

Review

Editorial Misconduct—Definition, Cases, and Causes

Matan Shelomi

Department of Entomology and Nematology, University of California-Davis, 1 Shields Ave, Davis, CA 95616, USA; E-Mail: mshelomi@ucdavis.edu; Tel.: +1-914-393-7449; Fax: +1-530-752-9464

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Abstract: Though scientific misconduct perpetrated by authors has received much press, little attention has been given to the role of journal editors. This article discusses cases and types of "editorial misconduct", in which the action or inaction of editorial agents ended in publication of fraudulent work and/or poor or failed retractions of such works, all of which ultimately harm scientific integrity and the integrity of the journals involved. Rare but existent, editorial misconduct ranges in severity and includes deliberate omission or ignorance of peer review, insufficient guidelines for authors, weak or disingenuous retraction notices, and refusal to retract. The factors responsible for editorial misconduct and the options to address these are discussed.

Keywords: scientific misconduct; retraction; editors; journals; peer review

1. Introduction

Different organizations have different definitions of "research misconduct," [1]. Common components include plagiarism and fabrication or manipulation of data [2]. Though often associated with deliberate fraud by aberrant personalities, we now accept that misconduct is a general problem including violations by well-meaning authors ignorant of proper research ethics [2,3]. Misconduct is rare and, when discovered, usually results in retraction [2], but its consequences remain. High-profile cases damage the reputations of journals, authors, and scientific integrity as a whole [4], and retracted works are often still trusted years later [5]. An extreme case is the Wakefield hoax, in which an article in *The Lancet* fraudulently linking vaccines to autism [6] led to global declines in vaccination, despite its retraction and public debunking [7]. Given these costs, timely retractions and the prevention of suspect article publication are critical, for which the responsibility lies with journal editors.

Papers on academic integrity have focused on authors, with the role of editors limited to preventing or catching misconduct [8,9]. Rare publications of fraud are blamed on the fraudster's skill or failures of the peer review system [10]. Yet editors, like researchers, are human: they have their own motivations and biases, are often unpaid for their efforts, and are burdened with ever increasing article submission rates [9]. This review considers the concept of "editorial misconduct", where improper publication is traceable to action or inaction by editors. Here we define the term, review cases thereof, and describe its causes and possible solutions.

2. Definition of Editorial Misconduct

Like research misconduct, editorial misconduct ranges in form, severity, and frequency. Again, the term does not presume malicious intent, nor does it diminish the seriousness of author misconduct, but is simply another element to the problem. No one denies the challenges of being an editor, but the reality is that avoidable mistakes do happen, and some are not easily excused.

Definitions of editorial misconduct will vary. We provide a working definition here as when an editorial agent, through action or inaction, fails to uphold the journal's mission. This includes maintaining low barriers to entry, negligent peer review, and lowering standards for specific articles, which all enable fraudulent publication. This definition does not include failure of good-faith efforts to detect author misconduct, but focuses on occasions where such efforts were lacking or omitted. Also included are incomplete, hidden, or nonexistent retractions of discovered frauds. Potentially includable are publishing articles outside the journal's scope, failure to disclose conflicts of interest, and poor regulation of advertisements [11]; which all harm the journal's perceived legitimacy, objectivity, and accuracy [12].

3. Manifestation and Extent of Editorial Misconduct

3.1. Pre-Publication: Author Guidelines and Peer Review

The most benign and common form of editorial misconduct is insufficient preventative measures. Clear author instructions on ethical issues and descriptions of the procedures a journal uses to detect and respond to misconduct can prevent submission of bad papers [13]. For example, after discovering gift-authorships were linked to misconduct, many journals required authors to state what role each author played in the production of a paper [14,15]. Much reported misconduct today involves manipulated photographs [4,16,17], and often the responsible authors did not have "intent to deceive" [18], but just touched up images without knowing such manipulations were inappropriate [19]. Clear instructions on acceptable image manipulation can prevent such errors, yet such rules are lacking or insufficient in most journals [20,21].

