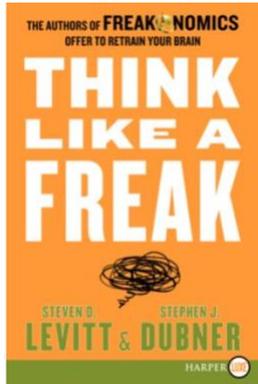


Briarcliff High School

AP Capstone Seminar

2022



All incoming AP Capstone Seminar students are required to read *Think Like a Freak* by Steven D. Levitt and Stephen J. Dubner

REQUIRED ASSIGNMENT:

Overview & Purpose:

Welcome to AP Seminar! What would a high school AP course be without a summer assignment? Ha! I can tell you what it wouldn't be... and that's AP Seminar.

This college-level course is all about solving the world's problems — seriously! However, to solve the world's problems, one must first learn to think like a freak. Lucky for you, the book you're about to read is a handy how-to guide. If you internalize the rules surrounding thinking like a freak, you're well on your way to success in AP Seminar!

The Assignment:

You will read the entirety of the book *Think Like a Freak* and answer the following questions. The suggested approach to completing this summer assignment is to read one (1) chapter per day, subsequently answering the questions associated with that chapter. Time management is one of the most valuable skills you'll need to develop to be successful in AP Seminar. Start now!

The Due Date: Wednesday, September 7

Questions: Contact me at kmccarthy@briarcliffschools.org

Chapter 1

1. Given what you learned in this chapter, how would you describe what it means to “think Like a Freak”? Do you think like a Freak? Why or why not? Would you encourage others to think like a Freak? Why or why not?
2. Where do people get their biases and “knowledge”? How do our interactions with family and friends reinforce our biases and “knowledge”?
3. Why is it important to understand the role of specific incentives when trying to solve a problem?

4. People often do not want to challenge others' ideas, even if they have evidence that the ideas are incorrect, because it would be uncomfortable. Americans, more than others, tend to support the notion that people can have their own ideas. Why do you think this is the case?

5. In psychology and cognitive science, confirmation bias (or confirmatory bias) is a tendency to search for or interpret information in a way that confirms one's preconceptions. Provide an example when you engaged in this type of thinking and when you did not fall into the "trap" of confirmation bias. Now, think about these two situations, why do you think you fell into the "trap" of confirmation bias in one of the situations and not the other one? What factors influenced your thinking?

Chapter 2

1. Why do Levitt and Dubner encourage people to conduct experiments to help solve problems?

2. Problems that we face today, such as climate change, terrorism, and mass shootings cannot be answered by simply assembling facts; they require judgment, intuition, and an educated guess about how things will ultimately turn out. Thus, to address complex problems, we need to make educated predictions based on scientifically verified facts. If everyone has access to the same scientifically verified facts, everyone should come up with the same solution, right? Why or why not?

3. Given the tendency to want to protect our own reputation, people often perceive that the cost of saying "I don't know" is higher than the cost of being wrong—at least for the individual. However, saying, "I don't know," can have many benefits while assuming one knows the answer, but that information is wrong, can have many downfalls. Imagine that you are the CEO of a large corporation. Outline a strategy that you would use to counteract individuals' tendencies to overestimate their own knowledge.

Chapter 3

1. Explain why reframing the question can help you solve a problem.

2. Describe the two broad lessons that you learned from Kobi's experience as a world-famous hotdog-eating champion. Apply these lessons to a situation that you are currently facing.

3. Provide an example from your life when you focused your attention on the "noisy" part of the problem. How could you reframe the problem/question to facilitate a true resolution to the problem? What factors influenced your decision to focus on that part of the problem?

Chapter 4

1. Explain why problems are more likely to be resolved when causes, not symptoms, are addressed. Provide an example from your community that highlights a situation when symptoms are being targeted instead of addressing root causes.

2. Why would a Freak consider the lack of food and money to be a superficial answer to the question of the causes of poverty and famine?

3. Think about the current obesity epidemic in the United States, and provide three examples of “solutions” that address the symptoms. Have they been successful? Why or why not? Thinking like a Freak, identify possible root causes of the obesity epidemic.

