

Final Exam, Part I

PHREL 5373A, Critical Thinking William Dembski, Spring 2007

This is part I of your take-home final (part II is the critical review of “A War on Science”). Answer all the questions succinctly. This exam is open book and open notes, but you may not consult with other people for the answers. The weight assigned to each question is given in brackets, with weights summing up to 200. This exam is worth 20 percent of your grade. You have till noon on Wednesday, May 9, 2007 to email your answers to this exam to Jack Greenoe. His email address is JLGreeoe AT elearning DOT swbts DOT edu. Pt. 2 of your final (i.e., the critical review of “A War on Science”) needs to be emailed to me, also by noon of May 9th, at wdembksi AT designinference DOT com.

[Each of the following ten questions is worth 10 points.]

1. List and briefly define the three means or modes of rhetoric/persuasion. Give an example of each.

Logos, ethos, pathos. Logos speaks to the actual line of argumentation (logic) by which the rhetor makes his case. Ethos speaks to the credibility of the speaker in making his case. Pathos speaks to the emotional appeal(s) that the rhetor tries to capitalize on in making his case and getting his audience to respond. In the debate over intelligent design, for instance, there is the straight evidential case for ID, for instance, that the complexity of living forms suggests the plausible role of intelligence in their formation (logos). Then there is the credibility of the speakers (ethos). The other side tries to undercut the ID proponents’ ethos at every turn; hence the effort to keep ID proponents from getting tenure (adversaries of ID don’t want credible people supporting the theory). Emotional appeals for and against ID also exist (pathos): on the pro-ID side, the value of human life, and in particular humanity being made in the image of God, seems to depend on the design of the human person. Thus one can argue that without design, one opens the door to Nazi eugenics (bringing up the Nazi’s always, in this age, includes an emotional appeal even if a reasoned appeal is there as well). On the anti-ID side, one can argue that ID threatens to destroy science and will thus destroy our enlightened way of life. This too is an emotional appeal. **GRADING: one point each for mentioning logos, ethos, pathos; one point for defining each correctly; one point for each correct example; that’s nine points; add one point if the person merely attempted the problem, thus bringing the total up to ten points.**

2. List and briefly define the five canons of rhetoric. Which two of these are most important in our day? Why are the other three less important today than in times past?

The five canons of rhetoric go by various names (some drawn from the Latin and Greek). The first is *invention*, where one comes up with the various types of arguments and rhetorical moves one is going to make. The next is *arrangement* (aka *disposition*), in which one arranges the material produced in the first step to form a coherent presentation. Next comes *style*, which concerns the specific manner in which the rhetor expresses himself (e.g., ornate, poetic, simple, turgid). Next comes *memory*, which is concerned with how to commit one's presentation to memory. Finally, comes *delivery*, which is concerned with how the whole rhetorical presentation is conveyed to the audience (this includes management of voice and gestures). The two most important in our day are invention and arrangement. The other three have become less so. People tend to go with stripped down (simple) styles. Memory is not an issue because of tele-prompters, written-out texts, PowerPoint, etc. Delivery is still important, but it seems much less so than in times past – people in times past wanted to be entertained and delighted by rhetorical flourishes (there was no TV back then); nowadays people often are more interested in information. **GRADING: 5 points for the listing what they are and defining them; 5 points for explaining which are more important and which less important.**

3. What is the difference between a contrary and a contradictory? Give an example to illustrate the difference.

Two claims are contrary if they are mutually exclusive. They are contradictory if they are not only mutually exclusive but also exhaustive. “It’s at least 90 degrees outside” and “It’s less than 60 degrees outside” are contrary – they are mutually exclusive in that both can’t be true. But they are not exhaustive since it could be 70 degrees outside. On the other hand “It’s raining outside” and “It’s not raining outside” are contradictories – it has to be one or the other. **GRADING: 5 points for drawing the distinction between contraries and contradictories correctly; 5 points for giving correct examples illustrating the distinction.**

4. How do schemes and tropes differ as figures of speech? Give an example of each.

Schemes and tropes are figures of speech that change the customary use of words. In schemes the customary order of words is changed; in tropes the customary meaning of words is changed. There are lots of examples of specific schemes and tropes on pages 65 and 66 of Murphy. **GRADING: 5 points for defining these two types of figures of speech correctly; 5 points for illustrating schemes and tropes correctly.**

5. What is a deductive argument? What does it mean to say that a deductive argument is valid? What does it mean to say a deductive argument is sound? Are any arguments other than deductive arguments capable of being valid? Explain.