When an author deliberately violates such guidelines, peer review can catch the fraud [10], but only if it is used. In 1996, physicist Alan Sokal successfully published a paper in the postmodernist journal *Social Text* [22] that was "liberally salted with nonsense" [23]. The editors later admitted that *Social Text* did not use any form of external peer review for any submissions [24]. That scenario is not unique. Absent peer review among social science journals had been demonstrated before Sokal [25], and even today many science journals eschew external peer review [26], though the number is

decreasing. Physics papers published by French television personalities Igor and Grichka Vogdanov have long been suspected to be jargon-heavy hoaxes [27]. A 2013 sting operation by the journal *Science* found 157 out of 304 open access journals accepted a "flawed and unpublishable paper" [28]. Perhaps the most inexcusably published hoax to date is the 2013 publication in a Romanian materials science journal, *Metalurgia International*, of a nonsensical article that not only cites Sokal's hoax paper, but also cites works in nonexistent journals by "scientists" like Michael Jackson, Ron Jeremy, and Borat [29]. It even included photographs of the authors in false moustaches and wigs, yet was published without any changes requested.

Exactly when a paper is so obviously fraudulent such that its publication is due to negligence rather than bad luck is debatable. Consider a 2008 *Proteomics* article that claimed in the title that mitochondria are "the missing link between body and soul" [30], and alluded to "a single common fingerprint initiated by a mighty creator" and the "wisdom of the soul devoted to guaranteeing life". Investigation revealed plagiarism and the article was retracted [30,31], but public confidence in the journal and Editor Michael Dunn was shaken. Dunn blamed "human error… in the normally rigorous peer review process" [32], but a report of the USA's National Center for Science Education concluded:

"...the reviewers were very sloppy, incompetent, or both; at the very least they were inattentive in this case, despite the editor's claims to the contrary. And Dunn himself is not without responsibility in this case: he must have seen the reference to 'the soul' in the article's title, and he should have been more pro-active. His failure to make any public statement about the creationist claims in the article also raises questions about the leadership at the journal." [31]

Selective review, caused by what Sokal called "ideological preconceptions" [23], can also be a problem. When articles promote editors' beliefs, even if they are unrelated or in contrast to the journal's mission statement, editors may relax their standards and miss obvious author misconduct. Though perhaps expected in political publications, science journals are not immune to bias. An example is a 2004 article in *Diabetes Voice* allegedly about "Life with Diabetes in the Gaza Strip". The abstract did not mention diabetes at all, but was a "one sided and highly-distorted version of history... entirely inconsistent with the goals proclaimed by *Diabetes Voice* [and] the International Diabetes Federation" [33], and was itself plagiarized from another source [34]. The article's content was also factually wrong, using mistruths to paint Israel in a negative light [35]. Acknowledging both authorial and editorial misconduct, the International Diabetes Foundation publicly apologized [34], *Diabetes Voice* removed the abstract from the website, and the editor-in-chief resigned. Multiple similar examples can be found in *The Lancet* [36,37], including an anti-Israel polemic that did not cite sources or have any references and was eventually retracted "because of factual inaccuracies" [38]. While editors are no more immune to ideological preconceptions than anyone else, their positions require some impartiality, as peer review must be enforced equally for all authors.

Rare cases exist when editors abused their power. In 1994, Malcolm Pearce published four papers in the *British Journal of Obstetrics and Gynaecology (BJOG)*, where he was assistant editor, about research on patients that never existed [1]. His actions included editorial misconduct as not only did he not request peer review for some of his papers, but also he did not get a letter of submission signed by all co-authors [39]. The latter included Geoffrey Chamberlain, a professor at the same medical school

as Pearce and editor-in-chief and owner of *BJOG*. Chamberlain resigned his *BJOG* positions before he could be investigated for misconduct (editorial or research), but a report on the affair concluded that the journal "did not put up as many barriers to the publication of fraud as they might" [40].

3.2. Post-Publication—Retraction Misconduct

Once a journal is certain a published paper contains error or misconduct, they must publish a correction or withdrawal [14]. According to the International Committee of Medical Journal Editors (ICMJE):

"The retraction, so labeled, should appear in a prominent section of the journal, be listed in the contents page, and include in its heading the title of the original article... Ideally, the first author should be the same in the retraction as in the article, although under certain circumstances the editor may accept retractions by other responsible persons. The text of the retraction should explain why the article is being retracted and include a bibliographic reference to it." [14]

The advent of online publishing adds duties/opportunities to editors. Online and PDF article copies should remain accessible, but marked as retracted. If the retraction notice is published separately, it must be electronically indexed and include links to the article, and *vice versa* [41]. Unfortunately, many journals fail to meet the ICMJE guidelines. For example, *BJOG* retracted the Pearce papers through a single notice entitled "Retraction of Articles" [42], whose online abstract is blank, and text is behind a paywall. The original articles are still available online, with no indication anywhere that they are retracted. Since then, authors apparently unaware of their unreliability cited the articles at least eight times, once in 2013. Positive citation of retracted papers is a constant problem [43,44], but should be less frequent in properly marked papers.

