Paper #2. Due Tues April 19.

Instructions:
(a) Choose one of the following topics and respond to it in an essay of no less than 5 pages (not including title page and bibliography) and no more than 7 pages. Your essay should be typed, 10- or 12-point, double-spaced and spell-checked. Please submit a hardcopy of your paper in class on the due date, as well as an e-copy to Turnitin.
(b) Your essay should conform to the guidelines for writing philosophy essays handed out in class. Make Absolutely Certain that you have read and understood these guidelines before you attempt to begin writing your essay. If you do not follow these guidelines, the grade for your essay will suffer!
(c) Your essay must include a bibliography that minimally includes the relevant course texts. Your essay must use this bibliography as a source to cite for all claims and quotes you attribute to authors. If you do not include a bibliography that you cite for claims and quotes, the grade for your essay will suffer!
(d) Please make use of Poly's Writing Center if you have trouble with spelling and/or grammar. If your essay contains so many spelling/grammatical errors that a reader cannot comprehend what your claims are, then your grade will suffer as a result. Information about Poly's Writing Center can be found at <http://www.poly.edu/academics/support/polytechnic/writing>.

1. Describe in detail Clarke's "Dynamic Shift" argument for the existence of absolute space. How does it differ from Leibniz's "Kinematic Shift" argument against absolute space? How does Leibniz respond? Do you think this response is adequate? Why?

2. The definition of Newtonian spacetime attributes certain properties to spacetime points. Describe how these properties provide a substantivalist explanation of the bucket experiment. Now explain how a relationist can adopt this definition (hint: a relationist claims spacetime points do not exist; rather, all that exists are physical objects). In relational Newtonian spacetime, explain why (i) the universe cannot be statically shifted, (ii) it can be kinematically shifted, and (iii) a relational account of inertia can be given. (This is Problem #2 on pg. 195 of the text.)

3. Describe Kant's argument for the existence of absolute space based on the existence of incongruent counterparts. Why are experiments done in the 1950s on Cobalt-60 decay processes relevant to this argument? Explain how a relationist could respond to it. Which do you think is more convincing and why?

4. The debate between absolutists and relationists focuses on two types of physical phenomena: inertial effects, and physically distinct incongruent counterparts (like Cobalt-60 decay processes). How are these phenomena explained by (i) an absolutist; (ii) an "extrinsic" relationist, who only accepts quantities of motion that are relational (i.e., two-place) properties; and (iii) an "intrinsic" relationist, who will accept some quantities of motion that are monadic (i.e., single-place) properties? Which of these explanations is more convincing and why?