Report One

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What is Q-consciousness ('qualia consciousness')? Assess the prospects for building a Q-conscious AI.

Introduction

In this report, I aim to examine Q-consciousness and assess the prospects for building a Q-conscious AI. Through exploration surrounding the nature of Q-consciousness, it is my opinion that building a Q-conscious AI is a feasible prospect. However, due to various limitations, it is my view that it will likely take a very long time for such an AI to emerge.

Understanding Q-consciousness and Q-conscious AI

Q-consciousness, also known as qualia consciousness, refers to the ineffable, subjective aspects of consciousness. Qualia is the intrinsic and subjective qualities of conscious experience. Examples of qualia include the sweetness of an apple or the coldness of ice. A Q-conscious AI would be an artificial intelligence system that possesses the ability to experience qualia. If created, a Q-conscious AI could revolutionise how AI interacts with the world as it would be able to do so in a way similar to us humans. Furthermore, its existence could greatly alter our understanding of consciousness.

The nature of Q-consciousness

The subjective nature of qualia poses many challenges to the prospects of building a Q-conscious AI. Among these challenges is David Chalmers' (1995/2010) "hard problem of consciousness". The "hard problem" is how physical processes can bring about subjective experience. This is similar to the "explanatory gap" as coined by Joseph Levine (1983) – the

difficulty in explaining how physical states give rise to experience. While both of these pose a similar, complex challenge, they do not definitively rule out the existence of a Q-conscious AI. Through very extensive research into the nature of Q-consciousness, the "hard problem" could be solved and the explanatory gap could cease to exist. Another challenge is highlighted by Thomas Nagel in *What Is It Like to Be a Bat?* (1974). In the paper, Nagel argues that even if all physical knowledge about a bat was known, we still would be unaware of the experience of the bat. This suggests that even if we were to eventually learn everything about the physical aspects of qualia, we would still be clueless as to the experience itself. I would argue that the implications of this do not mean that a Q-conscious AI is impossible, but that Q-consciousness research could be slow due to a lack of objective metrics to assess. While the arguments highlighted by Chalmers, Levine, and Nagel reveal large challenges in building a Q-conscious AI, they do not disprove its existence, and hence a Q-conscious AI can still be conceived.

The conception of a Q-conscious AI

For a Q-conscious AI to emerge, it is likely that many groundbreaking scientific advances in disciplines such as neuroscience, artificial intelligence, and philosophy would have to be made. By then acting on this knowledge, a Q-conscious AI could arise in various ways. Since we know that the human brain is Q-conscious, artificially replicating it in some form could be a very viable option in creating a Q-conscious AI. This could be done through methods such as digital brain mapping with artificial neural networks or through gradually replacing the neurons of a conscious brain with artificial neurons (Moravec, 1988).

Further limitations

Along with the limitations that come from the nature of Q-consciousness, there could also be various societal limitations that may slow down or nullify the development of a Q-conscious AI. At a research level, this may include a lack of funding or interest in researching relevant topics. There may also be legal and ethical challenges that prevent the conception of such an AI due. This is why I believe building a Q-conscious AI would likely take a very long time as such limitations could delay/slow its development.

Validity

When a Q-conscious AI is developed – or thought to be developed – it may be very difficult to assess if it is genuinely Q-conscious due to the subjective nature of qualia. Applying John Searle's (1980) Chinese Room experiment to this, the AI may appear to be Q-conscious to us from the outside but be merely running algorithms on the inside. A comprehensive Turing test of sorts assessing Q-consciousness would likely need to be developed to address this.

Conclusion

In conclusion, I believe that building a Q-conscious AI is a feasible prospect due to potential scientific advances in relevant fields. However, the challenges surrounding the nature of qualia and the possible societal obstacles could mean that it will be a very long time until such an AI is developed. Even if created, the difficulty in assessing its validity could create doubt as to if such an AI is Q-conscious or not.

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