

Globalization and dissemination of scientific research: concentration of publishers and implications on different fields of science

A globalização e a divulgação da pesquisa científica: concentração de editoras e implicações sobre diferentes campos da ciência

In a globalized world, there is an increasing number of mergers of corporations in order to unify markets on a planetary scale. The dissemination of scientific knowledge is no exception to this standard.

An article published in 2015 in the prestigious scientific journal *PlosOne*,¹ addressing the consolidation of the scientific publishing industry in the period from 1973 to 2013, shows the growth of six commercial publishers - Elsevier, Blackwell, Springer, Taylor & Francis, American Chemical Society and Sage - through acquisitions of smaller publishers, particularly. In 2013, five of these editors covered more than half of all works disseminated through the *Web of Science*. This concentration of publishers is expressed in different ways in different fields of knowledge production.

In Humanities and Arts, only 20% of the articles were published by this group of commercial publishers at the end of the period selected for analysis. The authors point out that, in these scientific fields, publishing in books or in local journals is a more common practice. According to the study, big publishers do not find it profitable to explore these fields whose “products” do not extend over the whole world, as is the case of Biomedicine, for example. Somehow, this field of Humanities and Arts is somewhat independent of these oligopolies in their straightforward process of editorial concentration.

Physics and Chemistry have the lowest percentage of publications by these companies for other reasons - namely, the strength of scientific societies in these fields, which invest in the culture of publications in open access journals in the form of pre-prints.

1 Larivière, Vincent; Haustein, Stefanie; Mongeon, Philippe. The Oligopoly of Academic Publishers in the Digital Era. *Plos One*. June 10, 2015. <https://doi.org/10.1371/journal.pone.0127502>

Biomedicine seems to lie in the turmoil of trends of interest to these corporations. Similarly, in Applied Social Sciences, the concentration of articles in these publishers rose from 15% in 1995 to 66% in 2013.

When discussing the same article, “Oxigênio”² considers that

The problem with this oligopoly of commercial publishers is that the scientific community is dependent on the system. In this environment, researchers are pressured to publish in high-impact journals, which can interfere even in their objects of study. Another problem is the abusive profit of these publishers. They have decreased spending on printing and distribution by using digital publication, but they still charge for submission of articles, which are products sold worldwide through subscriptions. It should be noted that academic libraries are responsible for up to 75% of the revenue from these publishers [our translation].

Dependence of the scientific community is clear, for example, in the current concern about the maintenance of the journal database *Portal de Periódicos Capes*, in 2018, by scientific societies and organizations in Brazil, according to a letter sent recently to the President of Capes (Coordination for the Improvement of Higher Education Personnel), signed by the Brazilian Academy of Sciences (ABC), the National Association of Heads of Federal Institutions of Higher Education (ANDIFES) and the Brazilian Society for the Advancement of Science (SBPC).³ Free access granted by Capes to researchers and students may be denied if payment agreements with these publishing corporations are broken. In this case, researchers will have to pay for access to journal articles in their fields of interest. This can occur with the resources intended for funding their research projects, i.e., by reducing the funds for experiments or field work, thus hindering the development of the corresponding studies. Another option is for researcher to pay with their own financial resources, which leads to a devaluation of national science.

DEMETRA has sought the paths of open access publishing as its editorial basis. The journal receives financial support through public funding, although nowadays such funds have been scarcer and scarcer year after year. As an interdisciplinary endeavor, it has made efforts to provide a place for emerging fields in Brazilian science which are not offered space because of profit-seeking interests, which, in general, are typical of the large publishing corporations mentioned above. It is the case of Humanities, when they address food and the symbolized body, both taken as mediators of social relations; also, debates on social policies, including those occurring at a local level, which, however, are innovative in a nationwide scenario; or even studies situated in

2 “Oxigênio” is a program about journalism and scientific dissemination produced in partnership between the Laboratory of Advanced Studies in Journalism (Labjor) and *Web Rádio Unicamp*, both at the State University of Campinas (UNICAMP). Available at: <http://oxigenio.comciencia.br/o-oligopolio-das-editoras-de-periodicos-cientificos-e-a-pressao-por-publicacoes-dos-cientistas/>. Accessed on: Mar 3, 2018.

3 Available at: <http://jcnoticias.jornaldaciencia.org.br/wp-content/uploads/2017/09/carta-%C3%A0-Capes-sobre-o-Portal-de-Peri%C3%B3dicos-12-09-2017-SBPC-ANDIFES-ABC.jpg>. Accessed on: Mar 3, 2018.

the scope of Collective Feeding. All fields of production of scientific knowledge have a place in DEMETRA; however, these particular fields - Humanities, Social Policies and Collective Feeding - deserve special attention as a form of encouragement to their development.

Following very different paths from those of large international mergers, DEMETRA lies in the opposite direction of commercial interests. Our editorial efforts are aimed at strengthening science, regardless of whether it has already been consolidated or is in the making. We have promoted, on a yearly basis, calls for thematic issues in the field of humanities. And we are open to similar initiatives in other areas of science, while keeping the principles of open access in the dissemination of scientific knowledge.

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