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Commentary

Heads I Win, Tails You Lose: The Intransigence of STM Publishers

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A few commercial publishers dominate provision of access to scientific and technical information sought after by researchers around the world. Increasing subscription prices of journals at rates higher than general inflation caused librarians to think of forming consortia, but publishers started selling online journals as bundles, and libraries ended up with many journals their researchers have very little use for. Scientists and librarians adopted open access, but publishers came up with hybrid journals and article processing charges to beat any adverse effect on their profits caused by the fast-spreading open access movement. We compare the steps taken by scientists and librarians in the West to reclaim ease of access to research findings with what is happening in India. We end with a few suggestions.

Key Words: Article Processing Charges; Big Deal; Double Dipping; Hybrid Journals; Library Consortia; Open Access Movement; Rising Cost of Journals; STM Publishers

Introduction

Scientists in India, as elsewhere, will be happy if their libraries provide them access to thousands of journals. Librarians, even in the most affluent institutions, have only limited budgets and they have to balance between journals on the one hand and books, monographs and reference material on the other, and can subscribe to only a limited number of journals. In the past decade and a half, thanks to generous funding by several government agencies (e.g., UGC, CSIR), librarians formed consortia so they could access online journals at more attractive prices and in large numbers. Also, during the same period, many open access (OA) journals became available and some subscription journals came forward to make articles OA if the authors paid a fee. There also came up a large number of repositories, both institutional (such as the ones at Indian Institute of Science and Central Marine Fisheries Research Institute) and subject-based central repositories (such as PubMed Central). As a result, scientists now have much easier access to a much larger volume of current literature. But, it appears that publishers seem to profit far more than scientists. They keep increasing the subscription prices at a rate higher than general inflation. Even affluent institutions like Harvard University are forced to cut down the number of journals they subscribe. The Association of Research Libraries (ARL), a group of about 125 research libraries in North America, is concerned about this crisis in scholarly communication (or 'serials crisis' as they call it) and is working to promote open access as one way to counter it. The publishers continue to make their unusually large profits unmindful of the hardship researchers are put to. In business circles, publishing scientific, technical and medical (STM) journals is considered to be one of the most profitable businesses. Efforts made by groups of researchers to make scholarly communication more cost effective have not met with expected success levels. For example,

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entire editorial boards of a few commercial journals resigned and started new journals in the same field. But this happened only in a handful of cases and not all of them succeeded.

In this paper, we look at what is happening currently in India in the context of the unusually large influence wielded by journal publishers.

Cost of Journals

A recent survey of many scientific journals across fields (Bergstrom and McAfee, 2013) has shown that journal subscription prices charged by for-profit publishers have risen steadily at about 5% per year for the last decade. The 2015 subscription prices for a few journals published by commercial publishers are shown in Table 1. On average, the subscription prices listed by for-profits are three or four times as high per article or per citation as those charged by non-profit professional societies from the same field (Bergstrom, 2014). (Table 2) (See full statistics and analysis at www.journalprices.com). Of course, this ratio varies from publisher to publisher. While Elsevier's price per citation is about three times of the non-profit journals, the ratio is about ten for journals published by Emerald, Sage and Taylor and Francis (Bergstrom *et al*., 2014). That for-profit publishers charge very high subscription fees is well known; as early as 1988, Barschall had reported that the American Physical Society journals were 12 times more cost effective than physics journals published by commercial publishers (Barschall, 1988). In 1989, Philip Abelson commented on the poor impact of many high-priced journals (Abelson, 1989).