Sometimes retraction notices themselves should require review. A retraction notice in *The EMBO Journal* for a paper using fabricated data includes this line: "The authors declare that key experiments presented in the majority of these figures were recently reproduced and that the results confirmed the experimental data and the conclusions drawn from them" [45]. No citations or data are given for this claim. *Nature* recently published a similar "corrigendum" [46]. Even if these authors are telling the truth (while admitting to prior fraud), such claims should be subject to peer review and, if false, rejected.

Retractions must also be timely. Here it is difficult to blame editors, for fraud investigations take time and the cooperation of research institutions [47]. When an author requests retraction, however, the response should be swift. Consider the Wakefield paper. A 2004 investigation revealed he had financial interest in attacking MMR vaccines [48]. Subsequently, ten of the original authors wrote a "Retraction of an interpretation", disavowing the vaccine-autism link, but claiming the main thrust describing a novel intestinal lesion was still valid [49]. Following the 2010 revelation that the experiments lacked ethics committee approval, *The Lancet* fully retracted the paper [6]. In the over twelve years it took *The Lancet* to reverse the decision they publicly denounced after six years [48] and were torn over from the start [50], vaccination rates in the West fell dramatically, with a death toll in the thousands [7]. The article's severe public health consequences should have emboldened the editors to err on the side of caution and to consider any misconduct as invalidating the entire article [43,51].

The most unethical response to known misconduct is not retracting at all. In 2005 the USA Office of Research Integrity (ORI) found Dr. Eric Poehlman guilty of fabricating data on 10 papers and 17 NIH grant applications. Besides prison, his sentence included writing letters of retraction to several journals, and his institution had been sending letters even earlier. Of the three journals the university contacted in 2006, however, only one issued retractions [41]. As of 2013, two of the 10 papers ORI named [52] are completely un-retracted. Other examples include the works of John Darsee and Mark Spector, suggesting hesitation to retract is a common problem [47].

4. Conclusions: Causes and Preventative Strategies

The extent to which journals neglect peer review is likely unknowable, except through the self-policing nature of science (the *Proteomics* and *Diabetes Voice* cases) and the action of "scientific activists" like Dragan Djuric, author of the *Metalurgia International* hoax. He highlighted the problem of predatory journals that charge authors publication fees but omit peer review [29,53]. Though around for years, such journals are proliferating today via the Open Access model and online-only publication [28]. (Note that most open access journals do not fit this description: open access biomedical journals are equally reliable as biomedical literature in general and much more forthcoming about the nature of their errors than pay-for-access literature [54].) Predatory journals are extreme cases, yet they are symptoms of wider systemic problems. When such journals somehow obtain an impact factor, authors may deliberately submit there to boost their publication record. Djuric reported this was a common practice in Serbia and Romania, which he criticized through his hoax [53]. Changing academic cultures that overly focus on publication number requirements for tenure or promotion can thus reduce the attractiveness of predatory journals to their prey.

Why would journals avoid or disguise a retraction? Besides saving face, editors may forgo retraction to avoid libel lawsuits [2,55,56]. Some editors will not retract without proof beyond a reasonable doubt that misconduct occurred, which takes time to acquire, or expressly-written retraction requests from the authors or research institutions [57]. The latter may never come if universities do not publicize their results, prefer negotiated resignations to retraction, or are unwilling to pursue investigations once an author has left the institution [47,58]. Editors can decide for themselves how long to wait or how hard to push for responses. However, when such letters do arrive, the journals have no excuse not to retract. The "retraction inertia" of some Poehlman journals cannot be attributed to legal concerns, and must be counted as a form of editorial misconduct.

