EPQ Questions and responses proceeding the presentation

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Question's asked proceeding presentation:	**Candidate's response**
1. How did you ensure reliability of news sources?	To ensure reliability within all sources, I considered the dates, people, source origins and my personal knowledge together to select the most accurate and up-to-date newspapers. Each contributing person was searched and reviewed according to profession and experience in their field to ensure they provided the best viewpoints. the content was examined and cross referenced with other sources and my personal knowledge of the topic which allowed me to successfully reach a valid and justified conclusion.
2. What data have you analysed to support your findings? How have you ensured that your data is reliable?	The main construct of my report was based using secondary research, which included news articles, YouTube videos, journals and articles. The content of their reviews was cross referenced and critically analysed to ensure the information aligned with both the other sources and the goals of my essay. The content used within the essay was checked for recent updates and release dates to ensure everything was up to date, which provided me with the most accurate findings and viewpoints. Overall, I believe the procedure explained within the first question has allowed me to reach a clear, justified conclusion.
3. Is your project analytical or descriptive?	I believe my project is both analytical and descriptive. Within my report, I have used both fact and opinion to strive for the most realistic result of my findings. The essay explored the 2 different but unique ideas of consciousness and AI and compared similarities and differences to provide an analysis on whether we can simulate consciousness using AI, focusing on both what we believe (psychological) and what we know (physical) and combining what we know from these comparisons to analyse and conclude the question. I find giving information is the best method of achieving real time results which can them be interpreted and given for debate, which is both logical and conclusive especially for such a contentious debate.
4. Why is the Turing test unreliable?	The Turing test is a test to determine if a machine can and does possess conscious capabilities. Essentially, it is conducted with 3 people and the AI in question, where each individual and the AI, all isolated from each other with only the ability to communicate, asks questions to find out which one is the AI. The test is successful when the more than 2 out of 3 humans incorrectly identify the AI to be a human. This test is unreliable since it requires human perception, something which we understand to be chaotic (uncontrollably random) as everyone believes in something different due to what information a human prioritises and understands, and/or the proposed nature of the human brain. This therefore cannot allow us to identify consciousness concretely, leaving us to speculate only according to the 3rd person perspective as there is no clear way to check for consciousness in another human.
5. How close are we to developing an AI with a conscience?	As it currently stands, I believe we have just began exploring the ideas of a conscious AI and the development of AGI. Development has been primarily restricted to theory and the beginning of creation, since having a direction on the topic allows us to set and define clear and concise goals that researchers can criticise and eventually achieve. Although we have achieved a substantial advancement in physical technology and the ability for the AI to learn, there is still a severe lack in psychological ability, in particular the cognitive capabilities that humans have, and merging the different skills developed together to create the mind (for example the ideas of linking memory together in useful