A deductive argument is one in which the truth of the premises is supposed to guarantee the truth of the conclusion. It is valid if the truth of the premises does indeed guarantee the truth of the conclusion. A deductive argument is sound if it is both valid and if the premises are in fact true (thereby ensuring the truth of the conclusion). Deductive arguments are the only ones that can be valid – in a sense, deductive arguments are defined with validity in mind. Non-

deductive arguments are always fallible in the sense that the premises could be true and the conclusion fail to be true. **GRADING: 2 points for each part of this question.**

6. What is an inductive argument. Give an example. Hume's "problem of induction" states that past regularities cannot guarantee future regularities. Is Hume right (i.e., is there no such thing as an infallible inductive argument)?

An inductive argument is one in which the claim/conclusion amplifies or otherwise goes beyond what is contained in the grounds/premises. For instance, from the premise "The 500 ravens I've seen were all black" an inductive conclusion would be "Therefore, all ravens are black." The problem is no one has seen all ravens and so there might be exceptions (e.g., a white raven). Precisely because inductive arguments go beyond the premises, there is always the danger of making a mistake – inductive arguments are inherently fallible. This applies also in moving from past regularities to future regularities (i.e., Hume's problem of induction). Just because something has always happened in the past is no guarantee that it will continue to happen in the future. **GRADING: 3 points for correct definition of inductive argument; 3 points for correct example; 4 points for correct treatment of Hume.**

7. What is hypothetical reasoning? Describe its structure. From the vantage of deductive logic, why does hypothetical reasoning constitute an invalid form of inference? Why are hypothetical arguments also called inferences to the best explanation?

Hypothetical reasoning is a form of inductive reasoning in which one comes up with a hypothesis that explains a number of facts, observations, events, etc. In Murphy's logical framework, the explanandum (i.e., the thing(s) we are trying to explain) serve as grounds. The explanans (i.e., the hypothesis that does the explaining) serves as a claim. The warrant for this argument is that one is entitled to conclude the hypothesis if it serves as the best explanation of the explanandum. For this reason hypothetical reasoning is also called inference to the best explanation (abbreviated IBE). Hypothetical reasoning is invalid from the vantage of deductive logic because even though the grounds may follow deductively from the hypothesis, the hypothesis, properly speaking, is supposed to be the conclusion, not a premise, for the argument. As a conclusion, the hypothesis does not follow necessarily from the grounds. Here's an example of what's at stake. It is a valid deductive argument (given a few hidden premises) to argue from "It's raining outside" to "The ground is wet." On the other hand, given "The ground is wet," the hypothesis "It's raining outside" could explain that fact and may indeed be the best explanation of that fact, but there could be other explanations as well, e.g., "The sprinkler system is on." **GRADING: 6 points for correct definition and structure of argument; 4 points for why it is called inference to the best explanation and is invalid when considered as a deductive argument.**

8. What is an argument from analogy? Are arguments from analogy always arguments from disanalogy? Explain. According to Murphy, the warrant in arguments from analogy is that things similar in certain respects are likely to be similar in other respects. How can this warrant be strengthened?

In an argument from analogy, one argues that because two things, call them A and B, share certain features (these shared features constituting the basis for the analogy) and because one of these things, call it A, has some additional feature, call it F, therefore the other thing, B, is also likely to have this additional feature F. Arguments from analogy are always arguments from disanalogy since the two things being compared are distinct (if not, there would be no point arguing that they share some feature – as identical they would necessarily share all features). As distinct, A and B will therefore fail to share certain features. In other words, each will have features that the other lacks. The big question with arguments from analogy is therefore whether the feature F in question is one of those that are held in common between A and B or whether it is one of those that are not held in common. One way to strengthen Murphy's warrant is therefore to argue that F is the type of feature that is likely to be among those held in common by both A and B. The standard way to do this is to note that the features which A and B are known to hold in common have never been separated from F in the past. Thus whenever anything has the features that A and B are known to share in common and whenever it is has been possible to determine whether F is present, F has indeed been present. Thus, for B to lack F would mean that it is the first exception. **GRADING: 6 points for correctly defining argument from analogy and disanalogy; 4 points for showing correctly how the warrant can be strengthened.**

9. In answering a simple question, one may, according to Gary Jason, give three types of responses. What are these? Give an example of each. Are these the only types of appropriate responses? Consider Matthew 21:23–27.

