

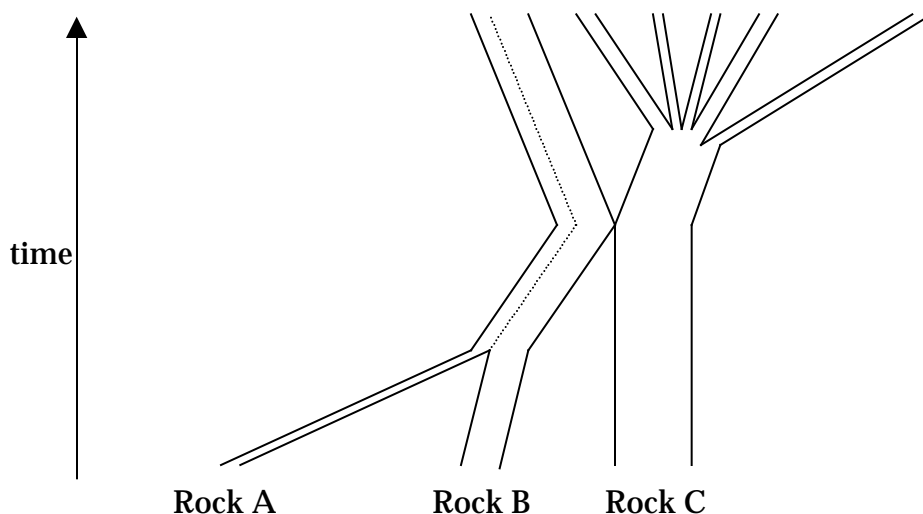
Metaphysics: Problem set 3

February 5

due date: February 12

NB: Use your own words. No quotation, no paraphrase.

- 1 The following spacetime diagram represents part of the history of three rocks floating in space. (i) Describe the events represented in the diagram. (ii) Describe the events that would be represented in the diagram if the arrow of time went from top to bottom instead of from bottom to top.



- 2 Draw a spacetime diagram of the moon orbiting the earth. (Note: the best way to get this to look right is to draw a 2d picture of an imaginary 3d diagram of this situation.)
- 3 Draw a spacetime diagram of the story of Descartes as told by van Inwagen. Choose THREE different ways of resolving the paradox and explain how the proponents of these views would annotate the diagram.
- 4 Here is the ancient story of the Ship of Theseus, with an elaboration due to the seventeenth-century philosopher Thomas Hobbes.

The Ship of Theseus is made entirely of wooden planks. Every now and then the planks wear out and are replaced with new planks, so that after many years all of the original planks in the ship have been replaced. The old planks are not thrown away: rather, they are collected by an enterprising museum curator. When the curator has all the original planks, he assembles them into the shape of a ship, which he exhibits in his museum under the name 'The Ship of Theseus'.

Draw a spacetime diagram that represents this story. (If you wish, you may assume for the sake of simplicity that the ship contains only three planks.) For at least THREE different spacetime regions represented in your diagram, give one reason for and one reason against the claim that this region is traced out by a ship.