About price and value of scientific publications: criticism or indignation?

Sobre o preço e valor das publicações científicas: reclamação ou indignação?

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One of the peculiarities of the time we live in is the sheer speed with which changes take place. They are of different orders, directly affecting the living conditions and opportunities of people, all basically caused by the very rapid scientific and technological progress. Obviously, then, in this dizzying speed that concepts, customs and behaviors are often changed, even radically, should not surprise the fact that science itself suffered transformations in their actions and how they are transmitted. There is turbulence in the field of dissemination of scholarly work, in which the community that produces them, generally not accustomed to be protagonists, seems determined to react. In fact, one scientist must pay to publish their work? Must one pay to gain access to knowledge generated by their peers?

It can be assumed how the authors conducted the first discoveries and how they spread, initially, the knowledge then acquired (slowly labored, or casually found). It is likely that some have sought to invidiously guard it, enjoying the advantages of its possession; while others chose to share it immediately, representing the thinking of scientists. In any case, what permitted the progress to the following generations, both in improvements of such knowledge, or how to get new evidence from them, was, unequivocally, having received them. In short, the dissemination of knowledge is necessary for its evolution, is the logic of science itself that it is multiplied by its diffusion.

Today, science still has these types of acquisition, accumulation and use of knowledge (invidiously or shared), known as characteristic of human nature. But science professionalized itself, it is organized, institutionalized in industries and universities, both investing in research. Industries invest to earn profits from their research and distribute them to their investors (shareholders). The social gears allow that the "profit", the results of their research (patents) remains privately maintained (at least for a certain period of time), although the "secret" of them (the science itself) becomes almost immediately known. Universities, aim to learn more (emphasizing the "research" as one of its pillars of support), for more and better disseminate knowledge (ie, "teach"). This mission, clearly social, must be supported by government. It's a researcher's duty the publishing of his/her labors in broad and unrestricted dissemination, in an open and honest manner.

Modern "Scientists" amuse themselves (not with the meaning of mirth - because the methodical scientific research requires discipline and hard work - but in order to follow different strands) in the production of practical knowledge (applied) or theoretical (basic), which ultimately converge to the same point (hence the 'Top' companies, although 'pragmatic', invest so much in "pure" research).

Once known actors and the scenery, here comes the narrative (a word that aptly describes the situation "in chains", attached to circumstances), to possible answers to questions contained in the beginning.

It is debatable whether the principle of disclosure of knowledge is universal, or should prevail in any situation. It is not essentially violated in the case of patents (the science about products deriving from them and which are marketed is automatically spread, although the "profit" is legally protected).

The questions now pending do not refer to this context, but to the commerce of scientific publications. That is, their purchases and sales. The traditional academic approach has always been that scientific knowledge has so much value that is "priceless". Of course, as labor, both the production and dissemination of knowledge should be paid, that is, both the scientist (the element of "research") and the teacher (element of "teaching") should be paid and not pay to perform their functions. So strange is collecting from an invited speaker to give his lecture, as it is to collect from a scientist to publish your work. Although, it can be explained.

Indeed, the growing number of researchers and the pressure for their products (papers) to be distributed (published) inspecific media (scientific journals), that is, with good impact factors, resulted in such journals putting themselves in a privileged situation, requiring not only higher quality publications, but higher payment. A simple law of marketing: supply (conditional and restricted) and demand (broad, competitive). Such media increased their value (in monetary sense of the word) by the generated market. The possibility that scientific development agencies (as in Brazil, CNPq, FAPESP and others) pay for the publication of a work does not eliminate the moral concerns of this payment.

Submitted for publication: May 22, 2012
Accepted for publication: July 2, 2012

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Funding: No specific financial support was available for this study.

Disclosure of potential conflicts of interest: H.F.A.Bicas, None: W.Chamon, None.

It is true that a journal has its production costs. Reception, evaluation and selection of work, paper, ink, printing, or electronic availability, require cash. And, therefore, can reason the right to charge for its reading. (Curiously, the essential quality of the magazine - the judgment of the scientific value of the articles - is, in most cases, obtained gracefully from advisors who are "rewarded" by the mere fact of being invited to the position.) For this reason, many journals charge for subscriptions, ie the right of reading your articles to any interested parties (the so-called paid access).

Timothy Gowers, an eminent mathematician at Cambridge University, rebelled against the "injustice" (1.2), hence giving rise to a petition (headed by another scientist, Tyler Nylon) to boycott the products of the world's largest publisher of scientific journals, whose publications follow these guidelines of pay-to-publish. The venerable Harvard University rebelled against the cost of subscriptions, not because of the payment, but by their exorbitances, unjustified under any pretext⁽³⁾. Some annual subscriptions can cost up to US\$ 40,000, for libraries. The Brazilian Ministry of Health recently launched a portal for access to scientific publications for health professionals with estimated annual cost of US\$ 5 million (http://periodicos.saude.gov.br)⁽⁴⁾. Since the end of 2000, Brazil has one of the largest programs in the world of access to scientific literature, developed by CAPES (CAPES Periodicals Portal - http://www.periodicos.capes.gov.br. Currently, this portal provides access to more than 24,000 full-text periodicals to more than 300 institutions. The total cost of this project in 2010 was US\$ 61.2 million, largely paid to scientific publishers⁽⁵⁾. The paid-access economically discriminates science users, while the payment of those who produce science reduces the recognition of their work. One is an economic issue; the other is an ethical breach. One compels **criticism**. The other, **indignation**.

In time, the ABO (Arquivos Brasileiros de Oftalmologia) believes that access to knowledge must be unrestricted, not charging their authors and offering open-access to its content. Open access is a *sine qua non-*condition to be present in the SciELO platform (www.scielo.br), a successful Brazilian initiative, which now demonstrates to the world how to proceed in reference to the provision of science "publication". Nowadays, not as "public" as it used to be...

REFERENCES

- The cost of knowledge [Internet]. [updated 2012 Jul 2; cited 2012 Jul 2]. Available from:http://thecostofknowledge.com.
- Aaronson S, Arnold DN, Avila A. The cost of knowledge: statement of purpose [Internet]. [cited 2012 Jul 2] Available from: http://gowers.files.wordpress.com/2012/02/elsevierstatementfinal.pdf
- 3. Harvard University. Faculty Advisory Council Memorandum on Journal Pricing: major periodical subscription cannot be sustained. [Internet]. Boston: Harvard University;
- 2012. [updated 2012 Apr 17; cited 2012 Jul 2]. Available from:http://isites.harvard.edu/icb/icb.do?keyword=k77982&tabgroupid=icb.tabgroup143448
- 4. Brasil. Ministério da Saúde. Portal facilitará acesso a publicações científicas [Internet]. Brasília: Ministério da Saúde; 2012. [updated 2012 May 29; cited 2012 Jul 2]. Available from: http://portalsaude.saude.gov.br/portalsaude/noticia/5358/162/portal-facilitara-acesso-a-publicacoes-científicas.html
- Almeida ECE, Guimarães JA, Alves ITG. Dez anos do Portal de Periódicos da Capes: histórico, evolução e utilização. Rev Bras Pós-Graduação. 2010;7(13):218-46.