Editorial misconduct reduction strategies are often the same as for research misconduct [56], with publishing and enforcing ethical guidelines for authors as the most needed and easiest solution. Mandating external review, preventing editors from reviewing their own articles, and omitting "partial retractions" in favor of full retraction can prevent misconduct as in the Sokal, Pearce, and Wakefield affairs respectively. Less useful is government oversight: Researchers, editors, and funding agencies agree that government inspections of either labs or journals to try to catch misconduct would be a disastrous impediment to research far greater than misconduct itself [2,58]. However, journals or institutions can and should run periodical data audits to see just how prevalent misconduct is [8].

A widely suggested method to improve publishing integrity is making the peer review process publicly accessible [59]. Communications between editors and authors, reviewers' comments, and even

article drafts could be made available online. This transparency would not only immediately demonstrate whether a paper received review at all, but also allow readers to judge the review's quality and check for editorial misconduct. One problem with this idea, besides increased work for already strained editors, is that reviews of rejected papers will not be available. The number of unfairly rejected papers, such as those with negative results [25], or which counter the editors' political beliefs, may never be known. In addition, open reviews may be less frank than confidential reviews, and could take longer to return, as referees might worry about their wording. Recruitment of new referees will also be even harder.

Some authors suggested abolishing peer review altogether [10,56]. All evidence suggests review measurably improves the quality of published articles, usually filters out bad papers, and redirects good ones to more appropriate journals. However, the system is expensive for the journal and thankless for the unpaid reviewer: The aforementioned publish-or-perish culture does not value time spent reviewing [60]. Reviews are subject to confirmation bias, though this is not necessarily negative: Researchers have shown that this bias for positive results increases the content richness of the scientific record and makes meta-analyses more accurate [61,62]. Rarely, reviewers engage in misconduct by denying a paper then resubmitting it as their own, as in the Vijay Soman scandal [63]. Alternatively, papers are published immediately and reviewed online by readers. The main criticism is that, while scientists are fit to review articles, the public is not, so the possibility of harm to unqualified readers exists [64]. Online review is also subject to "herding", where scientists are unwilling to publicly disagree with the views of the majority or senior scientists [61,64]. A better solution is recognizing and rewarding quality reviewers as we do quality authors via a "Reviewer Index" [60].

Another possibility is making all retraction notices or corrections open access, regardless of the original articles' availability. Charging readers to learn of journals' mistakes or authors' misconduct is unethical, especially for public health articles [43]. Open, thorough retractions also reduce lawsuit risk: journals can explicitly state why articles were retracted and show evidence. An exemplary retraction is that of a 2012 *Food and Chemical Toxicology (FCT)* study tying genetically-modified corn to cancer [65]. Freely available online, it cites the original authors and title and links to the original paper and *FCT*'s retraction policy based on ICMJE recommendations [14]. The article's webpage links to the retraction and to every response published in *FCT*. The abstract is replaced with the full retraction notice, which explains the cause for retraction and details the investigation of the authors, their raw data, and the peer review system, while commending the authors for their cooperation. In this case no author or editor misconduct occurred: the paper simply did not receive sufficient statistical analysis during peer review. Still, given its potential public health and policy impact and the high cost of research needed to correct the error [43], the decision to formally retract the article and its presentation should be lauded.

As the academic community holds itself to high standards, considering all sources of error and holding all responsible parties accountable is necessary to preserve the integrity of our fields [41,58]. For their part, the editors of most major journals are behaving admirably and adapting to modern needs. Creating systemic changes like rewarding reviewing or de-emphasizing number of publications in measures of a researcher's value will be more challenging.

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Conflicts of Interest

The author declares no conflict of interest.

