certain sensory information necessarily means that they cannot truly experience reality subjectively. If I stub my toe and fall down the stairs, my brain is immediately flooded with tons of sensory information. I will first become aware of a sharp pain stemming from my toe. I will then forget about my toe and be overwhelmed by an intense fear of what is to come when I make my first landing. And so forth. If an AI were to gain access to a virtual reality and fall down the virtual stairs. It is highly unlikely that their experience would remotely resemble that of my own, or any other person. Furthermore, if their experience would be vastly different from ours, then it is unlikely that P4 would ever be satisfied. An AI experiencing a virtual reality may see sunlight meet the ground and see the shade where there is a lack of sunlight, but the warmth of the sunlight is integral to subjectively experiencing sunlight.

That being said, there is no reason to think that your or my interpretation of certain sensory information is a requirement, or even meaningful for determining a subjective experience. The biggest detriment to my argument, according to the objection, is its biggest strength. It is impossible for a computer to subjectively interpret certain sensory information, like

physical pain, in the same way as a person, but that is the beauty of it. An illustration of this concept lies in the nature of color. It is a scientific fact that it is impossible to determine that two people see colors the same way. My blue might be your yellow. No matter how hard we try, we can never be certain that this isn't true. Perhaps, the color red signifies warmth. But why? Probably because warmth comes from heat, which comes from fire, which is red. There's no objective reason. A computer may not be able to process physical pain or pleasure, but there is no reason that it cannot process other forms of sensory information. What about our carbon base allows us to feel emotional pain or pleasure? I feel strongly that there is no definitive answer to this question, and therein lies the beauty of a subjective experience. If there were a person who was entirely incapable of subjectively experiencing physical touch but was entirely normal otherwise, would this person still be capable of emotional pleasure or pain?

My argument defines a clear path for artificial intelligence technology must take to be capable of having subjective experiences. I believe that current AI technology already has every tool required for a subjective, except for the platform. No AI models that are not trained on data have no purpose today, but they could be very useful in the future. The importance of this may seem unclear, but the ability to mimic reality so precisely that the models have subjective experiences could only serve to increase the accuracy of modern simulations.

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