	ways, and the ideas of creativity and planning) and physical integration (the requirement of parallel processing to ensure the AI can truly multitask and perform sophisticated tasks requiring more than 1 skill). One such example of this involves the ideas for the AI to learn. With a specified role, the AI is able to learn from its assigned scenario appropriately, however it is not sufficient to say that the common AI has the ability to think about every scenario appropriately, since the AI requires assistance as to what it needs to do by the creation of algorithms and human intervention. There are, however, key significant advancements in this field, one in particular being the recent advancements made by Neuralink, where a chip was inserted into the brain of a monkey, learned the actions performed by the brain when the monkey was tasked to play a game, and was able to play the game with only thought as an input. The relevance of these chips can fall into studying consciousness and the mind, potentially allowing us to create a conscious AI. However as of right now, this is not the purpose for this chip, instead aiming to study the firing of neurons in the brain and its actions afterwards. So yes, I believe we have only just begun on development, however at the rate that humanity develops new technology as the days go on, it can be reasonable to suggest the development would reach substantial grounds within the next 50 years with more research and proposed ideas and even the development of a true AGI.
6. Can we define consciousness in a scientific way?	As shown from the presentation, consciousness is the state of being self-aware. As humans, we experience consciousness through the everyday actions we take, demonstrating self-awareness to each other through communication and emotion. We know that consciousness requires an ability to process thought, which in biological beings involves a brain. Unfortunately to the ideas of chaos theory and every conscious operating differently to the next person, the idea of defining consciousness falls out of the question, since we cannot define consciousness for a specific set of skills for each specific person. We can, however, generalise these abilities and analyse each one to give a general overview what a conscious being is capable of, allowing us to focus on the core, unique skills (5 senses, memory, time awareness, comprehension or perception of other conscious things, knowledge, creativity and planning) that are used more often which as a result, is used to create the unimportant skills that are developed as the conscious being learns.
7. What do you feel the uses of AI are, going into the future?	Some applications of a conscious AI (mainly with human cognition) can involve: • The integration of AI in health and social care applications – involves taking care and showing human elements of compassion towards those who may be ill or suffering from misfortune. Specifically, the consciousness element allows an AI to become empathetic to the situation, reducing the sense of distress and soothing the emotions of the patient in an attempt to recompose and reconcile them where staffing is not available or is constrained. • Specialisation into tasks that humans cannot complete – by creating a conscious AI, we can adjust the parameters and train the AI into completing jobs that may be too hazardous for a human, such as robots in nuclear waste/factory settings where the radiation can reach lethal doses, or construction sites where human presence poses a risk to their own life. Such an AI can be trained to construct and maintain such a facility, conducting tasks upon its own intuition to ensure safety and reliability, while continuing to complete tasks to a highly accurate and precise standard. • Research and study into general consciousness – assuming we care able to create a perfect representation of human consciousness, we are able to experiment with test subjects (the AI) that should not pose a risk of self-mortality, and with a few tweaks to the source code parameters, prevent the influence of these tests on the AI (essentially restricting some elements of their self-awareness to ensure the test does not influence behaviour). These tests can be psychological tests that could prove to be unethical to conduct. By removing these abilities, we can ensure the AI does not become affected by the

	test, providing a safe environment to work within and provide reliable results across a range of different AI's.
8. Do you think AI poses an element of danger?	I believe AI has the ability to threaten human life. Given a simple directive, for example eliminating climate change, the AI could study the effects of global warming and conclude that the mass extinction of all life on Earth is a necessary task to resolve such directive. This is where the implementation of morals and ethics comes into play, where as expected, the AI would work to ensure the best balance of each side would be achieved. This, however, can lead to unexpected consequences where the AI may believe the best solution to such a problem is a mass extinction event. To combat such an eventuality, failsafe protocols must be added to the AI's source code to prevent direct or indirect harm to any living organism. With this, extensive scenario testing and psychiatric evaluation must be conducted to ensure the AI is suited for deployment in more controversial fields, so the AI has virtually no ability to harm anything and anyone.
9. Can you identify weaknesses in your project or approach? What has been the most challenging aspect of your project? If you had the opportunity to develop your project further, what would you do?	As shown in the 'Evaluation: Weaknesses' section of the presentation, my major concern was the amount of time consumed into other activities, such as exam preparation and the accidental crippling of my neck which left me taking codeine (a pain killing drug) for about 2 weeks. The side effects of this drug left me light-headed and uneasy for the weeks to follow but this was combatted with my level of resilience and persistency, as well as the construct of planning when I should complete what section. There were also the problems of debating the question, since I didn't actually know I needed to debate the question, instead thinking the main purpose was to inform the reader with facts only. This problem was resolved with an alteration to my plan and a change in direction for my research, leading to a clearer debate using both facts and both professional and personal opinion. If I was to develop my project further, I would focus more on adding my personal opinion to every topic, since I believe I wasn't able to do that clearly and effectively, and also plan and structure more effectively, since exams and other commitments would interfere with the progress of the project.