

Sustaining Honesty Takes Center Stage in Science Publishing

Scientists have professional obligation to advocate honesty. However, dishonesty has been on the rise lately that alarms the academia worldwide. An editorial appeared in *Science* titled “keeping science honest” narrates the story of fabricated data published by Swedish scientists in 2016 that instantly grabbed news headlines on how fish larvae prefer to eat plastic over natural food.^[1] Most scientists admire prestigious journals such as *Science* and *Nature* and therefore findings portrayed there are taken at face value. The plastic-eating fish report was nonetheless implicated in data manipulation after whistle-blowers raised red flag. The journal then launched an extensive investigation involving the Sweden’s Central Ethical Review Board lasting for 18 months and leading up to the retraction of the paper in 2018.^[1]

Are scientists prone to misconduct? Science indeed is an integral part of human activity. As such, all human activities are vulnerable to misconduct.^[2] A survey conducted in 2016 interviewed 500 renowned researchers in the United States of America to measure the core traits of excellence. Researchers at large voiced honesty as a vital component of best qualities.^[3] However, 2% of them admitted engaging in a single act of misconduct. They added that 14% of their colleagues apparently involved in some level of dishonesty.^[3] This trend may escalate in the future since the growth of the article publication has been on the rise in recent years.

India’s publication outfit has exploded from over 2000 papers published in 1990 to over 19,000 papers published in 2010.^[4] The enormous output has also backfired in the form of retractions driven by dishonesty.^[4] The blogging platform “Retraction Watch” keeps track of such retracted papers since 2010, and it has listed over 500 retractions involving India (retractionwatch.com). The reasons for retraction widely range from ethical violation to data manipulation and from fake peer review to outright plagiarism.

The editors of reputed journals work hard to improve the quality of papers while publishers tirelessly promote popularity and profit margin. Most of the open access (OA) journals are relentlessly on the lookout for funds. They charge authors sizably to sustain in the publishing enterprise. Whether or not journals ensure rational peer review, the beauty of the OA platform is that it provides an opportunity for readers to embark on instant postpublication scrutiny. That’s how dishonorable deeds are brought to light by curiosity-driven whistle-blowers.

Is retraction common in India? A quick search of the word “retraction” in the popular journal *Current Science* website yielded three hits; two were statements from authors and

the other an article where retraction watchword appeared in the title. Similarly, the *Indian Journal of Medical Research* website resulted in 15 hits, with two actual retractions. In both cases, a notice described that the articles were retracted with no facts on the inquest. Besides, a recent report shows 15 retractions between 2008 and 2014 involving seven PubMed-indexed dental journals from India.^[5] Hence, the question is, why few cases of retractions reported from India?

Investigating scientific deception indeed is a problematic assignment. Journals are cautious to launch an investigation involving deceitful concerns of published papers since it’s a time-consuming affair. When journals receive serious allegations, they refer the cases to responsible institutions to launch a detailed investigation. In less-sensitive cases, journal editors alert authors of such concerns and ask them to respond. The editors treat the viewpoints of both faultfinders and authors neutrally. They often publish the conflicting standpoints in the form of letters and allow readers to arrive at their own conclusion.

Some may wonder why readers need to validate scientific facts based on the statements of complaints and rebuttals portrayed by conflicting parties. In reality, reading the contradictory viewpoints of complainers and defenders may confuse the already puzzled readers on the dubious subject matter. Besides, the frequency of retractions will increase in the future to enrich ethical standards; hence, journals must be ethically equipped to deal with upcoming malpractice cases flawlessly and legitimately. Therefore, it’s time for India’s science journals to execute a legally binding policy on the retraction inquiry. Such a policy should allow editors of journals and chairs of scrutinizing committees to make faster verdict on retraction when authors fail to refute misconduct allegations honorably supported by facts and figures.

India’s leading journals, such as the *Indian Journal of Medical Research* and *Current Science*, have addressed the chronic issue of scientific dishonesty earlier. However, would it be feasible to lessen the enduring dishonesty dilemma in India’s academic environment? A report shows that medical college students in India were copying during examinations while faculty members turned a blind eye on the enduring saga.^[6] Similarly, university students in the United Kingdom were reported to use devices such as concealed earpiece, smartphone, and smartwatch to ingeniously cheat in examinations.^[7] Students are evidently keen to score high through risky endeavors while shamelessly compromising the established academic values.

In this morally murky learning context, educators must evolve to enforce resilient, positive reinforcement tactics

by using the latest high-tech tools, devices, and means to create a novel culture of scientific integrity in the university classrooms as we progress more toward digital teaching. As the English novelist Philip Pullman once said, “It’s only through honesty and courage that science can work at all.”

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