

**\*\* DISCUSSION PAPERS \*\***

Comprising forty-five percent of your final grade, the discussion paper provides an opportunity for you to analyze and systematize your understanding of a major course issue. While some additional research on your topic is advisable, you should resist the temptation simply to report the fruits of others' reflections. In other words, the bulk of your paper should be devoted to your own ideas: select a philosophical or theoretical issue from course topics; then work to clarify, explain, systematize, or resolve that issue, or perhaps pose new problems.

You may discuss any topic relevant to class concerns. Topic selection and perhaps a cursory outline should be completed by November 16<sup>th</sup> for approval by your instructor. Final drafts are due, without exception, on November 30<sup>th</sup>.

Below is a provisional list of topic questions that could serve as a basis for the discussion paper: you are certainly NOT confined to this list; it is merely a conceptual range-finder.

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1. What exactly is entailed by saying that one event causes another?
2. Are natural laws discovered or invented?
3. How, if at all, do causal laws differ from statistical generalizations?
4. Can the natural and the social sciences share a common methodology?
5. How do scientific theories emerge from experimentation?
6. What exactly is the role of experiment in a theoretical science?
7. What exactly is the role of value judgments in science?
8. What counts as an adequate scientific explanation?
9. Do scientific theories approximate objective knowledge?
10. How has relativity theory changed our basic concepts of substance, space, time, and energy?
11. Does science ever contradict common sense?
12. Do scientific theories converge over time?
13. Are scientific theories true or false?
14. How are the meanings of scientific terms fixed?
15. Why are scientific theories revised?
16. Are there any laws of nature?
17. Is physics legislated by cosmology?
18. Is the theory of evolution by natural selection adequate to explain the origin of species?
19. Is the theory of evolution by natural selection adequate to explain the emergence of mind?
20. Is artificial intelligence a branch of cognitive psychology?