

APE 2006 Academic Publishing in Europe The Role of Information in Science and Society 4 – 5 April 2006, Berlin

In a unique setting, the Leibniz Room of the Berlin-Brandenburg Academy of Sciences at the Gendarmenplatz in Berlin, APE2006 attracted 160 participants from 15 countries. The event was initiated by AKEP (Electronic Publishing Working Group) and ALPSP (Association of Scholarly and Professional Society Publishers) and organised by a variety of European Academic, including many SME, publishers, subscription agents and suppliers, under the auspices of the EC. It brought together a broad spectrum of publishers, scientists, research funding organisations and librarians, the goal being to seek a common language on structural changes taking part in publishing, science communication and in relation to society at large.

The **Welcome and Opening**, chaired by Sally Morris, the Chief Executive of ALPSP, started on a historic note: the heart of Academic Publishing is in Europe. The advances in ITC, to which European scientists have greatly contributed, have today gained a fundamental importance to the publishing industry.

Dr. Gottfried Honnefelder (President of the Börsenverein) reported that Germany today counts over 700 academic publishers and a large number of booksellers, emphasizing that their social and cultural importance shouldn't be underestimated. New media are welcome but not to the point that the existing system, which has proved itself during the past 5 centuries, would be destroyed. The rights of authors and their publishers need protection against copying.

Dr. Nicole Dewandre (EC- Research Directorate General) placed academic publishing at the heart of the European Research Area, and emphasized that research has a high priority in the EU. She stated that STM journals are an essential channel for the diffusion of scientific knowledge. A study (http://europa.eu.int/comm/research/science-society/pdf/scientific-publication-study_en.pdf) commissioned two years ago by the physicist and then Research Commissioner Dr. Philippe Busquin, has during the previous week been made public for consultation. The consultation process will be completed by June and will be followed by a conference during the last quarter of 2006. The study investigates the perceived market imperfections of the current publishing system and evaluates alternatives opened by the electronic revolution. Interested parties are invited to participate in the consultation process.

Dr. Jurgen Renn (Max Planck Gesellschaft, MPG) gave his opening address on behalf of the MPG President Peter Gruss. He reflected on the current scientific journal, the MPG's role and attitudes towards the current academic publishing process. Costs for the dissemination of scientific information have become research costs. He saw "open access" as a paradigm shift (of the order of Internet and the Web) and contrasted it with "toll access" currently practised by publishers. New media haven't been optimally used by academic publishers, and examples of systems developed and run by scientists themselves were suggested as alternatives. He stressed that people need to look for new models. If we keep mapping existing structures to a new medium, we will create and not cross boundaries. Dr. Renn stressed that "open access" is not directed against publishers but is rather a transformation process towards a better infrastructure which publishers can also exploit. The development of "open access" should focus on long-term preservation and quality control.

Dr. Derk Haank (CEO of Springer Science + Business Media) stated that academic publishing is electronic publishing: the journal migration **is** complete. For books it is under way, and much is still to come. Publishers, funding agencies and other parties have done a great job, for instance on linkage. While technology is not the central challenge, the future structure is steadily becoming more clear.

The Scope of European Publishing session was chaired by Dr. Einar H. Fredriksson (Director of IOS Press) and featured speakers from large and small publishers, including scientific societies and publishers associations, to underline the broad variety of activity. Sustainability of processes, as well as the impact of new technologies and legislation, are central themes.

Dr. David Hoole (Head of Brand Marketing and Content Licensing, Nature Publishing Group) gave a historic sketch to illustrate both change in geographic centres and the circumstances under which publishers operate. World War II had a profound impact on culture, economy and publishing technology developments. The American Chemical Society introduced copyright on their articles only around 1940. The STM industry achieved a remarkable growth after the War, and now faces an uncertain future. Research funding organisations are increasingly trying to protect their investments and to control publishing processes. A challenge for publishing, being a global business is to cooperate with the nationally organised funding agencies. The Asian input in paper publishing will grow rapidly, as well as China and Eastern Europe, but for now, the US still has the number one position. From the NPG perspective there are now several development scenarios possible. Dr. Hoole stresses that we need to build on experience, develop our global business and offer value for money.