Market Dominated by a Few Publishers

Many scientists around the world keep publishing in journals published by commercial firms. Even in India, as seen from *Web of Science*, about 50% of the papers are published in commercial journals. A recent study has shown that 48% of about 18,000 papers published in 2012 and 2013 by researchers receiving funds from the Department of Science and Technology and the Department of Biotechnology were published by just three for-profit publishers, *viz.*

Table 1: 2015 subscription price (in USD) of a few commercial journals

No.	Journal	Publisher	Print	E- only	Print + E
1	Tetrahedron Letters	Elsevier*	$17,108.00	$13,429.60	
2	Cell	Elsevier	NA	$3,984.80	
3	Journal of Electroanalytical Chemistry	Elsevier	$10,525.00	$7,804.00	
4	Journal of Mathematical Sciences (including enhanced e-access)	Springer	NA	NA	$18,286.00
5	American Journal of Medical Genetics	John Wiley	$19,857.00	$19,101.00	$23,678.00
6	Journal of Applied Polymer Science	John Wiley	$30,654.00	$30,150.00	$36,785.00
7	Electronics and Communications in Japan	John Wiley	$24,139.00	$23,383.00	$28,967.00
8	Journal of Co-ordination Chemistry	Taylor & Francis	NA	$11,902.00	$13,602.00

Accessed on 29 October 2014 from the publisher websites.
Elsevier bundles most journals and offers prices for combined subscriptions.
*For example: for 2015, the combined Subscription to five *Tetrahedron* Journals, viz. *Tetrahedron, Tetrahedron Letters, Tetrahedron:Asymmetry, Bioorganic and Medicinal Chemistry*, and *Bioorganic and Medicinal Chemistry Letters*, is $42,044. *Physica* A, B, C, D and E are all offered as a set for $26,045. *Thin Solid Films* is combined with *Organic Electronics* and the two are priced $18,894. *Journal of Electroanalytical Chemistry* is combined with with *Bioelectrochemistry* and the two are priced $12, 963. Environmental Science Package - Option 2 (Comprising: *Atmospheric Environment, Chemosphere, Environmental Pollution, The Science of the Total Environment* and *Water Research*) costs $35,880. *Brain Research* is combined with *Brain Research Reviews* and two are offered at $7,458

Table 2: A comparison of journals published by for-profit and non-profit publishers in different fields

Non-profit	Biology	Economics	Engineering	Humanities	Medicine	Social Sciences
Number of Journals	712	128	602	44	1,236	437
Mean Journal Price	626.75	332.93	831.27	244.77	507.75	392.01
Median Journal Price	273.00	274.00	545.00	228.50	289.00	254.00
Mean Number of Articles	107.40	28.71	127.44	20.25	116.31	49.74
Median Number of Articles	51.50	26.80	62.95	13.90	60.85	26.50
Mean Number of Citations	363.31	43.76	210.63	16.12	415.96	97.81
Median Number of Citations	65.35	21.30	46.60	6.50	97.25	22.90
Mean Price per Article	**9.15**	**15.12**	**13.26**	**16.93**	**7.02**	**11.73**
Median Price per Article	4.57	9.79	6.55	10.79	2.98	8.11
Mean Price per Citation	**7.35**	**18.98**	**23.25**	**47.70**	**9.06**	**20.12**
Median Price per Citation	2.25	8.84	7.22	17.24	1.06	7.89
For-profit	Biology	Economics	Engineering	Humanities	Medicine	Social Sciences
Number of Journals	828	174	788	45	2,028	800
Mean Journal Price	2,405.07	1,146.62	2,648.16	606.51	1,633.97	1,097.78
Median Journal Price	1,664.00	890.00	1,715.00	552.00	1,035.50	825.50
Mean Number of Articles	110.64	43.80	133.58	19.93	97.79	50.35
Median Number of Articles	73.10	29.80	67.30	10.20	65.95	27.30
Mean Number of Citations	368.41	56.37	257.84	16.93	260.47	98.27
Median Number of Citations	155.75	25.25	60.80	5.40	122.65	29.45
Mean Price per Article	**32.23**	**36.70**	**37.35**	**48.96**	**25.72**	**34.27**
Median Price per Article	22.15	29.05	23.27	45.99	16.37	27.89
Mean Price per Citation	**23.16**	**46.98**	**62.60**	**140.73**	**21.77**	**50.43**
Median Price per Citation	10.38	29.73	22.39	68.23	8.55	26.29

Statistics are calculated using subscription prices for 2013 and citation and page counts for the years 2004-2011. Calculation date is 29 September 2013. [*Courtesy*: Bergstrom T, *LSE Impact Blog*, 12 August 2014 http://blogs.lse.ac.uk/impactofsocialsciences/2014/08/12/secrets-of-the-big-deal-journal-pricing/]

Elsevier (5,068 papers in 633 journals), Springer (2,166 in 390 journals), and Wiley (1,399 in 291 journals) (Gunasekaran, Ramamoorthi, Arunachalam, unpublished data). The situation is no different in other countries. And these publishers charge very high subscription for their journals. No wonder they declare profit margins in the range 35-40% year after year even when the economy is going through a recession.

