

**Open Access.** Peter Suber. The MIT Press, Cambridge, Massachusetts, London, England. 2012. 230 pp. Price: US\$ 12.95/£ 9.95.

This book by Peter Suber builds on his excellent work and articles on open access (OA). A direct question that may be in the minds of the readers is why a book on OA is not available for OA. Suber points out that many of his thoughts on OA are already available for free on the Internet and the book will in fact be made OA 12 months after publication.

Suber says that the book should be read by busy researchers or administrators. Though I belong to neither of these categories, I have extensively read his work and this book is a coherent compilation of his thoughts. The book clearly tells you what OA is and what it is not. It also discusses the benefits of OA and why it should be adopted by institutions worldwide.

Unlike creative workers like musicians and film makers, academicians do not expect any payment for publishing research articles or books. The academic custom to write research articles for impact (which may lead to tenure, promotions/career growth) rather than money has resulted in publishers utilizing this aspect for commercialization. While publishers play a crucial role in dissemination of information by printing journals and distributing them worldwide, their impact has reduced with internet and online accessibility.

Researchers expect that the administration (librarian) will subscribe to all journals that are available, while the commercial publishers like to maximize their profit. The budget of libraries has been increasing in the past few years as

the prices have skyrocketed beyond imagination. As the library budget bloats to extraordinary proportions, the administrator of an institute is helpless and is unable to alter the dynamics due to resistance from every quarter. With some of these top publishers merging and buying out academic societies and their associated publications, the pricing policies are likely to become more intransigent. One way to contain these library budgets may be through OA.

Before the review, it is better for readers to clearly demarcate two paths (gold and green) of OA that lead to the same goal. In gold OA, authors publish in an OA journal that provides immediate OA to all of its articles. Some examples include journals published by BioMed Central and PLoS. Some of these journals charge article processing fees, whereas certain journals waive these fees. In green OA, authors can publish in any journal and then self-archive the peer-reviewed post print, i.e. the author's refereed final draft of the record. This self-archival can be in their institutional repository, a central repository or even a disciplinary repository. Self-archival is not new to scientists and computer scientists have been using Citeseer and high-energy physicists have been centrally archiving in arXiv for the past two decades. Most of the commercial publishers who charge fees for access (either through toll for a single access or journal subscription), also allow for a hybrid model in which they provide OA only for those individual articles for which their authors (or their authors' institution or funder) pay an OA publishing fee.

Chapter 1 discusses about what OA is and what it is not. It is important to note that OA is not an attempt to bypass peer review, violate copyright, reduce academic freedom or a way to undermine conventional publishers. OA is not primarily about bringing access to the laymen. Currently, commercial publishers have ensured that the final printed copy of the manuscript is not available even to the author. Recently, I published in a high-impact society journal, but the society journal is published by a commercial publisher. Therefore, the price of the journal is high and is not subscribed by my institution. I had no access to my own published paper and the journal refused to part even with an online copy of the manuscript. Therefore, if the publishers argue that there is no access prob-

lem, they are simply wrong. This has been well emphasized in chapter 2 of the book. The chapter also discusses one of the critical issues that plagues research institutions. While many faculty are aware of access gaps, they are simply unaware of the causes for these problems and how the publishers have extracted the maximum benefit of this situation. This has led to the situation wherein users (faculty) who are most aware of the quality are unaware of the prices. The lack of exposure of faculty to the issues in OA has led to several misconceptions and they are unable to provide quality input to check the budget of their libraries.

Chapter 3 discusses the green and gold OA, which has been mentioned earlier in this review. It is important to understand green and gold OA because if the authors cannot make OA one way, they can certainly do it in the other way. This is because both green and gold OA co-exist. Most of the scientists will choose prestige over OA and this is understandable. However, they can continue to publish in their favourite journal, which is toll access, but deposit the post print of the paper in a repository. Green OA is thus compatible with gold OA and may even offer certain advantages. It makes faster progress, and does not require the launch of new OA journals or development of a new system. All that is required is that the researcher deposit the post-print version of the article in a repository, whether institutional or discipline-specific. The rising levels of green OA may trigger the cancellation of conventional journals or at least reduce the bargaining power of the toll access publishers.

Chapter 4 deals with OA policies. While the content of OA is controlled by scholars, they are unfamiliar with OA policies. Many are unaware that green OA (i.e. deposition of their articles in a repository) is allowed by almost all the publishers. Given this situation, many universities and institutions have now developed encouragement policies or even mandated deposition of articles in repositories.