References

- 1. Smith, R. Research misconduct: The poisoning of the well. J. R. Soc. Med. 2006, 99, 232-237.
- Maintaining the Integrity of Scientific Research. In Subcommittee on Investigations and Oversight of the Committee on Science, Space, and Technology, 1st ed.; US Government Printing Office: Washington, DC, USA, 1990; p. 1455.
- 3. Fang, F.C.; Steen, R.G.; Casadevall, A. Misconduct accounts for the majority of retracted scientific publications. *Proc. Natl. Acad. Sci. USA* **2012**, *109*, 17028–17033.
- 4. Neill, U.S. Stop misbehaving! J. Clin. Investig. 2006, 116, 1740–1741.
- 5. Greitemeyer, T. Article retracted, but the message lives on. *Psychono. Bull. Rev.* 2013, doi:10.3758/s13423-013-0500-6.
- 6. The Editors of *The Lancet*. Retraction—Ileal-lymphoid-nodular hyperplasia, non-specific colitis, and pervasive developmental disorder in children. *Lancet* **2010**, *375*, 445.
- 7. Flaherty, D.K. The vaccine-autism connection: A public health crisis caused by unethical medical practices and fraudulent science. *Ann. Pharmacother.* **2011**, *45*, 1302–1304.
- Rennie, D. Proposals concerning the role of journals in preventing fraud and responding to allegations of fraud. In Proceedings of the Project on Scientific Fraud and Misconduct: Report on Workshop Number Three: AAAS-ABA National Conference of Lawyers and Scientists: Arnold and Mabel Beckman Center of the National Academis of Sciences and Engineering, Irvine, CA, USA, 17–18 February 1989; American Association for the Advancement of Science: Washington, DC, USA, 1989; pp. 187–194.
- Farthing, M. Research misconduct: An editor's view. In *Fraud and Misconduct in Biomedical Research*, 3rd ed.; Lock, S., Wells, F., Farthing, M., Eds.; BMJ Publishing Group: London, UK, 2001; pp. 244–256.
- Godlee, F. The ethics of peer review. In *Ethical Issues in Biomedical Publication*; Jones, A.H., McLellan, F., Eds.; Johns Hopkins University Press: Baltimore, MD, USA, 2000; pp. 59–84.
- Altman, L.K. The Myth of "Passing Peer Review". In *Ethics and Policy in Scientific Publication*; Bailar, J.C., Council of Biology Editors, Editorial Policy Committee, Eds.; Council of Biology Editors: Bethesda, MD, USA, 1990; pp. 257–268.
- McLellan, F. Ethics in cyberspace: The challenges of electronic scientific publishing. In *Ethical Issues in Biomedical Publication*; Jones, A.H., McLellan, F., Eds.; Johns Hopkins University Press: Baltimore, MD, USA, 2000; pp. 166–193.
- 13. Bosch, X.; Hernández, C.; Pericas, J.M.; Doti, P.; Marusic, A. Misconduct policies in high-impact biomedical journals. *PLoS One* **2012**, *7*, e51928.

- International Committee of Medical Journal Editors Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly Work in Medical Journals; August 2013. Available online: http://www.icmje.org/urm_main.html (accessed on 14 December 2013).
- Jones, A.H. Changing traditions of authorship. In *Ethical Issues in Biomedical Publication*; Jones, A.H., McLellan, F., Eds.; Johns Hopkins University Press: Baltimore, MD, USA, 2000; pp. 3–29.
- 16. Cutrone, M.; Grimalt, R. The true and the false: Pixel-byte syndrome. *Pediatr. Dermatol.* 2001, *18*, 523–526.
- Krueger, J. Incidences of ORI cases involving falsified images. *Off. Res. Integr. Newsl.* 2009, 17, 2–3.
- 18. Benos, D.J.; Vollmer, S.H. Generalizing on best practices in image processing: A model for promoting research integrity: Commentary on: Avoiding twisted pixels: Ethical guidelines for the appropriate use and manipulation of scientific digital images. *Sci. Eng. Ethics* **2010**, *16*, 669–673.
- 19. Cromey, D.W. Avoiding twisted pixels: Ethical guidelines for the appropriate use and manipulation of scientific Digital Images. *Sci. Eng. Ethics* **2010**, *16*, 639–667.
- Rossner, M.; Yamada, K.M. What's in a picture? The temptation of image manipulation. *JCB* 2004, *166*, 11–15.
- 21. Shelomi, M. Evidence of photo manipulation in a delusional parasitosis paper. *J. Parasitol.* **2013**, *99*, 583–585.
- 22. Sokal, A.D. Transgressing the boundaries: Toward a transformative hermeneutics of quantum gravity. *Soc. Text* **1996**, *14*, 217–252.
- 23. Sokal, A. A physicist experiments with cultural studies. Lingua Franca 1996, 6, 62-64.
- 24. Robbins, B.; Ross, A. Editorial Response to Sokal Hoax by Editors of Social Text, 1996. Available online: http://www.physics.nyu.edu/sokal/SocialText_reply_LF.pdf (accessed on 14 December 2013).
- 25. Epstein, W.M. Confirmational response bias among social work journals. *Sci. Technol. Hum. Values* **1990**, *15*, 9–38.
- Bailar, J.C.; Council of Biology Editors. Editorial Policy Committee. *Ethics and Policy in Scientific Publication*; Council of Biology Editors: Bethesda, MD, USA, 1990.
- 27. Overbye, D. Are They (a) Geniuses or (b) Jokers?; French Physicists' Cosmic Theory Creates a Big Bang of Its Own. *The New York Times*, 9 November 2002, p. 7.
- 28. Bohannon, J. Who's afraid of peer review? Science 2013, 342, 60-65.
- 29. Duiric, D.Z.; Delilbasic, B.; Radisic, S. Evaluation of transformative hermeneutic heuristics for processing random data. *Metal. Int.* **2013**, *18*, 98–102.
- 30. Warda, M.; Han, J. Retracted: Mitochondria, the missing link between body and soul: Proteomic prospective evidence. *Proteomics* **2008**, *8*, I–XXIII.
- Randerson, J. How was this paper ever published—Part II. *The Guardian*, 13 February 2008. Available online: http://www.theguardian.com/science/blog/2008/feb/13/howwasthispapereverpublis (accessed on 13 December 2013).
- 32. Salzberg, S.L. Creationism slips into a peer-reviewed journal. *Rep. Natl. Center Sci. Educ.* 2008, 28, 12–14, 19.

