PHIL*2000

Philosophy of Biology, 2017

Reflection Question 6

On Woodward and Goodstein Conduct, Misconduct, and the Structure of Science.

Due **Wednesday March 8**, **by 3:00 pm**

The article by Woodward and Goodstein open with a list popular ideas about how scientists should behave. These include: never be dogmatic, never be motivated by personal gain, never publish a misleading statement, always attempt to falsify hypotheses, and so on. The central thesis of this article is that these are deep misconceptions. Not only do scientists behave in ways that contradict these norms, but they really shouldn't follow them. That is, science would be worse at generating knowledge if scientists actually behaved in the ways that most people think that they should behave.

1) On page 13, the authors claim that we tend to think that scientists shouldn't be motivated by the pursuit of self-recognition or notoriety. We often think of the idea scientist as someone with a selfless interest in truth. But the authors argue that science in fact has a notoriety-based reward structure.

    a) Briefly explain the sorts of rewards that scientists should be pursuing, according to Woodward and Goodstein.

    b) What are the general benefits that are achieved with this kind of reward system?

    c) Briefly explain why you agree/disagree with the suggestion that science as a whole is better off if scientists are motivated by the pursuit of notoriety.

2) Some students will recognize a similarity between the doctrine of falsificationism and what you probably know as "the scientific method." Many students are taught that this method is necessary, maybe even sufficient for doing good science. But this article argues that the benefits of falsificationism are deeply exaggerated.

    a) Briefly explain the problems identified with falsificationsim (see pages 15-16)?

    b) Do these problems undermine what you have been taught about the scientific method (why or why not)?