

EDITORIAL

When a researcher is devoted to a specific interest, an essential part of his strategy as a scientist is to influence with his own knowledge the core of international researchers within the field. In fact, in each specialty there are concentric nuclei of larger (international), intermediate (national), and small (regional) influence in the scientific orientation of a certain area of knowledge. This is the reason for the existence of scientific journals: the open and free discussion of experimental findings, hypotheses and theories, not only from Experimental Sciences but also from Social Sciences and Humanities [1].

Before focusing on scientific journals, it is necessary to elucidate the fundamental difference between scientific and academic journals. The first is a trusted communication channel of a broad, international and in some cases interdisciplinary scientific community; and the second represents the advances of an academic community, sometimes only publishing the research of a particular institution. This difference allows us to better understand the demands of quality and rigor of a scientific journal.

Another definition of Scientific Journal could be a periodical publication, whose object is the scientific communication that results in the advancement of science, normally publishing novel investigations that have been evaluated and verified through a peer review process. The journals involve the scientific method since it is an essential part in their last phase: communication and publication of results [2].

Scientific journals constitute the means through which researchers share their achievements and review the research conducted by their colleagues in their respective disciplines. They are the mechanism by which an editorial team, adopting a peer review system, transforms a manuscript into a scientific article. Correspondingly, the scientific edition is a fundamental component in the cycle of scientific knowledge generation. Therefore, it can be affirmed that what a scientific journal with international visibility publishes is Science. This is the importance of the scientific journal in society, thus it highlights the value of the work of the editors, peer reviewers and the publishing institutions. In turn, it imposes an ethical framework for action on all of these actors, which is expressed in a set of good scientific publishing practices commonly accepted throughout the world.

The functions of a scientific journals can be summarized

as a reliable collective knowledge base, communicating information among scholars. The results that test the hypotheses or respond to the objectives have been obtained through presumably valid methodologies; they represent the frontier of research in a scientific field; they are proof of the findings found by a scientific investigation; likewise, journals identify the researcher in certain development: finally, the accumulation of articles published over time represents the body of knowledge within the discipline.

The edition of scientific journals has undergone radical changes in the last twenty years, since the first fully electronic scientific journals were created, and printed journals began to move to this format. There are several reasons for this necessary evolution: printed journals are more limited than the digital versions, because of the restriction in number of pages, the articles of a particular issue are expected to be approved and assembled at the same time they are printed, printing and distribution costs are high and do not add value to the editorial project, two-dimensional articles (flat graphics, limit on color images, no possibility of recording moving images or animated graphics), low visibility (low circulation, lower distribution and few readers), sometimes they are locked in library shelves, inability to search by fields or words in the text, lack of hypertextuality (ability to make interconnections between texts), which results in publication delays, and some other restrictions. In short, today the scientific publication is digital.

The evolution of scientific journals leads to their recognition as an indispensable instrument for science in all fields of knowledge, without any other cultural artifact that replaces it completely or that fulfills its functions effectively - the thematic repositories and Mega journals are an attempt. The policies of Open Science, Open Data and Open Access are not in conflict with the nature of scientific journals, but instead, they propose a different business model. The scientific journal is a cultural project that is healthful, long-standing, and that will certainly continue to evolve to make the most out of its electronic format.

Currently, there are large differences between the number and characteristics of journals between countries and regions. McVeigh announced that the distribution of ISI journals (predecessor of the current WoS) varied significantly according to the region, because their number was much higher in western and English-speaking countries (belonging to the so-called center or scientific

nucleus) than in the rest of countries. In fact, North America and Western Europe had 90% of all journals indexed in ISI. The peripheral journals (the rest of the countries) have common peculiarities. For example, they are usually published in local languages, they have less presence of commercial publishers and a smaller number of indexed titles. Among these, Latin American journals have their own characteristics, such as the edition in Spanish and Portuguese, the publication by universities and the wide adoption of open access [3].

Some developing countries known as BRICS (Brazil, Russia, India, China and South Africa) have begun to compete with some Western countries. Sometimes South Korea is included and then the acronym becomes "BRICKS". 40% of the planet's capital lives in those places, including 18% of the global economy [4]. According to Ulrich data, the nucleus (United States, United Kingdom, Netherlands and Germany) has 41.3% of the world's active scientific journals. BRICS countries publish 19.4% and reached 20.4% if South Korea (BRICKS) is added. Latin America publishes 6.8% and reaches 9.1%. Countries not included in the previous groups share the remaining 30.2%. As for continents, a third part of all journals are published in Western Europe, 22% in North America, 21% in Asia, 12% in Eastern Europe, 7% in Latin America and the remaining 4% between Africa and Oceania.

According to country rankings, BRICKS countries have climbed many positions in the world rankings, especially China, but also Russia, India, Brazil and South Korea [5]. The scientific production of all researchers affiliated with academic institutions in a country is related to the production of journals, according to the SJR. Most countries have a similar relative contribution in articles and journals, except for two special cases: The Netherlands and China. The first has a production of articles much lower than that of journals, no doubt due to the Dutch titles of Elsevier, with an eminent contribution of international authors. The opposite is the case of China, since few of its journals are indexed in sources

of international impact and Chinese researchers tend to publish in foreign journals. Other emerging countries such as India, South Korea and Russia follow similar patterns and are more productive in articles than in journals. Some of these do not publish many journals, nor do they have a large number of top-level academic institutions, but they have many researchers who publish their articles in journals in other countries.

The dominance of the United States has been compromised by the explosive growth in productivity of China, which is the second largest economy in absolute terms throughout the reference period 1996-2014, a position in which it has settled since 2005. It is also worth noting some rising powers such as India, South Korea and Brazil. On the European periphery, some countries are declining (for example, France, Switzerland, Poland and Sweden) and some others are stable (Spain and Italy, mainly) [4].

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