Dr. Willy Stalmans (former Chairman, FEBS Publication Committee) explained the position of a society publisher. From the point of view of learned societies, free access to all publications is not a priority. Current income for societies from publications can be of high importance and sponsors a variety of activities and grants. In the case of FEBS, the industry is looked at more from a consumer point of view than from the production side of information, and a free access policy then seems unfair. For authors, it would mean an added burden to arrange and administrate publication funds. Embargo periods as suggested by some funding agencies, which are stipulating free access after an initial period down to 6 months are unrealistic for many high quality publications.

Vitek Tracz (Chairman of the Science Navigation Group) had his address read by Dr. Matthew Cockerill:

it started out by stressing the necessity of academic publishers to reinvent themselves. Offering added value has to become the focal point. In order to do this, standardisation will be necessary. The new generation of Internet companies like Skype, eBay, etc. illustrate that information can float freely while you can exploit higher level services. It has to become recognised that paper-based and the emulation of paper-based publications are not the future. Knowledge structuring, tools for knowledge evaluation, collective knowledge of communities, semantic enrichment, mining tools, were all seen as fair game for the future publisher.

Dr. Piero Attanasio (CEO of mEDRA) opened by showing the complexity of the value creation process of the current publishing sector. One can imagine the elimination of various active groups in the chain, but at a price. In a situation where market conditions are affected by politics, new policies including open access and copyright, may have the effect of strengthening the competitive advantage of large players. E.g. under certain conditions, open access may promote market concentration. In the case of Italy, there may be as many as 1000 online publishers (publishing both in English and Italian), and in the current climate few have been able to define reliable business models. Technologies affect, but do not determine, market equilibrium. One of the most important key competitive factors remains a journal's reputation. This is a very long-term effect. Smaller publishers need to create alliances with universities and authors and invent new business models.

The **Technology and Innovations** session was chaired by Arnoud de Kemp (Chairman of the Electronic Publishing Working Group - AKEP and managing partner of digilibri). This session focussed on search engines, long term access, citation analysis, research evaluation and future infrastructures.

Martin White (Managing Director of Intranet Focus) lectured on how better environments can be developed for new search engines. Computerised searching of bibliographic databases dates back to the early sixties. Alta Vista came in 1995 and Google in 1998. The number of companies who are active players in the search industry and who are likely to invest in improvements are few. He reviewed the linking of thesauri and the creation of ontologies. "Relevance" is a very difficult criterion to evaluate; everyone has their own needs. Publishers seem to think that limited research resources, which can be redefined, are sufficient for academic and corporate users, but all have different needs. Google and others have resources enough to test ideas which may later be dropped; business strategies are not always clear. There are several good reasons to give more attention to the area of search and to the strategy of design of search questions.

Hans Jansen (Acting Director e-Strategy, National Library of the Netherlands) discussed large scale and long duration archiving strategies, including migration and emulation, or the "Safe Place Model". The latter is adopted at his library as the only fully acceptable solution. Within this framework, agreements are reached with publishers (some 20 of the largest companies so far) and, in principle, every STM publisher is welcome. With the available IBM system up to 40k articles could be added to the archive per day. The financial situation still has to be worked out. As long as there is a commercial interest among the publishers, articles are available on licence conditions. When demand declines for an article, it can be offered for free. Problems are seen in the area of international

electronic publications, which do not fall within the scope of a national library.

Dr. Henk F. Moed (Centre for Science and Technology Studies, Leiden University) started out from the observation that the structure of the academic system in a country determines "ranking": the increase of university performance, either individually or per country, is now being discussed. Noting that the terms "free" and "open" access are being used in a variety of ways, he analysed suggestions that "free" access may increase speed of dissemination and possibly also raise impact factors. Based on arXiv submissions and 22 journals in the physics area, citations of open-access and not-open-access articles were investigated. When you differentiate between impacts of free access, early availability and authors' selection of source of cited articles, you find that both the latter factors are more significant than that of free access. These kinds of studies indicate that some of the free access debate has been based on over-simplification.

