Description

Scientific misconduct is bound to affect any researcher who has been found guilty of committing it. But whoever thought that former collaborators would have to bear the brunt of scientific misconduct? Let us see how and why the effects of scientific misconduct are affecting research collaborators.

The Jeffrey Stevens Example

The Office of Research Integrity (ORI) has ruled that Prof. Marc Hauser, Professor of Psychology at Harvard University, engaged in research misconduct. One of his former postdoctoral fellows, Jeffrey Stevens, claims that Prof. Hauser's misconduct has affected his career negatively. A paper from Maikel Pellens and Katrin Hussinger, authors at the Centre for European Economic Research, confirms that this is possible.

Jeffrey Stevens is now an Associate Professor at the University of Nebraska, Lincoln. He used to be a postdoctoral fellow in Prof. Marc Hauser's lab. Even though there was no misconduct in the papers they wrote together, Stevens' career wasn't spared from the effects of his mentor's deeds. When Hauser was found guilty of misconduct, Stevens was looking for a job at that time. But he found it exceedingly difficult to get recruited. In at least one case where he was being considered, the Hauser situation came up and he was not called for the interview. He also noted that his citation numbers lowered post the discovery of Marc Hauser's misconduct.

The paper by Pellens and Hussinger supports Stevens' observations. They found that, in general, scientists who commit research fraud have their citations decrease by as much as 26%. Researchers who collaborated with them before they committed fraud experienced a 9% decline in citations. This ripple effect was worse for junior scientists. Interestingly, researchers with relatively fewer citations at the time the misconduct gets discovered would have a citation decline of 34%. Established researchers with a relatively higher number of citations would see a very small reduction in their citation numbers.

Marc Hauser's Misconduct

Hauser worked in the field of language and cognition but has been found responsible for six misconduct cases. Hauser initially claimed that the misconduct was a consequence of his heavy workload. However, an internal Harvard report suggests that the misconduct was not a simple case of

negligence. The Harvard report describes how Hauser manipulated data so that it would support his hypothesis. It also shows that Hauser minimized concerns from members of his research group about the origin of a result. It describes a disturbing pattern of misrepresenting results. The professor also displayed a reckless disregard for basic scientific standards.

The cases of misconduct generally involve manipulating data regarding his research on monkeys. Some of the manipulations include:

- On reviewing a video of monkeys, there was no evidence of them being exposed to one of the syllable patterns mentioned in a paper published in *Cognition*. This concerned paper has since been retracted. Hauser suggested that the tape had been altered, which was disproved by forensic examination.
- In 2005, Hauser did a statistical analysis of an experiment. The experiment determined how monkeys responded to two artificial languages. Initial analysis found no statistical significance in the results. Hauser told a member of his lab that he made a mistake with the coding. After he corrected the coding, the results became statistically significant. To do this, Hauser changed five data points. Four of the changes resulted in statistical significance.
- In 2007, a member of his research group found inconsistencies in data coding rhesus monkey behavior. Hauser claimed there were no inconsistencies. The group member resigned later that day.

How Does Misconduct Affect Collaborators?

Co-authors on retracted papers often have damaged reputation. What about former collaborators of those involved in misconduct? Maikel Pellens and Katrin Hussinger have recently answered this question. They found that scientists who previously worked with those found guilty of misconduct also suffer damage to their reputations.

This is unfair for the researchers. There is no way a scientist can predict that their collaborator will behave unethically in the future. Pellens and Hussinger stated in their paper that the scientific community relies on trust. With the complexity of science increasing, researchers do not have the time or resources to personally check each piece of published research. Scientists rely on reputation as a quick way to assess the work of their colleagues.

Scientists also tend to be conservative. To avoid relying on bad science and to protect their own reputation, researchers avoid work that has any chance of being tainted. A scientist's association with a fraudster is a sign of bad ethics. If more experienced scientists avoid using a person's work, it symbolizes that the senior scientist is aware of misconduct. This can lead to other researchers also avoiding that person's work. Pellens and Hussinger call this avoidance behavior "stigmatization by mere association."

Have you read the paper by Hussinger and Pellens? Do you agree with their findings? Have you seen this ripple effect in your field? Please share your thoughts with us in the comments section below.

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Author
daveishan