

SCIE300 Reading Assignment 8 (RA8)

60 points

Question 1 (5 points)

What is the definition of “consciousness” employed by Tegmark?

Question 2 (5 points)

There are many possible definitions of consciousness. Quickly read the relevant section of the article on consciousness in the online Stanford Encyclopedia of Philosophy. Based on this, give one definition of consciousness that disagrees with Tegmark’s definition.

Question 3 (10 points)

Based on your own personal opinion, without necessarily referring to Tegmark’s discussion or conclusions, which of the following do you believe could be described as conscious: a single-cell bacterium organism, an oak tree, an ant, an ant colony, a goldfish, a dolphin, a chimpanzee, a dog, a new-born human baby, a two-year-old human, an adult human, the AlphaGo computer program, a computer simulation that precisely replicates all relevant aspects of the human brain, a superintelligent computer program.

Question 4 (10 points)

Repeat the previous question but this time apply Tegmark’s definition of and conclusions about consciousness. Briefly (1–2 sentences) explain any differences between your answers to this question and the previous question. If there were no differences, explain why not.

Question 5 (10 points)

Tegmark suggests a scientific experiment that could be used to test a theory that distinguishes between conscious and unconscious thought in humans.

- (a) Describe this experiment in your own words.
- (b) Explain why the experiment probably could not be used to test a theory that distinguishes between conscious and unconscious thought in a superintelligent computer program.

Question 6 (10 points)

Tegmark argues that your visual consciousness cannot reside in your retinas, despite the fact that they perform a great deal of complex visual processing. What is the evidence against this “conscious-retina hypothesis”?

Question 7 (10 points)

Tegmark argues that “both biological and artificial consciousnesses therefore feel that they have free will.” Explain this argument in three or four sentences, using your own words.