Chapter 5

1. Do you think like a child in your own life? Describe examples of situations that required you to think like a child. What were the outcomes?

2. This chapter suggests four reasons to think small. Choose a pressing problem facing you or your community and explain how each of these reasons to think small could help you solve the problem. For example, you might consider thinking small about low graduation rates, food insecurity, or access to health care.

3. The authors ask, “Why is it so important to have fun?” (p. 96). Thinking like a Freak, what would your answer to this question be?

4. To better think like a Freak, this chapter suggests a three-step process to get started on problem-solving: (1) generate a big list of ideas (especially obvious or outrageous ones), (2) follow this step with a cooling-off period (sleep on it), and then (3) finally sort the good ideas from bad (remember it costs nothing to ditch a bad idea). It’s time to try this strategy in your own life! Choose a pressing issue in your own life, generate a list of ideas, give them a waiting period, and finally, identify the best ideas from your list. Describe your experience with this process and reflect on it.

5. Use thinking like a child and having fun to solve a problem (preferably a small problem!). Identify a problem behavior that you or a person you know would like to change. Think about the “fun” part of the behavior. Describe a strategy to change the problem behavior to a beneficial behavior using a fun approach. Examples from the book include using a lottery to increase savings and a social gaming site to raise money for charity. Hint: You might even think back to previous chapters that include discussion of incentives.

Chapter 6

1. This chapter introduces the concepts of declared preferences and revealed preferences. Explain the difference between these and offer examples of these two types of preferences that you have observed in your own experience.

2. Using examples from your own life, describe two or more relationship frames that influence your behavior.

3. What are three reasons why even carefully constructed incentive plans can fail? Describe an example of a real or fictional incentive plan failure due to these reasons.

4. Think about a problem you are currently facing at home, work or school. Hint: Recall from the previous chapter that there are benefits to focusing on a small problem. How could incentives help you to solve this problem? Create an incentive plan for changing a behavior to help solve your problem by addressing the six rules of incentives on page 135.

Chapter 7

1. What is game theory?
2. Why are most college applications relatively complicated and difficult to complete? What does the information obtained from a completed application signal to a college admissions committee?
3. Levitt and Dubner suggest that the self-weeding garden strategy is more successful if it is used infrequently. Describe one possible scenario where this strategy could be useful in your own life. Don't forget to describe what the possible outcomes of the strategy could be. It's okay to speculate here! Why do you think that this strategy is difficult to use frequently?

Chapter 8

1. In the example of driverless cars, why might supporters of driverless cars be wise to point out the potential problems with this form of transportation? Why is pointing out potential flaws a good persuasion tactic?
2. Why do the authors advise a would-be persuader to steer clear of anecdotes? What is the problem with anecdotes?
3. If you could persuade one person (or a group) of just one thing to make your life better today, who would it be and of what would you persuade them? Using the six principles from this chapter, outline a plan for persuasion.

Chapter 9

1. What are the differences between sunk and opportunity costs? Which should you pay more attention to if you are considering quitting?
2. What is a premortem? How can it be used to make better-informed decisions about quitting?
3. What is the status-quo bias and how does it affect decisions to quit?

Beyond the Book (3 Points)

Thinking like a Freak involves experimenting on ideas to determine the best way to solve problems. Esther Duflo's social experiments are testing solutions with randomized trials to best identify ways to address serious social issues. Watch her TED talk to learn more about the benefits of conducting social experiments.

1. Using the lessons you learned in this book, describe how Dr. Duflo thinks like a Freak. Did she demonstrate each of the principles (role of incentives, root causes, experiments, etc.) that were described in the book? If not, which ones didn't she engage in?
2. Dr. Duflo recommends that we use social experiments to determine how best to spend aid dollars to help address issues related to poverty. Imagine that you have been asked to help decide how best to spend an additional one million dollars to help alleviate problems associated with poverty here in the United States. To do so, you need to conduct a social experiment to ensure that the money is well spent. Using the social experiments shared in the TED talk as examples,

describe the social experiment that you would conduct, including the specific research question that you are interested in answering, the target population, the social behavior that you want to better understand, and the necessary information that you will need to make a data-driven decision. Be sure to highlight why the research question that you are attempting to answer is an important one.