Market Growth and Profits

The global scientific and technical publishing market

grew from 2010 to 2012 at a compound rate of 2.3%, says a report on STM publishing by the media industry market intelligence firm Simba (Simba, 2013a). Journals are the biggest piece of this market ($4.6 billion), and Elsevier, the largest scientific publisher of all, commands a market share about equal to the next three companies (Thomson Reuters, Springer, and Wiley) combined (Esposito, 2013). Reed Elsevier's profit was continually on the rise from 2006 and it was estimated to be 39% in 2013 (Morrison, 2014). Other publishers also make huge profits: Springer's Science + Business Media (2010) reported a return on sales (operating profit) of 33.9%, an increase of 4% over the profit of the previous year. In the first quarter of 2012, John Wiley and Sons reported a profit rate of 42% for their scientific, medical, technical and scholarly division. This represents an increase in the profit rate of 13% over the previous year. The operating profit rate for the academic division of Informa.plc for the first half of 2011 was 32.4%, an increase of 3.3% over the profit of the previous year (Morrison, 2012).

Double Dipping

A recent study by Simba (2013b) found that the major revenue source for open access journals are the author-paid, article processing charges (APC) publishers collect to cover the costs of peer review, editing, layout and electronic publication. Simba (2014) estimates the revenue generated by these fees grew 32.8% in 2013. This includes gold open access journals that publish entirely on an open access basis and survive solely on the payment of APCs, and hybrid journals that are sold primarily on a subscription basis but make individual articles available through OA with payment of an APC (Table 3). A great deal of that revenue is being generated by commercial publishers that thrive under traditional subscription models. According to the recent Simba report (2014), STM journal revenue is expected to increase at a compound annual rate of between 1% and 2% between 2014 and 2017, but OA revenue is expected to more than triple in that period. Elsevier has been double dipping in the most direct way possible, charging people to download articles for which APCs have been paid (Taylor, 2012).

Table 3: Article Processing Charges for making articles OA by different types of publishers

Type	Average APC (in USD)
Full OA journal - published by "non-subscription" publishers	1,418
Full OA journal - published by "subscription" publishers	2,097
Hybrid journal - published by "subscription" publishers	2,727

Source: Björk B-C and Solomon D (2014) Developing an effective market for open access article processing charges, Wellcome Trust, UK. http://www.wellcome.ac.uk/stellent/groups/corporatesite/@policy_communications/documents/web_document/wtp055910.pdf

Here are some figures, provided by the Wellcome Trust, of the APCs some journals have actually charged during 2012-13: *Lancet* (Elsevier) £5,760; *Public Service Review* (Public Service) £6000 (highest charged by a hybrid journal), *Neglected Tropical Diseases* (PLoS) £3,760 – the highest for a purely OA journal. Wiley's most expensive APC came in at £3,078.92, BMJ's was £3,600, while for the most expensive Informa Healthcare APC paid by Wellcome during the period was £2,907.42 and Springer's was £2,759.24 (Research Information, 2014).

Publishers charge huge subscription and huge APC for 'certain prestigious journals' as these journals have high impact factors and are highly cited. But the gap between elite journals (which enjoy high prestige) and others is gradually closing. Acharya *et al*. (2014) have shown from an analysis of Google Scholar that the number of highly cited papers in non-elite journals is gradually increasing and the increase between 1995 and 2013 for all fields put together is 64%. (In 2013, almost 25 % of papers were published in non-elite journals). The increase is truly impressive for physics and mathematics (204%), health and medical sciences (98%), chemical and materials sciences (80%), and computer science (72%).

