Honors College Orientation – Fall 2023

**Discussion Questions**

*Algorithms to Live By*: *The Computer Science of Human Decisions*

by Brian Christian and Tom Griffiths

*This book provokes questions spanning several areas of inquiry, from epidemiology to economics, political science to public health, environmental engineering to environmental justice to data analytics. The following questions will guide our discussion of this book at the Honors College Orientation. Please prepare typed responses to these 10 questions. Some questions may only require a sentence or two while others may need a longer response. Responses will be collected and evaluated by Honors College faculty and staff, so be sure to print out your answers before you arrive with your full name and your orientation group name at the top of the page(s) that you submit. Don’t forget to bring these answers to the Thursday Orientation!*

1.Did reading *Algorithms to Live By* help you think in a different way about any process or decision you might have faced or might face in the future? How so? Did you respond to the reading by thinking more about particular issues or choices or by thinking more about general perspectives on decision-making?

2.Are the authors’ claims that many problems can be solved by an algorithm overstating or understating their case? What evidence, if any, do you have for your position? If their claims are overstated or understated, then what are the consequences?

3.Chapter 6 describes Bayes rules and suggests that people use a naïve form of Bayes rule in every day reasoning. However, the value of Bayes rule depends strongly on informative priors. Is it possible to manipulate public opinion by presenting compelling stories so as to influence people’s priors and thus their reasoning? Have you seen examples of this behavior?

4.Good algorithms created with inaccurate data generally lead to inaccurate solutions. Can you identify instances where this outcome has occurred in public life? When analyzing the effectiveness of an algorithm, which is more important- the correctness of the algorithm or the correctness of the data?

5.Most people operate without high levels of consciousness about computational strategies. How well do they handle decision-making in relation to what is revealed when these strategies are applied? Do the comments in the text give you more confidence in people’s practical abilities? More confidence in computational strategies?

6.Christian and Griffiths note that using one of their computational approaches to address a problem “doesn’t mean that you will have *no* regrets, just that those regrets will accumulate ever more slowly as you go through life. Even the best strategy sometimes yields bad results . . . . If you follow the best possible process, then you have done all you can, and you shouldn’t blame yourself if things didn’t go your way.” Is this a disturbing perspective or a comforting one for you as you think about choices you might face? If you were having difficulty making a decision about your future, would this perspective help to temper your anxiety?

7.Discussions about mathematics and calculation often seem to encourage (in non-mathematicians at least) impressions of precision and certainty. Yet the working out of computational problems often seems to emphasize the limitations of even the best strategies and to undercut any desire for fixed certainty or assurance. Do you think that fixed certainty or assurance is possible? If so, why? If not, are these calculations nonetheless beneficial (and how), or do the limitations outweigh any benefits (and why)?

8.Can you think of ways that the desire for certainty might play into understandings (or misunderstandings) of public issues? Consider the legal circumstances that lead to waivers for kids playing T-ball mentioning the possibility of death or the issues surrounding those who want medical treatments or vaccines to have a 100% percent guarantee of safety and effectiveness under all possible circumstances. Does an emphasis on limitations or probability in discussions on computation provide any help in thinking about how to live our lives?

9.Can computational thinking offer good advice for a college student? What do you think of this: “Following the advice of these algorithms, you should be excited to meet new people and try new things—to assume the best about them, in the absence of evidence to the contrary. In the long run, optimism is the best prevention for regret.” If you were inclined to doubt the wisdom of these sentiments, would computational arguments help change your mind?

10.On p. 259, Christian and Griffiths state: “Computational kindness isn’t just a principle of behavior; it’s also a design principle.” After reading this book, do you agree with that statement? Can you provide an example from your life or experiences where computational kindness was helpful?