- Steinberg, G., Steinberg, Diabetes Voice Exchange. In SPME Scholars for Peace in the Middle East, 11 March 2006. Available online: http://spme.org/campus-news-climate/steinberg-diabetesvoice-exchange/900/ (accessed on 14 December 2013).
- 34. Lefèbvre, P.; Silink, M.; Home, P. Editor's note—An apology. Diabetes Voice 2004, 49, 17.
- 35. Raz, I. Diabetes under fire. *Diabetes Voice* 2004, 49, 14–17.
- Torossian, R. The Lancet: Anti-Israel Bias At Its Finest. Available online: http://www.israelnationalnews.com/Articles/Article.aspx/11385#.UqraQSM7fy8 (accessed on 13 December 2013).
- 37. The Editorial Office The Games Go On. British medical journals play politics, again. *Isr. Med. Assoc. J.* **2012**, *14*, 82–83.
- Steinberg, G.M.; Balanson, N. NGO Malpractice: The Political Abuse of Medicine, Morality, and Science; NGO Monitor Monograph Series; Greenberg, A., Ed.; NGO Monitor: Jerusalem, Israel, 2013.
- Lock, S. Fraud and the editor. In *Fraud and Misconduct in Medical Research*; Lock, S., Wells, F., Eds.; BMJ Publishing Group: London, UK, 1996; pp. 240–256.
- 40. Lock, S. Lessons from the pearce affair: Handling scientific fraud. BMJ 1995, 310, 1547–1548.
- 41. Sox, H.C.; Rennie, D. Research misconduct, retraction, and cleansing the medical literature: Lessons from the poehlman case. *Ann. Intern. Med.* **2006**, *144*, E7–E11.
- 42. Retraction of articles. Br. J. Obstet. Gynaecol. 1995, 102, 853.
- 43. Budd, J.M.; Sievert, M.; Schultz, T.R. Phenomena of retraction: Reasons for retraction and citations to the publications. *JAMA* **1998**, *280*, 296–297.
- 44. Budd, J.M.; Sievert, M.; Schultz, T.R.; Scoville, C. Effects of article retraction on citation and practice in medicine. *Bull. Med. Libr. Assoc.* **1999**, *87*, 437–443.
- Budagian, V.; Bulanova, E.; Orinska, Z.; Thon, L.; Mamat, U.; Bellosta, P.; Basilico, C.; Adam, D.; Paus, R.; Bulfone-Paus, S. A promiscuous liaison between IL-15 receptor and Axl receptor tyrosine kinase in cell death control. *EMBO J.* 2011, *30*, 627–627.
- 46. Senturk, A.; Pfennig, S.; Weiss, A.; Burk, K.; Acker-Palmer, A. Ephrin Bs are essential components of the Reelin pathway to regulate neuronal migration. *Nature* **2011**, *478*, 274.
- 47. LaFollette, M.C. *Stealing into Print: Fraud, Plagiarism, and Misconduct in Scientific Publishing*; University of California Press: Berkeley, CA, USA, 1992.
- 48. Deer, B. Revealed: MMR Research Scandal. The Sunday Times, 24 February 2004.
- Murch, S.H.; Anthony, A.; Casson, D.H.; Malik, M.; Berelowitz, M.; Dhillon, A.P.; Thomson, M.A.; Valentine, A.; Davies, S.E.; Walker-Smith, J.A. Retraction of an interpretation. *Lancet* 2004, 363, 750.
- 50. Chen, R.T.; DeStefano, F. Vaccine adverse events: Causal or coincidental? *Lancet* 1998, 351, 611–612.
- 51. Fuchs, S.; Westervelt, S.D. Fraud and trust in science. Perspect. Biol. Med. 1996, 39, 248-269.
- Office of Research Integrity, Papers Affected by Dr. Poehlman's misconduct. In March 23 ed.; 2005. Available online: http://ori.hhs.gov/sites/default/files/pubmed_list.pdf (accessed on 14 December 2013).
- 53. Djuric, D. Penetrating the omerta of predatory publishing: The romanian connection. *Sci. Eng. Ethics* **2014**, in press.

