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— THE CLAT COMBAT —
THE LOGIC PRO



LOGICAL REASONING

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THE CLAT COMBAT

Logical Reasoning 1

A recent generation of historians of science, far from portraying accepted scientific views as objectively accurate reflections of a natural world, explain the acceptance of such views in terms of the ideological biases of certain influential scientists or the institutional and rhetorical power such scientists wield. As an example of ideological bias, it has been argued that Pasteur rejected the theory of spontaneous generation not because of experimental evidence but because he rejected the materialist ideology implicit in that doctrine. These historians seem to find allies in certain philosophers of science who argue that scientific views are not imposed by reality but are free inventions of creative minds, and that scientific claims are never more than brave conjectures, always subject to inevitable future falsification. While these philosophers of science themselves would not be likely to have much truck with the recent historians, it is an easy step from their views to the extremism of the historians.

While this rejection of the traditional belief that scientific views are objective reflections of the world may be fashionable, it is deeply implausible. We now know, for example, that water is made of hydrogen and oxygen and that parents each contribute one-half of their children's complement of genes. I do not believe any serious-minded and informed person can claim that these statements are not factual descriptions of the world or that they will inevitably be falsified.

However, science's accumulation of lasting truths about the world is not by any means a straightforward matter. We certainly need to get beyond the naive view that the truth will automatically reveal itself to any scientist who looks in the right direction; most often, in fact, a whole series of prior discoveries is needed to tease reality's truths from experiment and observation. And the philosophers of science mentioned above are quite right to argue that new scientific ideas often correct old ones by indicating errors and imprecision (as, say, Newton's ideas did to Kepler's). Nor would I deny that there are interesting questions to be answered about the social processes in which scientific activity is embedded. The persuasive processes by which particular scientific groups establish their experimental results as authoritative are themselves social activities and can be rewardingly studied as such. Indeed, much of the new work in the history of science has been extremely revealing about the institutional interactions and rhetorical devices that help determine whose results achieve prominence. But one can accept all this without accepting the thesis that natural reality never plays any part at all in determining what scientists believe. What the new historians ought to be showing us is how those doctrines that do in fact fit reality work their way through the complex social processes of scientific activity to eventually receive general scientific acceptance.

1. What according to the author, is true about the historians of science?

- (a) They considered scientific views as accurate reflections of a natural world.
- (b) They regarded scientific views as unbiased fruits of their experimentation.
- (c) They claimed that the scientific views are subjective and can therefore be some day proved wrong.
- (d) They contradicted certain philosophers of science by stating that the scientific views were based on reality.

2. Which of the following cannot be the assumption of the author?

- (a) A few scientific ideas may be imprecise.
- (b) Experiment and observation based scientific views do not easily reveal the truth of reality.
- (c) Well informed intellectuals will not possibly try to falsify the basic realities of the world.
- (d) The truths of the world are revealed to the scientists who aim for them.

3. Which of the following statements can be inferred from the passage?

- (a) Pasteur rejected the theory of spontaneous generation because he was against materialist ideology.
- (b) New scientific ideas often correct or improve the old imprecise ones.
- (c) It is often through the complex social processes that the scientific truths of the world are revealed.
- (d) Scientific claims are subject to falsification.

4. Which of the following statements is most likely to be concluded from the passage?

- (a) Scientific observations are a result of ideological inclinations.
- (b) Scientific observations can be accurate reflection of the world, however, it is a long journey of accepting and rejecting.
- (c) The historians of science and the philosophers of science have the same viewpoint on accepted scientific views.
- (d) Many influential scientist base their claims not on experimental evidence but on their imaginations.

5. The author would definitely agree to

- (a) Establishing the lasting truths about the world is a straightforward matter.
- (b) Scientific observations are accurate reflections of the real world.
- (c) Recent historians of science have extremist views about scientific claims made.
- (d) Currently accepted scientific observations can ultimately be proven wrong through future research.

1. Ans. (c)

Sol.: It can be understood from the first paragraph last two sentences. The rest of the options are in contrast to the views of the historians of science.

2. Ans. (d)

Sol.: Option (d) is not an assumption as the author states in the second sentence of the third paragraph that thinking so is quite 'naive' 'we need to get beyond this'. Option (a) and (b) can be assumed from the middle part of the third paragraph. Option (c) can be understood from the last sentence of the second paragraph.

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3. Ans. (c)

Sol: Option (c) is correct. It can be inferred from the third and the fourth paragraph.

4. Ans. (b)

Sol.: It can be understood from the third paragraph of the passage.

5. Ans. (c)

Sol: Option (c) is correct. It can be established from the last few lines of the first paragraph.

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