

# HUL381/ELL457: Assignment 3

Maximum Marks: 6

Submission deadline: **1 April, in class**

**Instructions:** You should primarily refer to the assigned essay and other course readings, but may also consult any other materials you find useful. However, your answers should be written entirely in your own words. Any direct copying detected will be regarded as plagiarism and dealt with accordingly. If you refer to sources outside of the assigned/course readings, you must mention them in a list of references at the end. Please remember to write your name and entry no. on your submission.

Modern cognitive science is founded on the idea that key aspects of our minds can be modelled and emulated computationally (what is referred to as the *Computational Theory of Mind*). In class, we have been discussing a range of specific computational modelling approaches which cognitive scientists have sought to deploy. However, there is still a school of thought in psychology which rejects the premise of the computational theory of mind, and hence in effect denies the possibility of cognitive science in its current form ever being successful. For this assignment, you will read and respond to a controversial recent essay, *The empty brain*, by one of the most prominent sceptics, Robert Epstein:

<https://aeon.co/essays/your-brain-does-not-process-information-and-it-is-not-a-computer>

Your task is to read and write a response to this essay. Based on what you have learnt about the computational modelling techniques we have looked at in the course, how would you defend their use as a valid way of seeking to understand the mind? Is it really true that the kinds of phenomena Epstein describes cannot be accounted for by computational or information-processing mechanisms? If not, why not? Is he somehow misinterpreting or misunderstanding the notion of computation or information processing? In what ways? Try to think of specific examples from the kinds of modelling approaches we have discussed and how they might help us respond to Epstein's scepticism. Also, to what extent might Epstein's critique be valid (if at all), and how might thinking about such issues help us to refine our modelling approaches in cognitive science? It would be desirable to comment on this as well in your response.

(You need not restrict yourself to just text. Feel free to use illustrative visuals/diagrams/plots/*etc.* in your response if you wish.)