

Editorial

The Vicious Cycle and the Virtuous Cycle

Perhaps one of the topics that leads more heated debates in the scientific community is that which is linked to the evaluation of scientific production. This endless deliberation in the academic field occurs in virtually all levels, from students to the most senior of professors. This editorial does not intend to cover these aspects but to allow us to make an analysis from two premises. The first is that to evaluate the productivity of a researcher is absolutely necessary and the other is that the majority of Brazilian scientific production is linked to postgraduate courses.

Evaluation by CAPES, established in the 1980s, has resulted in the stratification of courses. In 1996, the concentration of courses in its highest strata (A and B) was obvious, which led CAPES to think of a new way to evaluate courses, thus creating a model of courses in seven strata with triennial reviews; this year being the fifth edition of this model. When introducing this system for the first time, a computerized Qualis stratum was used. The system has been updated throughout the years. Up to the 2007 evaluation (2004–2006 triennium), scientific journals had been divided into international, national and regional categories with levels A, B and C, albeit with variations according to the area of concentration. Generally, the journals with an impact factor (IF) greater than 1 measured from the Institute for Scientific Information (ISI) databases are considered of good quality and still take into account the publications in national journals indexed by SCIELO.

The year 2008 triggered a major shift in the way of analyzing Brazilian scientific production. Qualis experienced the altering of its criteria, changing the strata to levels now recognized by letters (A1/A2, B1–B5 and C), raising the level of requirement related to IF and creating a correction factor between levels. This change, applied to the triennium then underway, led to an immense reaction from the scientific community, from the coordinators of postgraduate courses and principally the editors of national journals. There were editorials vehemently contrary, emphatic in putting this new form of evaluating scientific production as an inducer of death of national journals. As such, we would have a

vicious cycle where the authors do not send their work to national journals for failing to have an IF and these same national journals, in turn, not obtaining work of quality and periodicity.

Initially, I think these are two distinct issues and should not be confused. One issue is the Qualis stratum, which lends itself solely and exclusively for the evaluation of the intellectual production of postgraduate courses. The other issue, completely different, is the quality and penetration of national scientific journals in the science field. Understanding that the vicious cycle exists, there is also the fact that we have many scientific journals that fight for their space in this community. Traditionally, there have been few journals with their IF measured from the ISI and what's more, these journals have never managed to obtain a significant index. The effort of their editors is immense and the result obtained is extremely slow. The biggest problem is how to break this cycle, since we start from the premise that the majority of Brazilian scientific production is intimately linked to postgraduate courses and the requirement of evaluation takes into account a stratum that does not emphasize national journals.

Another incontestable fact is that Brazilian scientific production is increasing both numerically and in quality, although in the latter much slower. If measured in the number of citations, a disproportion is seen between the number of publications and how many are cited. Without entering the discussion whether the IF is a good evaluator of scientific journals, is the fact that the number of citations is the essence of the IF. Recently, the 2009 IF, revealed in the Science Citation Index (SCI), was published in the Journal Citation Reports (JCR). In this listing, there is a striking result for national journals, since many titles obtained for the first time their indexes and those more traditional, such as *Memórias do Instituto Oswaldo Cruz*, broke the barrier of factor 2 (IF=2.097). Brazilian journals that never presented a measured IF, although long indexed in PubMed, have been given a measured IF. In this list, *Acta Cirúrgica Brasileira* (IF=0.479), *Arquivos Brasileiros de Cardiologia* (IF=1.316), *Arquivo Brasileiro de Endocrinologia e Metabologia* (IF=0.680), *Clinics* (1.591), *São Paulo*

Medical Journal (IF=0.746), Revista da Associação Médica Brasileira (IF=0.589), Revista Brasileira de Fisioterapia (0.338), Revista Brasileira de Psiquiatria (1.311), Revista Brasileira de Farmacogn (IF=3.462) and Revista Brasileira de Medicina Veterinária (IF=0.145).

This fact is great news for Brazilian science. At last, in recent years, we have seen a significant jump in the number of scientific papers published, propelling Brazil to a highlighted position, far ahead of other Latin American countries. However, the same did not occur with the number of citations of our work. A great effort in this direction must be conducted by the Brazilian scientific community. To publish more, and more importantly, much better, is the desire and the goal to be pursued. There is the need for the investment in quality since the goal of quantity is being strived for. In this sense, the effort of

these journal editors who have succeeded in attaining an IF was very important. Yet all of us need to respond to this so as not to forget those Brazilian journals and, as much as possible, in supporting them with high-quality articles that possess scientific relevance. We have to break the vicious cycle to put Brazilian science into the level of quality that it deserves and enter once and for all into the virtuous cycle. This is the conquest that serves as an example for various Brazilian journals, including Applied Cancer Research.

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