Dr. Stefan Decker (Digital Enterprise Research Institute, DERI) focussed on a situation still a few years ahead, a collaborative infrastructure of the next generation. New developments in the computer field, including semantic web, peer-to-peer communication, natural language processing, etc. will lead to new forms of collaboration and "social semantic information spaces". These will have great impact on scientific communication.

The **Outreach of Research Communication** session was chaired by Arie Jongejan (CEO, Royal Swets BV).

Dr. Georg W. Botz (Max Planck Gesellschaft, Munich) gave a short report on the recently held 4th Berlin Open Access Conference at Golm. The OA movement has been affecting more services and repositories recently: the issue of OA is seen as broader than just applying to publications. It also involves raw data, supporting material and collaborative tools. Next to this OA is seen as the means to increase the impact of science on the scientific community and on society in general. The MPG is supporting a smooth transition to an OA world, and invited the audience to the next conference in the series, planned to be held in Padova.

Dr. Johannes Fournier (Deutsches Forschungs Gemeinschaft -DFG, representing Dr. Gudrun Gersmann, Library Committee of DFG) explained, that this Committee has increased its mandate to include research information and the building of digital research resources. It is part of the mission of DFG to supply the necessary German and international information to German scientists, and during the past years an amount of 27M Euro has been spent on national licences. Open access was seen as a way to reduce the costs for information. Scientists will determine the future developments of academic publishing: electronic publishing is only a part of the general changes in the research area. DFG will assist in the establishment of new publishing organisations, but can only supply initial funding and not maintenance. The speaker saw collaboration with publishers necessary and desirable. Freely available information could form a basis to be used by publishers, and sold at their own risk to a broader public.

Dr. Matthew Cockerill (Publisher, BioMedCentral Ltd., London) presented his company's route to become a profitable enterprise. This would be based on open access to its publications - whereby the authors or their employers/funding-agencies are required to pay a fee per article published. A fee of around 1000 Euro

is seen as adequate at this time, and some 400 institutes, paying for 69% of the currently published articles, are currently supporting the company. 65 funding agencies were recently contacted for a survey, to which 23 so far have responded – mostly favourably. The speaker also mentioned other companies employing the “authors-pay” principle, with comparative prices, and suggested that at a level of 1-2000 Euro per article such efforts could become sustainable.

Rene Olivieri (CEO, Blackwell Publishing Ltd., Oxford) spoke of the serials crisis as being a thing of the past and of ongoing improvements in the publishers/librarians relationship. While the scenario for academic publishers is changing, a vast majority of scientists show themselves satisfied with the system as it works today. He saw several motives for the support of open access, from technical to ideological. The stakeholder interests ranging from politics: economic growth through research, funding organisations: control and accountancy, to the open-access lobby: beliefs and values. But next to open access, there is a more pressing issue for the scientists: time wasted on searching for an article. The publishers are forced to adapt to the changing situation!

Henning P. Nielsen (Chairman, Pharma Documentation Ring (PDR) and Novo Nordisk S/A, Bagsvaerd) started with the observation that for his sector the access to high quality information and the opportunity to publish are of vital importance. Scientific journals are important for research, documentation for product licensing, marketing (reprints and supplements) as well as customer support and for attracting and retaining the best scientists. The speaker was open to the aspects of free access to information which could benefit the industry, but saw little possibilities for marketing (advertising) in free access journals. Comparisons between research conducted in the pharmacological industry and in universities as to the costs of producing articles for publication can hardly be made. When looking at reprints (for Novo Nordisk this is a bigger budget than the subscription budget), the future model with free access journals is unclear. The articles are freely accessible, but the copyright issue is unsolved.

The **Strategic Change** session was chaired by Dr. Kurt König (Office of Official Publications of the EC) who first gave an overview of the activities of his Unit, CORDIS and the website providing an overview of research related activities of the EC (www.cordis.lu).