"As things stand, we are getting the worst of both worlds. The university community is paying a large ransom to monopolistic publishers, but is still

not getting full access to the output that its own scholars produce and evaluate without pay" (Bergstrom *et al*., 2014). What the universities and research laboratories now pay to help publishers make such obscene profits could very well be used to support young researchers, recruit new faculty or for buying equipment and chemicals. This is particularly true for India and other not-so-rich nations. Unfortunately, even in India there is a preference among scientists to pay such journals to publish their work, despite opposition by respected policymakers like Balaram, who told SciDev.Net, "I do not want my government funds to be subsidising Public Library of Science (PLoS) journals or any other non-Indian open access journal." (Jayaraman, 2008).

The publishers claim that the profits are well earned through services provided to the authors and value added to the manuscripts submitted. In a recent editorial, the President of the Electrochemical Society, Paul A Kohl pointed out: "For-profit corporations and some professional societies have been draining billions of dollars per year as profit from researchers, authors, readers, and funding agencies. New journal titles are created each year solely for the purpose of selling more titles and increasing profits" (Kohl, 2014). The Elsevier group alone publishes about 2,200 journals. "While these publishers may facilitate the review process, it is still the scientists and engineers who provide the editorial and review services, not the publishers themselves," says Kohl (2014). Also, it is difficult to understand why APCs should vary from about $50 to $6,000 and why journals published by the same publisher should charge different APCs. How any publisher can justify charging an academic an average cost of £2,443 to publish in a journal that is already being supported by library subscriptions from not just one university, but many universities around the world, asks Brook (2014).

Indeed, most commercial publishers get the entire work flow – from receipt of manuscript to hosting the journal online – carried out by low-cost labour in developing countries. Several companies in Chennai, for example Scientific Publishing Services Pvt Ltd, and TNQ Books and Journals, do this kind of work for the big-name publishers.

OA Movement

The fleecing of subscribers started with Robert Maxwell and his Pergamon Press in the early 1950s. Maxwell perfected the art of rapid expansion in the number of journal titles he published. He increased the number of journals from six in 1951 to 59 in 1960 and 418 in 1992. Other publishers did not take much time to follow and take advantage of a captive market.

Scientific publishing has been ripe for disruption since it was first put behind a paywall. Stevan Harnad fired the first salvo when he came up with his subversive proposal in 1994. The next major milestone was the Budapest Declaration (2002), followed by the Berlin Declaration (2003), the Bethesda Declaration (2003) and the Bangalore Declaration (2006), all of them strongly recommending making scientific research openly and freely accessible online. Recent developments include the many fully open access journals such as those published by BioMed Central and the Public Library of Science (PLoS). *PLoS One*, one of the seven titles published by PLoS, alone has published within its first eight years more than 100,000 papers (Pattinson, 2014). Start-ups in this space are already working to undo the domination of the paid journal mode, with Figshare most recently launching in the UK to open up the sector (Clark, 2014). More and more governments are making open access mandatory for publicly funded research. The Belgian Francophone Research Funding Council (FRS-FNRS) and European Commission's Horizon 20 Programme have also adopted open access mandates. In India, the Departments of Biotechnology and Science & Technology are working on a common open access policy which, when implemented, is likely to make it mandatory for papers resulting from research supported by them to be made open access.

When the OA movement picked up momentum, the first response of for-profit publishers was to do everything they could to throttle the movement even before it usurped some of their traditional space. They hired lobbyists and tried to influence the US