Chapter 5 discusses on the scope of OA. Any kind of content can be digitized and put online. OA has primarily worked for research articles in science and technology. But it can also work for books, monographs and encyclopaedia. Much of the OA movement has focused on journal research articles because the authors of

these articles do not get paid for their articles. This is in contrast to books, where book authors earn royalties with each purchase. Suber asks the OA activists to treat journal articles as lower hanging fruits and treat books as higher hanging fruits. He argues that readers are likely to buy a print edition of a book even if the book is OA and digitally available for free. I am not so sure because I feel the younger generation, who have been exposed to computers from their childhood, is completely at ease in reading an entire book on a tablet.

Chapter 6 provides details of copyright issues with publishers. It clearly explains that almost all the publishers have allowed green OA with or without an embargo of a few months. Chapter 7 discusses the economics of these journals. Suber argues that many gold OA journals do not charge processing fees and, even if they did, it is either waived or paid by sponsors on behalf of the authors. He also rightly argues that hybrid OA journals do little and may in fact double dip economically by asking both author side fees as well as hike subscription charges.

Chapter 8 questions as to whether a shift to OA will leave casualties. Suber argues that green OA may or may not affect journal subscriptions. He cites the example of physics wherein two major academic societies, APS and IOP, have publicly acknowledged that self-archiving has not affected their subscriptions. As mentioned earlier, most of the toll access publishers willingly allow green OA. This is because librarians still have an incentive to subscribe because of embargo policies that may limit the deposition of the post print in the repository and because libraries may like to provide their faculty with a formatted, copy-edited and paginated version of the manuscripts. However, as Suber rightly argues, green OA policies are justified even if they do create risks for toll access publishers because there are no reasons to put the thriving of monopolistic commercial publishers ahead of research itself. Chapters 9 and 10 discuss the future of OA and self-help tips for a researcher. They are short chapters, but well written and succinct.

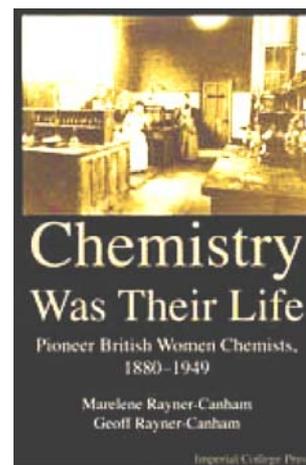
It should be noted that I am not an indiscriminating advocate for OA. I believe gold OA risks taking the community down an expensive, hazardous route. Data from Cornell and University of Maryland show that institutions pay

much more under an author-side fee model because the rise in article processing charges (APCs) rivals that of increase in the subscription rates. Based on the experience of publisher subscription increases, one tends to believe that the publishers of gold OA journals will also do the same (i.e. increase APCs) when they achieve monopoly. Thus, I believe, under current circumstances, gold is costlier than the more widely existing (subscription + green) model, especially for developing countries like India. I thus strongly believe that institutional repositories have to be exploited and all Indian institutions should actively encourage their researchers to self-archive their post print in their institutional repository. Such a move would not only enhance green OA, but also provide a source and showcase the intellectual property emanating from the institution.

This book is clear in its recommendation. If you are a publisher of journals, adapt to OA, otherwise, you will become obsolete like what happened to the typewriter manufacturers with the advent of the computer. If you are a scholar, try to publish in OA gold journals; if not, at the very least, deposit all your post prints in a repository and support green OA. By supporting green OA, the researcher is not only supporting the OA movement, but also enhancing the visibility of his/her research. On 16 August 2012, Georgia State University distributed copies of Suber's book to new faculty and administrators on campus. Included with every book were details on the benefits of OA and a link to their institutional repository. It is high time that Indian institutions follow the above example.

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**Chemistry Was Their Life: Pioneer British Women Chemists.** Marelene Rayner-Canham and Geoff Rayner-Canham. Imperial College Press, 57 Shelton Street, Convent Garden, London WC2H 9HE. 2008. xvii + 542 pp. Price: US\$ 114.

Suggest to a present-day high school student in Bangalore who is interested in chemistry that she should not have the same professional ambitions as a boy in her class and she will likely laugh right in your face. Today, in most countries of the world, women can qualify themselves for a career in teaching and research, and aspire to the topmost positions in both academia and industry. There is no barrier stopping women from achieving their goals, not on paper, at least.

This equality did not exist too long ago – not even in the West – as this book reminds us. This publication from the Imperial College Press in London chronicles the life and times of pioneer British women chemists born between 1880 and 1949. On the occasion of its centenary in 1947, the Chemical Society released a book on some distinguished British chemists who had died since the First World War. No mention was made of any female chemist from that period, which creates the impression that women were either entirely absent from the scene or that they had done nothing worthwhile in the laboratories. The authors of the book under review provide evidence to the contrary.

Rayner-Canham identified 896 academic women chemists on the rolls of the Royal Institute of Chemistry and Chemical Society, and pieced together biographies of 141 of these women. They take care to present the details of these women's lives and works in the appro-