Mark Seeley (Legal Counsel of Elsevier Inc.) gave a broad overview of STM publishing houses and related service companies, illustrating how publishing functions were migrating far outside the traditional STM sector. The larger companies have invested in a variety of author support systems, but the offerings by new entrants (some of them companies which used to provide back-office services for publishers) make us aware of the changing roles of stakeholders. One central question is whether publishers should change their role. Some new services, like PatientInform, could easily be set up by publishers, but they will have to offer significant services to the community to stay competitive. On the other hand, it is a very tough task to develop easy-to-use systems.

Dr. Christian Sprang (Legal Counsel of the Börsenverein) gave an overview of the legal and policy framework within which the German academic publishers are functioning. Funding policies of the Federal Ministry of Education and Research and the

German Research Foundation – DFG as well as the local developments of copyright legislation were both seen as less fortunate for the future developments of the publishing and booksellers sectors in the country. The DFG, which operates under the above Ministry, is subsidizing the establishment of new publishing activities within universities. This support is linked with requirements for providing free access to the publications of these university presses, and it is an open question whether sustainable publishing houses can be established this way. On a broader note, the speaker saw the chronic under-financing of the public educational and research sector as one of the causes of the pressures felt in the academic publishing industry in Germany. There are insufficient incentives for publishers to act as entrepreneurs.

Antje Sörensen (Legal Counsel, International Publishers Association (IPA)), stressed that copyright constitutes the basis for the publishing industry. Access rights are being demanded on a global scale, and in discussions at UN level there are regional lobbies such as Latin America for international free access treaties. Access rights could become law, making publishers liable for not providing access. Publishers will need to specify their roles in transferring information into knowledge, here defined as “ability to act on information”. They need to show that they are contributing benefits to society at large, actively soliciting and creating works, and being the custodian for quality, freedom of authors and the independence of science. Demands for access cannot be countered by solely rational argumentation: publishers will need to engage also in the emotional policy debate.

Martin Marlow (VP, Atypion Ltd), saw the publishing business as being affected by technological developments as well as by changing, and more specific, customer demands. In a series of slides the current state of the information, communication and access to the literature were described, and the likely future developments were sketched. Next to content, access and context will be equally important. Publishing paradigms for the “new sciences” would include community services, search and analysis tools. Publishing would migrate based on changing user demands as well as on changes in the Internet itself. The speaker summarized his findings by explaining the 5 m’s; malleable, multiple (platforms), manageable, mixable and massive. People want to get all the relevant information, but need help to manage it.

The **Closing Panel** was chaired by Dr. Herman P. Spruijt (Royal Brill Academic Publishers and IPA). A brief introduction by three panellists was followed by a general debate.

Dr. Albrecht Hauff (CEO, Thieme Verlag KG) stated that he has doubts whether a change from a competition-based publishing system to a state- or university-run system would be a change for the better. In his opinion, the neutrality of publishers with regards to content is very important. Further, he discusses the question how scientific communication can be improved all the way to society at large. Dr. Hauff does not consider this task a primary function of scientific publishing as other players already fulfil that task. But if today, it is felt necessary that scientific information has to be communicated faster to the public, scientific publishers should be involved. Moreover, he stresses the importance of copyright protection whilst remembering that a lesser protection would discourage publishing activities, which can lead to the end of the scientific monograph. Moreover, he clearly states that it is unlikely that Open Access will

lead to a reduction of costs. Finally, Dr. Hauff reminds that publishers will have to add value to the dissemination of science, because otherwise, they would not be needed anymore.

Dr. Juergen Renn, MPG, appeals for publishers to regard scientists as customers and not as competitors. He agrees with Dr. Hauff that value added and investment are necessary and that there is no reason that the future system will be less expensive. But he blames the publishing industry for being too conservative. Dr. Renn suggests that the publishing business should be guided by the most innovative and advanced scientists. He gives the example of small scientific communities that have already improved mechanisms of filtering and quality control. Further, he emphasizes the importance of primary data to published papers for the purpose of quality control. He proposes that the publishing industry should shift their investments from conserving the old system to infrastructure and value added services in innovative science activities. Lastly, he emphasizes that not only STM, but also cultural heritage is an important area of new scholarly publishing models.

