

**Phil 125: Midterm Assignment (Exam Version)**  
Winter, 2022

**Instructions**

Due, as an attachment, via the “Assignments” tool on Canvas, by 11:55pm Tuesday, February 15 (in PDF or any format easily converted to PDF, e.g. MSWord).

Answer any *two* of the questions listed below, in 2–3 pages for each answer, for a total of 4–6 pages.

The questions are keyed to different reading assignments, with the idea that each question is raised most centrally in a certain part of the reading. However, you can and should use material from anywhere in the text where it’s relevant to the answer.

Your focus should be on answering the questions accurately, not on making an original point or argument (if you want to do that, you should choose the paper option). However, all the questions do require some thought; they can’t simply be read out of the texts. And, of course, as usual, your answer must be “original” in the sense that it is your own work. (You are not required, and in fact not even encouraged, to use any outside source, but, if you do, you must cite it properly.)<sup>1</sup>

You can find answers to some commonly asked questions about my assignments and grading in my FAQ (<https://people.ucsc.edu/~abestone/courses/faq.html>).

**Questions**

1. Carnap, *Aufbau*, first reading assignment: Explain both the similarities and the differences between the two aspects of an “axiomatized theory,” as

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<sup>1</sup>If you have any questions about plagiarism and related issues, please see <https://guides.library.ucsc.edu/citesources/plagiarism>. To find out what happens if you are accused of plagiarism, see the academic misconduct policy: <https://ue.ucsc.edu/academic-misconduct.html>.

discussed by Carnap in §2: the “deductive system” and the “constructional system.” (Note, in case the little Carnap says about this is too hard to understand: a “deductive system” is just a system, like say a system of geometry, where all the true statements — theorems — are “deduced,” that is, proved, from the axioms.) Explain further what Carnap means by “reduction” and “construction,” in the context of a *constructional* system, and what the analogous processes (from theorems back to axioms or from axioms forward to theorems) would be in a *deductive* system. From the fact that Carnap is engaged in setting up a constructional system, rather than a deductive system, what can be ruled out as the purpose of the book?

2. Carnap, *Aufbau*, second reading assignment: According to Carnap, what is the connection between the following three ideas: (1) not every *name* makes sense as an argument to every propositional function (for example, “Julius Caesar is prime” is neither true nor false); (2) not every *object* is of the same “type”; (3) objects of higher type are “logical complexes” of objects of lower type? How is (3) supposed to explain (1), and why is (1) supposed to be the real meaning of (2)? Why is Carnap forced to claim that ordinary language is full of a special kind of ambiguity — type-ambiguity — to make this work? Consider, for example, the two sentences “The nation is angry” and “Uncle Rudy is angry.” Why must Carnap claim that “angry” means different things in these two sentences?

3. Carnap, *Aufbau*, third reading assignment: In §102 (p. 160), Carnap says that the point of construction theory is “rational reconstruction of a process of cognition whose results are already known.” Explain what this means and why it is important that he says it. In what sense is construction theory supposed to justify science? In what sense, on the contrary, is science supposed to be the standard against which the results of construction theory will be tested? Why is it important that rational reconstruction involves “fictions” (see §100)? (Can we use construction theory to check if some particular scientific statement is true?)

4. Carnap, *Aufbau*, fourth reading assignment: What, according to Carnap, is the difference between a scientific question and a metaphysical question? Discuss the example of the Trojan war, §175, p. 281. Explain roughly speaking how the question, “Was the Trojan war an actual or a fictional event?” could be addressed *empirically*, using properly “constructed” terms. Given that the constructional system is so incomplete — Carnap hasn’t actually

told us how to replace statements involving terms like “Trojan War” or “fictional” by long, long statements containing only the fundamental relation (remembered similarity) — how can we spot the questions that *can't* be addressed in that way, that is, the “metaphysical” questions? Give an example of a question we can be sure is metaphysical (according to Carnap), and explain how he thinks we can tell. How will the philosopher who asks such a question respond when we start trying to interpret their question empirically, the way we did with the question about the Trojan War?

5. Carnap/Neurath, protocol sentences debate: Explain what Carnap means by a “protocol sentence” in *The Unity of Science*. Why does Neurath think there cannot be “protocol sentences” in this sense? What does he propose instead? That is: what does he think the language of science should be like? Explain why it looks like Neurath will find it seriously difficult to explain scientific testing without protocol sentences. How would Neurath respond?

6. Carnap/Putnam, “Methodological Character” and “What Theories are Not”: Explain the role of the “Observation Language” in the “Methodological Character” paper and how Putnam’s attack on “observation terms” seems to show that nothing could fulfill that role. Isn’t Carnap free to propose whatever Observation Language he wants? Why won’t Putnam allow that?

7. Goodman: Consider Goodman’s discussion of the relationship between the *dispositional* terms “flexible,” “inflexible,” and the *manifest* terms “flexes,” and “fails to flex” (around p. 44). Why doesn’t “flexible” mean the same thing as “flexes” (as Goodman defines the term)? (Give an example of something that is flexible, but does not flex.) In what sense does the dichotomy between “flexible” and “inflexible” amount to a *projection* of the dichotomy between “flexes” and “fails to flex” — taking the distinction between what flexes and what fails to flex and, so to speak, extending out into a wider realm? Explain, further, why Goodman would like to *eliminate* “flexible” in favor of “flexes” (that is, give a rule for translating all sentences including “flexible” into sentences containing “flex”). What general strategy does he adopt for doing so? Why, according to him, is the problem of getting such a strategy right similar to the problem of saying which inductive inferences are valid?

8. Quine, “Epistemology Naturalized”: Quine says (on p. 81) that we should not reject “the verification theory of meaning,” even though the verificationist

project of the *Aufbau* fails. Why does he say that the theory must be true in some form? Is this a reason that Carnap would give? Why or why not?