

Assignment 5

Due Friday, March 29 at 11:59 pm.

Please submit all work on Canvas as a PDF or Word file. Make sure you clearly label each solution, and include the answers to the in-class quiz at the beginning of the assignment.

Part 1: Automatic vs. Controlled Thinking

1) Scenarios Consider the following activities. For each one, indicate whether it primarily involves system 1 or system 2 thinking. (8 points total)

- (a) **Parallel parking in tight space**
- (b) **Completing the phrase "bread and ..."**
- (c) **Comparing two microwaves for overall value**
- (d) **Counting the occurrences of letter c in a page of text**
- (e) **Finding a strong move in chess (if you are not a chess master)**
- (f) **Finding a strong move in chess (if you are a chess master)**
- (g) **Detecting hostility in a voice**
- (h) **Answering to $2 + 2 = ?$**

2) Board Games Think back to the board game activity and/or the board or card game you decided to write about.

- (a) **What did you do in the game that could be considered automatic thinking? In two to three sentences, describe the situation and how automatic thinking was involved. (3 points)**
- (b) **What did you do in the game that could be considered controlled thinking? In two to three sentences, describe the situation and how controlled thinking was involved. (3 points)**
- (c) **Think about some of the mistakes that automatic thinking might be subject to, such as being influenced by priming, overconfidence in causality, confirmation bias, and more. How might these have played a role while you played your card/board game? Would controlled thinking have been better in some situations? (3 points)**
- (d) **Think about some of the benefits of automatic thinking. How might these have played a role while you played your card/board game? Would controlled thinking have been worse in some situations? (3 points)**

Part 2: Heuristics

3) Estimating Age Imagine an experiment in which participants are asked to estimate the age of a famous movie star (whose age is 65). Group A is first asked whether the star's age is greater or less than 90. Group B is first asked whether it is greater or less than 40.

- (a) Which group would you expect to provide larger estimates? (1 point)
- (b) In two to three sentences, explain your reasoning using a concept that was covered in the assigned readings. (3 points)

4) UMD Statistics Consider the following questions about the University of Maryland, College Park student population:

- How many undergraduate students attend UMD?
 - How many InfoSci majors are there at UMD?
 - How many Econ majors are there at UMD?
 - What is the average SAT score of UMD students?
- (a) Without looking them up, try to guess/estimate the answers to each of these. If you already know the answers, try doing it for a different year (e.g. the values from 10 years ago). (2 points)
 - (b) Using concepts covered in the lecture and readings, describe how you reached each estimate. (3 points)
 - (c) Now, look up the values for each of these online. Did you underestimate, overestimate, or get it approximately correct? Why might this have happened? Consider the biases described in this link to answer the question. (4 points)
 - (d) Suppose you were able to discuss your estimates with a group of people before looking it up. Do you think you would have been closer or further from the actual value? Why might your answer have been different? (2 points)