Study questions for [GS] Chap 10 & 11: Naturalism and Social Structure
1. How is *naturalism* often summarized? How does Godfrey-Smith describe *foundationalism*?
2. What are some claims that Quine's article "Epistemology Naturalized" made?
3. What is the debate over the theory-ladenness of observation?
4. How might the Muller-Lyer illusion be described as an example of the theory-ladenness of observation? What is Godfrey-Smith's response?
5. According to Hull, what does science run on?
6. According to Godfrey-Smith, Lakatos and Laudan focused on rational choices that *individual* scientists make. How is this different from Kitcher's view?
7. What is wrong with a reward system in which a fixed reward is given to everyone who works on the research program that eventually succeeds, regardless of how many workers there are?
8. What is wrong with a reward system in which a reward is given to individuals for making choices that produce the maximum benefit in terms of the overall chance that the community will solve the problem?
9. Why does Kitcher think the following reward system is optimal: reward only those individuals who work on the research program that succeeds, but divide the pie equally between all workers who choose that program?
10. Explain why Strevens thinks Kitcher's reward system in #9 encourages "free riding"?
11. What reward system does Strevens think is optimal?

Study questions for [GS] Chap 12: Scientific Realism
1. How might someone claim that the world of one thousand years ago was not a world of electrons?
2. What is *common-sense realism*?
3. According to Godfrey-Smith, must the scientific realist be a common-sense realist? Why or why not?
4. What is *common-sense realism naturalized*?
5. What is Godfrey-Smith's definition of *scientific realism*?
6. What is the Pessimistic Meta-Induction against scientific realism?
7. What is the argument for scientific realism based on the success of scientific theories? Why should we be critical of this "Miracles Argument"?
8. According to Godfrey-Smith, how did the logical positivists, Popper, Kuhn, and Latour view scientific realism (pro or con)?
9. What is the empiricist Underdetermination Argument against scientific realism?
10. What is the argument against scientific realism that is based on metaphysical constructivism?
11. According to Godfrey-Smith, what is the difference between *metaphysical* constructivism and *social* constructivism?
12. What is *instrumentalism*?
13. What is an *empirically adquate* theory?
14. According to van Fraassen, what is the goal of science?
15. What is one problem associated with van Fraassen's *constructive empiricism*?
16. Under a linguistic account, what does a theory consist of?
17. How are models used by scientists to represent phenomena? How is this different from a linguistic approach to representation?
18. How can the model-theoretic approach to representation avoid the Pessimistic Meta-Inducation against scientific realism?

Study questions for [B] Chap 1: Laws of Nature

1. How does the simple regularity theory describe a law of nature?
2. Give an example of a regularity that is not a law.
3. In what sense is a functional law, like the ideal gas law, not a regularity?
4. In what sense is a probabilistic law not a regularity?
5. How does the systematic (or best system) account describe a law of nature?
6. Why does Bird think the systematic account could mistake an accidental generalization for a law?
7. According to Bird, what is the key to understanding why a mere regularity cannot explain its instances?
8. Does Bird think a systematization of regularities (a theory) explains their instances?
9. How does the necessitarian account describe a law of nature?
10. What is one problem with the notion of a necessitation relation?

Study questions for [GS] Chap 13: Scientific Explanation

1. According to the *covering law* theory of explanation, what does it mean to explain something?
2. How is explanation like prediction, according the *covering law* theory?
3. What is another name for the covering law theory?
4. What is the *asymmetry problem* with the covering law theory?
5. According to the *causal* theory of explanation, what does it mean to explain something? What is the biggest problem with this theory?
6. According to the *unificationist* theory of explanation, what does it mean to explain something?
7. What is "pluralism" about explanation?
8. What is the Humean (regularity) view of laws of nature?