- 55. Morgan, P.A. The impact of libel law on retractions. In Proceedings of the Project on Scientific Fraud and Misconduct: Report on Workshop Number Three: AAAS-ABA National Conference of Lawyers and Scientists: Arnold and Mabel Beckman Center of the National Academis of Sciences and Engineering, Irvine, CA, USA, 17–18 February 1989; American Association for the Advancement of Science: Washington, DC, USA, 1989; pp. 181–185.
- 56. Montgomerie, B.; Birkhead, T. A beginner's guide to scientific misconduct. *ISBE Newsl.* 2005, *17*, 16–24.
- 57. Oransky, I. Science has "not asked for a correction or retraction" of arsenic life paper, and why situation is unlike XMRV-CFS. In *RetractionWatch*; Oransky, I., Marcus, A., Eds.; 2012. Available online: http://retractionwatch.com/2012/07/10/science-has-not-asked-for-a-correction-or-retraction-of-arsenic-life-paper-and-why-situation-is-unlike-xmrv-cfs/?relatedposts_exclude=8590 (accessed on 14 December 2013).
- 58. Applegate, M.W. Maintaining integrity in science without destroying the fabric of science. In Proceedings of the Project on Scientific Fraud and Misconduct: Report on Workshop Number Three: AAAS-ABA National Conference of Lawyers and Scientists: Arnold and Mabel Beckman Center of the National Academis of Sciences and Engineering, Irvine, CA, USA, 17–18 February 1989; American Association for the Advancement of Science: Washington, DC, USA, 1989; pp. 223–231.
- 59. Marcus, A.; Oransky, I. Science publishing: The paper is not sacred. Nature 2011, 480, 449-450.
- 60. Kachewar, S.G.; Sankaye, S.B. Reviewer index: A new proposal of rewarding the reviewer. *Mens Sana Monogr.* 2013, *11*, 274–284.
- 61. Park, I.U.; Peacey, M.W.; Munafo, M.R. Modelling the effects of subjective and objective decision making in scientific peer review. *Nature* **2014**, *506*, 93–96.
- 62. De Winter, J.; Happee, R. Why selective publication of statistically significant results can be effective. *PLoS One* **2013**, 8, e66463.
- 63. Hunt, M. A fraud that shook the world of science. N. Y. Times Mag. 1981, 1, 184.
- 64. Bingham, C. Peer review and the ethics of internet publishing. In *Ethical Issues in Biomedical Publication*; Jones, A.H., McLellan, F., Eds.; Johns Hopkins University Press: Baltimore, MD, USA, 2000; pp. 85–111.
- Séralini, G.-E.; Clair, E.; Mesnage, R.; Gress, S.; Defarge, N.; Malatesta, M.; Hennequin, D.; Spiroux de Vendômois, J. Retraction notice to "Long term toxicity of a Roundup herbicide and a Roundup-tolerant genetically modified maize" [Food Chem. Toxicol. 50 (2012) 4221–4231]. *Food Chem. Toxicol.* 2014, 63, 244.

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