Congress. They commissioned reports to show open access would be harmful to science. They were particularly worried about the rapid growth of repositories where authors could make their papers available free online and tried to put restrictions on what could be deposited and where. However, OA advocates and supporters were able to stall some of these moves. For example, two Congressmen who had received cash contributions from Reed Elsevier introduced a bill, the Research Works Act, in the US House of Representatives that if passed would have undone OA policies of the National Institutes of Health (NIH) and prevented the establishment of OA policies in other federal agencies (Jackson, 2012). Thanks to the overwhelming opposition from the scientific community, many of whom had signed the 'Boycott Elsevier' petition, they had to withdraw the bill later. But with time the publishers realized that the best course of action for them was to support some form of open access and they cleverly perfected the system where they can levy an article processing charge to make an article open in any of their journals. This proved to be a very profitable move. Around 2011, when the for-profit publishers were really alarmed about their future, analysts predicted that their profits (and stock prices) would dip (see, for example, Aspesi *et al*., 2012). But now largely thanks to APC and some unethical double dipping, these publishers may even look forward to a rise in profits and, in the case of Reed Elsevier, analysts have already upgraded its stock (Aspesi and Luong, 2014). But the publishers cannot easily abandon their old ways. When Bergstrom *et al*. (2014) sought copies of contracts US universities had signed with publishers, Elsevier contested the contract request from Washington State University and both Elsevier and Springer contested the request made to the University of Texas system, but both their contests were found to be untenable by the courts.

The Big Deal

When entering into a 'big deal', publishers insist on librarians (or consortia) signing a non-disclosure (or confidentiality) agreement which prevents sharing the conditions of subscription, especially the subscription costs paid. This, on the face of it, is ridiculous and is in complete violation of laws of natural justice. All major consortia in India (such as UGC Infonet, National Knowledge Resource Consortium of CSIR, and INDEST Consortium of MHRD) draw their sustenance from the consolidated fund of India (meaning from the taxpayers). And yet the costs incurred are not known to anyone other than the publisher and the consortium managers.

A deal is an agreement entered into by two or more parties for their mutual benefit. When the big deals offered by commercial publishers produce such ill effects on the budgets and operations of libraries how can it be termed mutually beneficial? "Where is the benefit to libraries? or to students? or to academic researchers, whose unpaid (at least by publishers) labour creates articles, referees' reports and editorial expertise?" asks Harvie *et al*. (2013). Incidentally, Brazil has a nationwide agreement providing journal access to 423 academic and research institutions. It is called Portal de Periódicos, provided by Coordination for the Improvement of Higher Education Personnel (CAPES) and they have not signed any confidentiality agreement (Gowers, 2014a). An ARL survey found that 25 of 50 US universities surveyed have policies of not signing non-disclosure agreements. Even those who sign reveal the details as required by Freedom of Information Act (FOIA) (Strieb and Blixrud, 2013).

The International Coalition of Library Consortia's 'Statement of Current Perspective and Preferred Practices for the Selection and Purchase of Electronic Information' states that "Non-disclosure language should not be required for any licensing agreement, particularly language that would preclude library consortia from sharing pricing and other significant terms and conditions with other consortia" (ICOLC, 2004). Robert Darnton of Harvard University pointed out long ago that by keeping the terms secret, one library cannot negotiate for cheaper rates by citing an advantage obtained by another library (Darnton, 2010). Many librarians do not understand they have bargaining power, says Bergstrom (Woolston, 2014).

A Majority of Journals Subscribed Not Used at All

A study by Giridhar Madras (2008) showed that even at the Indian Institute of Science, considered to be the best academic centre for research in the country, over a five year period the institute's researchers used only 48% of journals the institute subscribed for publishing their research or citing in their articles. [That does not mean the other journals were not used at all; some articles in some of them might have been read by a few researchers at the institute]. Please note that these figures will be considerably lower if we take into account the number of journals for which they had online access through the INDEST consortium. What is more, the faculty resisted any attempt to discontinue subscription to costly journals some of which have not been used by them either for publishing or for citing in more than a decade. Cancelling subscription to three of these journals alone would have saved Rs 2 million. Another hurdle for cancelling was that the institute had signed license agreements covering several years.

A recent study by Ramamoorthi (doctoral thesis, unpublished) has shown that less than 16% of journals subscribed either using the institution's own funds or through consortium membership in a multi-disciplinary research institute in India were used by local researchers (including students) either for publishing their papers or for citing in their papers. (Surely, scientists at the institute would have also used some OA journals and reprints obtained from scientists elsewhere. Also, many subscribed journals which have not been used for publishing or citing might have been read by some scientists). The situation is not any different in a few other institutions Ramamoorthi looked at. Why then do we need to subscribe to so many journals?

