

# Science and medicine have a 'publication pollution' problem

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The scientific community is facing a 'pollution problem' in academic publishing, one that poses a serious threat to the "trustworthiness, utility, and value of science and medicine," according to one of the country's leading medical ethicists.

Arthur L. Caplan, PhD, director of the Division of Medical Ethics in the Department of Population Health at NYU Langone Medical Center, shares these and other observations in a commentary publishing April 3 in the journal *Mayo Clinic Proceedings*.

"The pollution of science and medicine by plagiarism, fraud, and predatory publishing is corroding the reliability of research," writes Dr. Caplan. "Yet neither the leadership nor those who rely on the truth of science and medicine are sounding the alarm loudly or moving to fix the problem with appropriate energy."

In his commentary, Dr. Caplan describes several causes of publication pollution:

- The proliferation of journals that recruit authors who pay to get their articles published. Despite having substandard or no peer review, these "predatory publishers" now comprise an estimated 25 percent of all open-access journals. "Not only do they provide opportunities for the unscrupulous in academia and industry to pad their curriculum vitae and bibliographies with bogus articles and editorial appointments, they also make it difficult for those

involved in the assessment and promotion of scholars to discern value from junk," writes Dr. Caplan.

- Research misconduct, like falsifying or fabricating data or concealing serious violations. Fourteen percent of scientists report that their colleagues falsify data, and 72 percent report other questionable practices, according to one 2009 study published in *PLoS One*.
- Plagiarism, which, according to a 2010 Nature article was "staggering," requiring editors to spend "inordinate amounts of time" checking submissions they receive.

According to Dr. Caplan: "All these polluting factors detract from the ability of scientists and physicians to trust what they read, devalue legitimate science, undermine the ability to reproduce legitimate findings, impose huge costs on the publication process, and take a toll in terms of disability and death when tests, treatments, and interventions are founded on faulty claims."

Dr. Caplan proposes a national meeting of leaders in science and medicine to lead a sustained challenge to proactively and aggressively go after this pollution problem.

"The currency of science is fragile, and allowing counterfeiters, fraudsters, bungo artists, scammers, and cheats to continue to operate with abandon in the publishing realm is unacceptable," he asserts.

Provided by New York University School of Medicine

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