Dr. Klaus Saur, Walter de Gruyter GmbH, Berlin, explains that publishers still play a very important role. But he sees this role as endangered by recent legislation and public funding policies. Due to the recent developments of free online content, he warns that publications which were published for decades or centuries might have to be discontinued. Therefore, he appeals to publishers to protect copyright as much as possible. Regarding the comments of Dr. Renn, he points out that scientists *do* become competitors as soon as they deliver all their content in an open access format. Further, he explains that budget reductions in libraries are an important aspect of the problem. Finally, Dr. Saur warns that all these developments will lead to a reduction in the quality of information.

The general debate in the closing panel was largely driven by the issue of Open Access. The pros and cons in the lively discussion showed a wide spectrum of opinions.

The base for the discussion was Dr. Renn's demand to publishers to allow an open access model. Renn explained that open access is the wish of the customers, the scientists, and that it is the enabler for new form of science. The discussion was continued by Jan Velterop (Springer) who pointed out that it is very easy to make information freely available. Therefore, Velterop claimed, there are no good arguments against open access. In this context, Renn emphasised that not only information is closed up currently, but that publishers invest to close up information. Mathew Cockerill (BioMed Central), supporting Renn's initial argument, explained that open access is "the only way to allow the full resources of academia to throw that

creativity at finding the best ways to discover content and put that content in context".

Dr. Saur pointed out that a lot of content might be excluded from publication when an open access model is forced because its publishing costs cannot be recovered. Further, David Hoole (Nature Publishing Group) claimed that an author pay open access model would be unfair if a journal has a much larger number of readers than authors, as publication fees per article might be beyond 20,000 Euro. Sally Morris (ALPSP) indicated that latest research shows that the argument that open access raises the impact of an article seems to be false.

Willy Stalmans stated that FEBS (and many other Scientific Societies), if they were to adopt Open Access publishing, would lose their income for funding courses, congresses and fellowships, leaving European bio-scientists homeless and impoverished. In the best scenario, some of those activities might be taken over by e.g. the E.U. But scientists should then face the consequences, aptly worded by the physicist Sir Ernest Rutherford (1926): "It is essential for men of science to take an interest in the administration of their own affairs, or else the professional civil servant will step in – and then the Lord help you!"

Moreover, Peter Gregory (Royal Society of Chemistry) warns that open access might reduce the quality of journals when "volume is good for profit". Finally, Bianca Gerlinger (van Tulleken) called open access a form of "content communism".

Pieter Bolman (STM) clarified that the publishing industry should carefully listen to the scientific community and chose with it the best business model to make it possible. He warns that the industry should not per se defend the status quo.

In the final statement, Herman P. Spruijt (Royal Brill Academic Publishers NV) points out that open access business models should not be confused with the effects of digital distribution already achieved: scientist have at their fingertips more information immediately available than ever before and we have experience with more than one business model already. The question is now: Who in the information chain should pay the bill? We seem to agree that more than one model can exist and that an abrupt change is not the best solution for the academic community.

Despite all the energy and investments publishers are devoting to change their role, if they are not **seen** as adding enough value to the chain and not **seen** as proactive enough, authors, libraries and funding agencies will vote with their feet: technology is not the prerogative of publishers only but available to all players.

For questions, recommendations and proposals, please write to info@digilibri.de. In the case of the EC study mentioned above, we propose that all participants do file their comments before June 1st. For further information on the presentations of APE 2006, see www.ape2006.de.

Photographs of chair persons, speakers and of the meeting can be seen at www.digilibri.com. Please enter <ape 2006> in the Quick Search.

Rapporteurs: Einar Fredriksson and Björn Ortelbach, 20 April 2006.