Incidentally, Aspesi and Luong (2014) have reported that in ten universities in the UK, the top 25% of chemistry journals subscribed accounted for 75-85% journals viewed; for biology the figures were 75-88%. Note the distinction between the Indian and UK studies: one looks at actual use of journals either to publish one's papers or to cite articles from them in one's own articles and the other looks at just viewing articles in the journals subscribed.

Price Depends on the Negotiating Skills of the Subscriber

Often libraries and consortia end up paying whatever the publishers demand. If only they can develop some negotiating skills they can save considerable sums. We give below five examples from USA, which illustrate publishers' practice of discriminatory pricing and how the more talented librarians get better deals, all taken from Bergstrom *et al*. (2014).

Example 1

This is the most striking of all. In 2003, at the time of renewal of their original Elsevier big deal contract, the California Digital Library, acting for the nine campuses of the University of California System, bargained hard. "As a result, they paid 9% less in 2004 than in 2003 and agreed to annual price increases well below Elsevier's usual 5%. In 2008, California was again able to bargain for price increases well below Elsevier's standard contracts. Over the 10 year period from 2003 to 2013, the University of California's payments to Elsevier for their Freedom Collection contract has increased at an average annual rate of about 1.5%. If they had acceded to Elsevier's requests for annual increases of 5%, their annual subscription price in 2013 would have been nearly $13 million instead of the $9.3 million that they contracted to pay in 2013."

Example 2

In 2009, the University of Georgia paid about $1.9 million, and the University of Colorado paid about $1.7 million, for the Elsevier Freedom package. By comparison, the University of Wisconsin paid about $1.2 million and the University of Texas about $1.5 million. Wisconsin and Texas have much larger enrollments and produce about twice as many PhDs, but were able to bargain for lower prices than Georgia and Colorado.

Example 3

The University of Virginia pays about $450,000 for its Springer package, whereas Dartmouth pays

$480,000, despite the fact that Virginia's enrollment and number of PhDs are about four times those of Dartmouth.

Example 4

The University of Arizona pays $108,000 for the Sage package whereas Brigham Young University pays $185,000, although Arizona has a larger enrollment than Brigham Young and produces six times as many PhDs.

Example 5

The University of Kentucky paid about $490,000 and the University of Oklahoma about $500,000 for the Wiley bundle. The University of Illinois and University of California, Los Angeles, have enrollments that are nearly twice as large and produce three times as many PhDs, but pay substantially less than Kentucky and Oklahoma for the same bundle.

Lack of Interest Among Indian Scientists

Newspapers like *The Guardian*, UK, and journals like *The Progressive Librarian* cover issues relating to scholarly communication, open access, open data and open science, but hardly any Indian media pays attention to these topics. We cannot blame them though. Indian scientists, barring rare exceptions, have also not shown any interest in these topics. Journal costs rarely figure in their conversations. In the West though, scientists like Fields medalist Timothy Gowers spearhead projects like 'the cost of knowledge' (which led to the 'Boycott Elsevier' movement). Ted Bergstrom and Preston McAfee of the University of California, Santa Barbara, maintain a website on prices of journals (http://journalprices.com/) and Bergstrom also has a blog on this subject (http://www.econ.ucsb.edu/~tedb/Journals/jpricing.html). The library of the University of Illinois at Urbana-Champaign maintains a website on cost of journals: http://www.library.illinois.edu/scholcomm/journalcosts.html. The London School of Economics has a blog (http://blogs.lse.ac.uk/impactofsocialsciences/) where issues relating to open access and scholarly communication are often discussed. A November 2006 colloquium hosted by Stanford University on issues on scholarly publishing focused on academic journal pricing.

In India, Prof. Balaram wrote several incisive editorials on OA related issues in *Current Science* (Balaram, 2010, 2011, 2013). The Indian Academy of Sciences, Bangalore, started making its journals open access even before the Budapest Declaration was enunciated in 2002. Other government agencies, viz. ICMR, CSIR-NISCAIR and ICAR have also made their journals open access. Indian National Science Academy's journals are also OA now.

