Mathematical and Computer Modelling 58 (2013) 1677–1678

Contents lists available at ScienceDirect

Mathematical and Computer Modelling

journal homepage: www.elsevier.com/locate/mcm

Valedictory Editorial

Elsevier has decided to close this journal *Mathematical and Computer Modelling* (*MCM*), so with mixed feelings, I and the other members of the editorial board must move on.

Laura Schmidt of Elsevier has provided me with some history. The journal started as "Mathematical Modelling", a quarterly publication edited by Ervin Y. Rodin (U. Washington, St. Louis) and Xavier J.R. Avula (U. Missouri-Rolla), under Pergamon Press in 1980. The nine original volumes are freely available online at http://www.sciencedirect.com/science/journal/02700255/1/1.

The first paper of Volume 1 set the tone for the journal. That article, "The mere notion of a model", by Rutherford Aris & Mischa Penn of University of Minnesota, announced in beautifully crafted English that the discipline of mathematical modelling had matured sufficiently to be able to reflect on its own nature.

The editorial of Volume 10 (1988) announced that the journal name would henceforth include "Computer Modelling". This of course reflected the expectation that modern mathematical modellers would be expected to be facile with numerical computation and associated visualization of functions, data and dynamical flows.

I was invited to join the editorial board in 1992, recommended by my honours supervisor, the late Professor H.S. "Bert" Green. Bert, a Ph.D. student of Max Born, and subsequently a post-doc of Albert Einstein and of Erwin Schrödinger, explained to me that applied mathematics and mathematical physics were closely related, using general physical principles such as conservation laws, dynamics and thermodynamics to model the real world. These general principles generalize well to areas outside of physics, such as in population genetics and flows of capital. Soon after I joined the editorial board, Pergamon Press was bought by Elsevier. The central editorial office operated out of U. Washington with Rodin. It was evident that Ervin took great pride in the journal and that he was willing to work hard to maintain it. Over many years, I always found Ervin to be responsive and encouraging, and receptive to new ideas.

Early on, the editors tried to promote exchange of information on software, and educational mathematical modeling modules. In general, qualified guest editors were encouraged to design special issues of specialized conference proceedings.

Over its finite lifetime, the journal has registered over 6500 papers in ISI Web of Science. From the list of papers, I estimate the journal's H-index to be 57. In some sense, the journal will live on as it will continue to be cited for a long time. Just as a single scientist with such an H-factor will continue to be cited, so will a single journal. By comparison, the journal *Studies in Applied Mathematics* (Wiley-Blackwell), having published over 1300 papers since 1969, has an H-factor around 70. Elsevier's other flagship journal on related subjects, *Applied Mathematical Modelling* (*AMM*), established around 1976 and edited for most of its history by Mark Cross, has published over 8200 papers, with an H-index around 47.

Since I wrote my first scientific paper in the 1970s, I have seen enormous changes in scientific publishing on a scale that wasn't anticipated at that time. As a graduate student I was able to keep track of most new developments related to my research topic. That possibility belongs to an era that is now a distant memory. The proliferation of journals and explosion of scientific articles is disproportionate even to human population growth over that time. This has led to the navel-gazing activity of bibliometrics becoming recognized as a science of its own. Inexpensive mathematical word processors, mathematical software with graphics and algebraic capabilities, and web information search engines mean that anyone can participate. There are now several alternative business models and technical approaches to scientific publishing, leading to healthy vigorous debate. There is no consensus on which if any, of these approaches will prevail, or whether a new unexpected paradigm will soon emerge.

With such a depth and breadth of instantaneous information, it is now more likely for multiple independent thinkers to be led to the same idea, and for unfortunate disputes to arise over claims of priority. Under the incentives of monetary rewards that unfortunately have become institutionalized in academia, there is an incentive to publish the minimum quantum of progressed information. Many contributions on mathematical methods have disregarded the spirit of mathematical modelling by using a synthetic example calculation that has no reference at all to real data or to a practical real-world phenomenon. The same incentives even encourage plagiarism. The number of papers that are failing under the scrutiny of textual cross-checks is surprisingly high, ranging from cutting and pasting introductory text from one's earlier papers,

0895-7177/$ – see front matter © 2013 Elsevier Ltd. All rights reserved.
http://dx.doi.org/10.1016/j.mcm.2013.09.001

to theft of a paper in an obscure one-off conference. This problem really slowed down the processing of a few hundred stagnant submissions that awaited me as I took over as acting chief editor. In many cases, I have been able to work directly with authors to improve their papers. I do thank the recent authors who have put up with long delays and the journal office staff who have been persistent with cross-checks and other processing.

I ask potential authors to be considerate when dealing with editors in the future, because the task is becoming much more demanding, relying largely on volunteer reviewers and subject editors. When asked to review a paper, please consider that you are being entrusted with quality control that is important for the reputation of science, not a trivial request that should be avoided as a task beneath your dignity. Your own scientific career has likely been uplifted by constructive reviews of your papers and you should feel that you owe some professional service in return.

Despite a reasoned assessment by some that the journal's peak reputation is not recoverable, I think that we have produced some reasonable issues over the last year of the journal. I express my sincere thanks to honest insightful authors, to hundreds of reviewers over the past year and to the professional Elsevier journal staff. I am proud to have been associated with many well-known mathematical scientists who have been listed on MCM editorial boards over its 33 years of existence. Finally, thank you to those many authors who have entrusted the journal to publish stimulating and original articles. In my mind, I'm sitting down to have a drink with you now.

Philip Broadbridge
La Trobe University,
Melbourne