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QUIZ THREE: Scientific Thought and Social Values
PHI2394 A

Part I - Multiple choice (one mark each)

1. The Vienna Circle originally formed around which philosopher-physicist?
a) ~~Moritz Schlick~~
b) Rudolf Carnap
c) Hans Hahn
d) Otto Neurath
e) John Nerdelbaum Frink, Jr. x

2. In the article, "The Scientific Conception of the World" the authors consider that the basic orientation of science must be
a) enlightening.
b) free of metaphysics.
c) optimistic.
d) investigative.
e) "chillax." ✓

3. For the Vienna Circle, if science tries to describe an objects essence then this
a) is the proper aim of science.
b) is the practical end of the researcher.
c) is a misguided approach. objects derived from qualities
bad ✓
d) ignores the question of morality.
e) may be political dangerous. qualities from objects is
good ✓

4. The Vienna Circle believed that metaphysics was best expressed in
a) social science.
b) physical science.
c) human psychology.
d) art and literature, ✓
e) all of the above.

5. Thomas Kuhn believed that the progression of science was
a) linear.
b) backwards.
c) static.
d) "angular".
e) cyclical. ✓

- 6) Kuhn says that scientific truth at any point is product of
- a) the consensus of the scientific community. ✓
 - b) objective criteria alone.
 - c) the political situation.
 - d) and completely relative to the scientist.
 - e) multiple misunderstandings about the facts of nature..
- 7) What would NOT be an example of a paradigm shift in science?
- a) The transition from Newtonian to Einsteinian physics ✓
 - b) The move from the Ptolemaic cosmology to a Copernican one. ✓
 - c) The change in my preference from chocolate to vanilla ice cream.
 - d) The acceptance of Lavoisier's theory of chemical reactions and combustion in place of phlogiston theory, known as the chemical revolution.
 - e) The acceptance of Mendelian inheritance, as opposed to pangenesis.
- 8) What does Sandra Harding mean by "standpoint methodology"?
- a) The method of good science eliminates standpoints of the researcher.
 - b) The standpoint and method of science must be objective.
 - c) It is an objective criterion that applies to mathematics, not science. ✓
 - d) Science is shaped by the perspectives and standpoints of the scientist.
 - e) The methodology used by the Vienna Circle.
- 9) Existentialism was a cultural and philosophical reaction to
- a) rock-and-roll music.
 - b) globalization. ✓
 - c) climate change.
 - d) the great (economic) depression beginning in 1929.
 - e) industrialization and war.
- 10) Martin Heidegger claims that the essence of technology is anything but
- a) technological. ✓
 - b) dangerous.
 - c) enframing (*das Gestell*)
 - d) a mode of truth
 - e) a way of revealing (*Ent-bergen*).
- 11) What does M. Heidegger primarily mean by truth?
- a) Correspondence to the facts (*veritas*) ✓
 - b) *A-lētheia*, dis-closure (*Ent-bergen*)
 - c) Challenging-forth (*her-ausfordern*)
 - d) "The darkening of the world"
 - e) Accuracy
- Handwritten notes: *veritas = truth* and a circled '9' at the bottom right.

Part II - Short answer (three marks each)

12. What is Logical Positivism? Which of the four readings best represents this view? What is the ideal of science for the logical positivists?

Logical Positivism is taking philosophy and putting it on the same basis as empirical sciences in order to legitimize it. It is best represented in the article, "The Scientific Conception of the World". The ideal of science for logical positivists is that it should be free from metaphysics. The only way philosophy can be argued in science is if it has empirical evidence, and no philosophical assertions.

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13. What are the two main ways that Thomas Kuhn believes elements of subjectivity enter into the field of science? How is this related to shifts in paradigms?

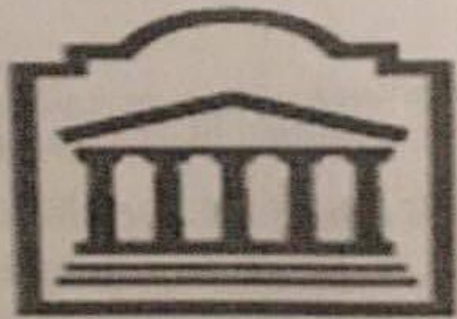
Kuhn believes science cannot be completely objective, there will always be elements of subjectivity present. The subjectivity can come from human bias, no matter how unbiased an individual tries to be and when an individual thinks for themselves outside of the general consensus such as in the case of the move from Newtonian physics to Einsteinian Relativistic physics. This is related to paradigm shifts as subjectivity promotes thought outside of the general consensus, which in turn can cause a major change in a particular scientific field.

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14. According to S. Harding what is the usual, recognized character of Western science? How is this different from her multicultural view of science? What is one piece of evidence she cites for the claim that Western science is already multicultural?

The recognized characteristic of Western Science according to Harding is eurocentricism, which is the belief that people of European descent are to be credited for major advancements in various fields throughout history. Harding disagrees with this. She said that science is a combination of methodologies across several cultures and gives evidence with Egyptian alchemy, and how it was a major contribution to Western science

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