ARL has been discussing the issue of 'serials crisis' for well over two decades. And researchers like Tim Gowers, Bergstrom and Stuart Lawson have brought into the open journal subscription prices paid by different universities in the UK and USA using the Freedom of Information Act (FOIA). In the West collectives such as ARL and the Progressive Librarians Guild have reacted to resist the ever-increasing costs of journal subscription. But we do not see any such action in India, unfortunately. Gowers (2014b) has obtained data from the 24 Russell Group Universities using FOIA on how much they spend on subscriptions to journals published by Elsevier: it is over £1.82 million per year (excluding VAT). Lawson and Ben (2014) obtained subscription costs paid by about 100 institutions in the UK to six major publishers, viz. Wiley, Sage, Taylor and Francis, Springer, Cambridge University Press and Oxford University Press, during 2012 for the subscription period 2013. No one, to our knowledge, has used so far the Right to Information Act in India to obtain information on the amounts paid to different publishers by the different consortia towards subscription to journals.

Conclusion

Whatever be the policies of governments and funding agencies, and actions of scientists and librarians, for commercial publishers of STM journals it is business as usual. In all their dealings with their clients, all decisions are unilateral and arbitrary. The content they sell, almost all of which comes from scientists, will become more and more unaffordable. But much of the blame lies with scientists. Unwittingly some of

them, and that includes many who have earned some reputation in the community, are ready to pay any amount charged by publishers as APC. Even when we buy groceries we look for value for money. There is no need to publish one's papers in journals that charge APCs to make the papers OA. One could always publish one's work in any journal even if it would not be made OA immediately and then make it available through a repository. As long as authors are ready to pay APCs, journals will levy arbitrarily fixed APCs and that would drain the funds allocated for S&T research. Publishers do not reduce the subscription costs of hybrid journals which bring in considerable income through APCs. Even if they claim that they are doing this, there is no way one could verify the veracity of such claims. Indications are not only they are not adjusting the subscription costs to the extent of APCs earned but some of them seem to even charge for individual copies of articles for which APC has been paid.

Unlike researchers in the West, Indian researchers have not been active in reclaiming their supremacy in scholarly publishing. Nor have they come forward to take collective action. Timothy Gowers must be a busy researcher. He is a celebrated mathematician. Honours include a Fields medal. And yet he devotes considerable time to fight injustice in the scholarly communication space (e.g., he mounted the 'Boycott Elsevier' movement) and sought to break the confidentiality publishers insist for subscription contracts and succeeded in his effort. Not many Indian scientists have shown any inclination to see a just order in this space.

The burden of juggling with limited budgets and selecting and acquiring journals is that of the librarian. Often librarians do not get much help from scientists even in the selection part. The Indian consortia managers, well meaning though they are, are not probably as skilled as the University of California team in negotiating prices of journals with publishers. Consortia in India are, says Balaram, "ill prepared to address the issue of overpricing." (Balaram 2010). The result is our libraries end up paying more than what they really need to and ordering journals which may not be really necessary. Our librarians would do well to leave their libraries often and meet with their scientist colleagues – faculty and doctoral students in the case of universities and scientists and research fellows in other research institutions. Such engagements can be enormously beneficial. Especially, discussion on developments in the area of scholarly communication and researcher's needs of knowledge resources will widen their awareness of what their clienteles' needs are.

Funding agencies in India, especially those under the government, could be cautious in allowing grantees to use their grants to meet APCs. They could take a proactive stance to promote wide accessibility to research they support.

The great hopes raised by the rise of OA seem to be receding, despite the fact that the share of papers available on OA is increasing and more and more funders and governments are coming up with OA policies. The different constituencies - librarians, scientists, economists, activists in advanced countries and emerging countries - expect OA to solve widely different problems. "This lack of clarity on which problem OA is trying to solve, in turn, means it is difficult to achieve any of these goals," say Aspesi and Luong (2014).

As we see it, the cost of access to research findings will keep increasing and publishers, especially the few large firms virtually controlling the business, will keep making huge profits as they do now. Whatever scientists, librarians and funders do, publishers will thrive; they seem to know the art of turning even adverse situations into a position of advantage. A case of 'Heads I win, tails you lose.'

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