Economic Analysis of Scientific Research Publishing. – Wellcome Trust, London 2003. ISBN 1 84 1290 47 5. 33 pp., free on the net: http://wellcome.ac.uk/scipublishing

Transition from printed journals to the journals published only on Internet is an idea discussed recently very often. Predictions that originated some ten years ago supposed that all printed scientific journals would disappear within the next twenty years. As concerns magazines a quote from 1999 even stated that all printed media would be dead in five years. The development of the last decade has not confirmed these predictions. Both print consumers and producers have probably found that the Internet is a complement to print materials, not a replacement. And publishing on Internet is still not as cheap as supposed ten years ago (and probably will never be very cheap).

To produce a serious scientific journal needs always work of an Editorial Office. Publishing without tough editorial work and peer reviewing of manuscripts would markedly lower the quality and reliability of published results of scientific research in all fields of science. And print journals still have an advantage: reading articles that are printed on paper is still more pleasant than reading them on eye tiring screen. But the most important question is, as usual, money. Should the author or the user pay for publication? And how much does paper or Internet publishing cost? The ideal state would be open access publishing on the net but is it really possible? Such questions were the reason why the Wellcome Trust financed a study on economics of scientific publishing.

It is true that the current market structure in science publishing does not operate in the long-term interests of the research community. Of course, any form of publishing is expensive. At present, scientific libraries mostly pay the costs. There are various calculations how much should an author pay for an article that would be present on the net free-of charge for the consumer. The guesses are between 500 and 1 500 $ per article, depending on kind of communication and type of journal. Nevertheless, at present commercial publishers are dominant; they elevate prices of scientific journals yearly by about 10 %. And because the journals are not easily substitutable for each other, the libraries have to pay. Of course, the publishers (only few of them being not-for-profit organisations such as scientific societies and university presses) provide authors with necessary services (improving the form of paper) and outputs (wide distribution, placement on WOS or Medline). Recently, commercial publishers sell bundles of full electronic versions of their journals to scientific libraries: this spares library space and offers the readers a large choice of full journal texts. This also ends in increasing impact factors of the journals. But it also lowers the number of subscriptions to print journals. Parallel electronic publishing of print journals provides speed and access to readers, but at present electronic journals without existing print version are not acceptable to many scientists. Citation of only electronic papers is not popular. And how about archiving, changes in software and hardware, possible losses induced by viruses, *etc*.? And what is the future?

All these questions were analysed in this report, sometimes in too many details. I would recommend shortening the text to about one half. The analysis is mainly based on data from Great Britain. It contains interesting information on price increases and average journal subscription prices. According to Blackwell, the cost of a journal in science and technology in 2000 was £ 671.77 (178 % of the price in 1990, but British journals are known by their high prices; general average journal cost was £ 431.71.) Nevertheless, the funds the libraries get have increased more slowly. Strange enough, there is still some increase in number of subscriptions. Old British universities subscribe to 740 journals per 1 000 full time students, new universities about half of that amount.

What are current developments in science journal publishing? Electronic submission and peer review was started in 1996. From January 2003 the Proceedings of the Royal Society A accept only online submissions. Online notice boards and discussion groups in some fields of science debate important current issues in science publishing. A digital journal archive should ensure permanent availability of papers. Better search engines and cross refereeing systems are desired. Paper prices are more or less constant but costs per Editorial Office employee increase much more rapidly than general inflation. In 1999 about 1 200 titles were produced electronically.

And what is the future of science publishing? My answer is: No idea (even after reading this report; there are four different scenarios). Nevertheless, the reader will find interesting information in this report. Thus read it, it is free-of charge!

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