

The ethical responsibility of Scientific Journals under pressure to publish

In late 2011, marking an important stage in the development of scientific journals in Brazil, the Brazilian Association of Scientific Publishers (ABEC) held its XIII National Meeting (XIII ENEC) on the theme of integrity and ethics in scientific publications, an event of great importance for all those involved in promoting science in this country. It became clear from the discussions that all of us, editors and coordinators, in so far as we are key players in the dissemination of knowledge, bear much greater responsibility than is generally supposed. It is therefore essential that we be alert to the possibility of all kinds of fraud, such as the massaging or even the invention of data, as well as the well-known practice of “cutting and pasting” – as it is now called in simple and direct language – and the various other ways of reusing information already published by the same author, known as self-plagiarism.

Furthermore, as researchers and providers of knowledge, we need to take the greatest care to ensure that the so-called “liquid modernity” of today’s world – to borrow Zigmundt Bauman’s metaphor,¹ – with its vast array of irrelevant information, does not contaminate scientific communication and damage the quality and the integrity that such communication requires.

The speed of change and the number of new facts, with the exponential rise in the number of publications² may even reduce the clarity which, as producers of knowledge, we need when expounding ideas and presenting scientific findings. It is one thing to engage in genuine healthy competition, even if there is some friction between individuals and individual research groups; but it is quite another to break the code of ethics which should be respected by all. Ethics and competition can perfectly well coexist.

The history of science is replete with examples of great debates and even rivalries³ between scientists who are now universally regarded as intellectual luminaries. It is well known how Newton and Leibniz argued over which one of them had been first to discover differential and integral calculus or how Darwin and Wallace clashed over the Theory of Evolution. These are two classic examples in which, despite the rivalry, there was, to my knowledge, no disrespect for the ethics of scientific investigation.

Less well known, although ethically exemplary and less a dispute over priority than a disagreement regarding results, is the case of the philosopher and mathematician, Bertrand Russell, who, in 1901,⁴ discovered an inconsistency in Gottlob Frege’s theory of the foundations of logic, which was due to be published that same year. As embarrassing as it must have been for him, Frege acknowledged the error, while Russell, in all his subsequent publications acknowledged the importance and originality of Frege’s theories and discoveries in this branch of science. In Russell’s own words, “He conducted himself with a candor whose nobility can never be lauded too much”.⁴

Is science no longer done the way it used to be? Of course it is and we can safely say that most researchers behave honestly and ethically. However, given the enormous pressure to publish to which we are subjected we need to take the greatest care not to err. The problem is that we need to be as alert as possible so as not to infringe on or violate the rights of others. Often these rights are disrespected and, looking at scientific literature, we can find boundless evidence of this. It is not uncommon for editors to identify cases of appropriation of already published ideas, the inclusion of individuals among the authors of papers who did not contribute to them and the omission of others that did, and also self-plagiarism and republication. We should therefore remain aware not only of overt plagiarism - the reproduction of other people’s material without due credit - and classic massaging and manipulation, or more brazenly, the pure invention of results.

The typical cases,⁵ in the last hundred years of fraudulent “research” and publications are already all too well known as examples of unethical conduct in science. These include the greatest hoax of the 20th century,

the so-called Piltdown Man, 'discovered' in 1912, which was exposed in 1953, to the great detriment of the paleontological community; and the ideas of Trofim Lysenko, in the Soviet Union, that damaged the science of genetics and the whole agricultural sector in that country in the 1940s. Another famous example is Cyril Burt's results regarding cognitive differences between twins, when he reported fictitious data on 53 pairs of twins, a fraud that was only exposed many years later in 1974. There are many other examples, but we shall conclude here with the most recent one, involving the South Korean, Hwang Woo-Suk, who claimed, in 2004, to have successfully cloned human embryos. A claim that began to be discredited the following year.

These are some of the more serious cases, but we should bear in mind that the perpetrators of these should not be regarded as scientists, but as fraudsters; marginal figures who are an affront to science and to humanity as a whole.

However, leaving aside such aberrations, it is worth recalling that even some respectable figures in the scientific community have been responsible for breaches of ethics - albeit with less serious consequences, but not, for that, excusable - when publishing the results of their research. A case in point is that of Crick and Watson, who did not include in their first ground-breaking publication in *Nature* on the structure of the DNA molecule the name of Rosalind Franklin, whose investigations and knowledge of crystallographic images had been indispensable in establishing the molecular model - a fact that Watson would later acknowledge.⁶ It has also been remarked that the mathematician, Henri Poincaré, is not acknowledged in Einstein's work on the Theory of Relativity, although there are various sides to the arguments and it is still an open controversy.^{7,8}

The debates at the ABEC meeting and the ideas raised by them are therefore leading editors to pay the greatest attention, in their journals, to ethical issues and stating these as clearly as possible in their recommendations for authors and upholding them rigidly in their editorial policy.

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