Research Misconduct and Publishing Ethics

Jaap van Harten
Elsevier BV, Radarweg 29, 1043 NX Amsterdam, The Netherlands.
Email: j.harten@elsevier.com

Scientists have a great deal of responsibility towards society and each other, because their work contributes to the advancement of knowledge and to the improvement of the quality of life. For this reason society makes available significant funding for basic and applied research.

Research integrity is of vital importance for the advancement of science. Who would want to build a research program on incorrect published data? How can society trust "science" if they read about scientists who did not adhere to basic research and publishing ethics? For the violating scientist the byword "Publish or perish" can thus easily turn into "Publish *and* perish".

In this presentation the following topics will be reviewed:

- Types of misconduct: generally speaking, scientific misconduct and publication misconduct.
- The size of the problem: although it's not easy to quantify the incidence, an increasing number of cases is detected.
- Detection tools: nowadays publishers collaborate on plagiarism detection software, but in practice also the "human factor" remains important, particularly for the detection of research fraud.
- How publishers handle misconduct cases: their primary responsibility is to eliminate misconduct cases from the scientific literature. They often collaborate with the scientists' universities.
- The costs of misconduct: very significant, not only for the violating scientist, but also for institutions and society at large.
- Why researchers commit misconduct: not only the pressure to publish, but also cultural and personality reasons.
- How misconduct can be prevented: warning researchers for the detrimental consequences of misconduct, and convincing the scientific community of the role it can play in preventing misconduct.

The vast majority of scientists conducts research in a responsible, ethical manner. Actively promoting this "normal" behavior throughout the community allows science to remain what it always meant to be: a place to advance knowledge and to make this world a better place to live.