According to Jason, one can answer a simple question (i.e., one that doesn't have multiple parts each of which requires an answer of its own) in three ways: (1) by giving a *direct answer*, which completely answers the question (e.g., answering "Yes" to "Is it raining outside?"); (2) by giving a *corrective answer* that challenges a faulty presupposition in the question (e.g., answering "I've never beaten my wife" to "Have you stopped beating your wife?"); (3) by *admitting ignorance* (e.g., answering "I don't know" to "Did Caesar have a mole on his big left toe?"). In the Matthew passage, Jesus answers a question with a question, using his question to determine whether those who asked the initial question (the Pharisees in this case) are worthy of an answer. **GRADING: 6 points for correctly giving Jason's three types of responses to a simple question as well as examples of each; 4 points for creatively interacting with the Matthew passage (I'll leave to you just what "creative interaction" means).**

10. Who was Niccolo Machiavelli? How was he the inspiration for *The 48 Laws of Power*? Should Christians be studying the laws of power? Why or why not? What was your favorite law of power? What was your least favorite law of power? Explain your choices.

Machiavelli was a political theorist who wrote *The Prince* as a guide to rulers, laying out the principles they must employ to shrewdly exercise political power. A dominant theme throughout *The Prince* is that the prince must seem virtuous but needs, for the sake of his power and ambition, also to violate virtue. *The 48 Laws of Power* extend Machiavelli's guide. The authors take the view that people, to achieve their ends, must cynically manipulate others. Should Christians be studying the laws of power? Yes and no. Jesus told

us to be wise as serpents and gentle as doves. On the one hand, it is important to know how the unregenerate world operates. On the other hand, it is important not be sucked into this way of thinking and operating. **GRADING: 2 points on correctly identifying Machiavelli; 2 points on correctly noting his inspiration for *The 48 Laws of Power*; 2 points on correctly noting how it can be good and bad for Christians to study a book like this; 4 points for anything students say about their favorite and least favorite law of power (as long as they identify two laws from the book, say which they like best and least, and give some justification, give them 4 points).**

[Each of the following two questions is worth 25 points.]

11. Analyze the following argument using the apparatus for analyzing arguments developed by Murphy:

“In crossing a heath, suppose I pitched my foot against a stone, and were asked how the stone came to be there, I might possibly answer, that ... it had lain there forever ... but suppose I had found a watch upon the ground, and it should be inquired how the watch happened to be in that place, I should hardly think of the answer which I had before given, that, for any thing I knew, the watch might have always been there. Yet why should not this answer serve for the watch as well as for the stone? For this reason, that, when we come to inspect the watch, we perceive (what we could not discover in the stone) that its several parts are ... put together for a purpose. ... we think that the watch must have had a maker: that there must have existed, at some time, and at some place or other, an artificer or artificers who formed it for the purpose which we find it actually to answer; who comprehended its construction, and designed its use. For every indication of contrivance, every manifestation of design, which existed in the watch, there exists in the works of Nature ... there is precisely the same proof that the eye was [created] for vision.”

—William Paley, *Natural Theology*

This is an argument from analogy. The grounds include reference to a watch and an eye and indications of contrivance in means adapted to ends that both these share (these are the features on which the analogy is based). The feature in question is whether the watch and the eye are actually designed. The watch is known to be designed. The claim, which is the conclusion, is that the eye is designed. The warrant is that things similar in certain respects are likely to be similar in other respects. **GRADING: use your judgment to see how closely the analysis given in the answers corresponds to this sketch of an answer and assign a grade accordingly.**

12. In *The 48 Laws of Power*, Greene cites Tacitus as writing, “Men are more ready to repay an injury than a benefit because gratitude is a burden and revenge a pleasure.” Is Tacitus correct? Is he even partly correct? If so, what does this say about our motivation as Christians to obey God? Are we obedient to God out of gratitude? Is gratitude a sufficient ground for obedience? Or do we, as Christians, have other motivations for obedience?

GRADING: Make sure that all the individual questions asked here get some attention and count off for any questions ignored. How you assign a numerical value for answers to the individual questions is your call. Look for creativity and theological acumen.

[The following questions is worth 50 points. Answer it in 500 words or less.]

13. You are the head of a large public relations firm in New York. A consortium of Christian businessmen and foundations is fed up with the godlessness of our society and approaches you to run a “rhetorical campaign” to make Christianity and its moral values credible again to the wider culture. You have \$100,000,000 a year for five years to make the campaign work (i.e., half a billion dollars total over five years). What programs are you going to institute and how are you going to allocate that money to restore Christianity as a credible world view? What objectives could you realistically hope to accomplish? [Example of a zero-credit answer: give all the money to the ACLU or to the UN.]

GRADING: Treat the answer to this question as a mini-essay. In assigning a numerical value, give credit for an astute analysis of the problem (what is wrong with the culture and what direction does it have to move) and give credit also for the likely effectiveness of the proposed campaign (what specifically is being proposed and does the answer make clear why the proposals made are likely to succeed). In addition, look for facility with the various methods of rhetoric developed in the course and how these are being employed. These are general guidelines, but how you assign a precise numerical value is your call.