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Impact factor between North and South in the knowledge organization field: trails that don't meet

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Since the late 1970s, science has depended on a system of standards that has tended to replace any previous form of evaluation, which emerged with the creation of indicators provided by a new bibliographic tool, the so-called Science Citation Index (SCI)[1], initially developed to evaluate scientific journals.

These and other indicators became commonplace when they became mandatory references for the majority of librarians and laboratory directors, who assimilated the idea of conventional science and used the publication classifications to target journals, thus creating an inflexible market for these publications. The consequence was predictable: the big businessmen in the publishing sector quickly realised the potential of this new market and began to raise journal prices. As far as research was concerned, the quantitative form of these new indicators was much appreciated, as they gave the impression of objectivity and could help to evaluate without leaving any room for doubt. One of the effects of the application of these quantitative evaluations was their extension to individual evaluation.

It is claimed that these tools, based on citations, can help determine the best journals and, along these lines, the reasoning goes that the authors involved in these journals would be among the "best". In fact, the researchers may indeed be, but this evaluation becomes used as a "label" for the authors, so that publishers compete with only one parameter, called the impact factor, as a basis.

Some publishers learnt to manipulate this impact factor and subsequently generated various citation-based tools (called scientometric indicators), which began to proliferate and expand in institutions around the world.

A constant confusion has been observed in all these citation-based indicators: although they were originally designed to graphically represent the circulation of theories, concepts, methods and tools, to analyse networks between researchers and to measure the possible impact of published articles, they have also begun to be considered quality indicators. Another degree of confusion has been

1 https://clarivate.com/products/scientific-and-academic-research/research-discovery-and-workflow-solutions/webofscience-platform/web-of-science-core-collection/science-citation-index-expanded/

added to this: although numbers can be related to quality measurements - for example, in a quantitative estimation of the degree to which a work meets a certain threshold of scientific competence - the quantitative form of this indicator opens up the possibility of classifications and pushes to identify not what is of good quality, but what is "better", in other words: the concept of "excellence" is replacing quality as a result.

Science, however, needs all these researchers and, with a system of competition such as that produced by citation-based indicators, the number of recognised researchers can only increase to a certain extent, while the overall quality of the research communities as a whole may well stand still or even decline, with the loss of vocations and interest linked to this system that goes against all creativity and courage - so important for the advancement of research.

So researchers prefer to work with trendy topics and ideas to get their articles published and cited, but this has even worse consequences: those who want to stay in the competition without having what it really takes to take advantage of this competitive structure can also look for some shortcuts: cheating and plagiarism are on the rise and recent studies show intriguing insinuations that the higher the impact factor of a journal, the more low-quality articles may have been approved.

When it comes to research and scientific production in Latin America, the first question to bear in mind is precisely the presence of this competition: when we are aware of this, we must ask ourselves what the effects of competition are on research in the region, whom it favours and, finally, when these questions are answered, it becomes important to investigate how research directions should be modulated to improve their quality at a regional level, as well as investigating where and how competition should be managed to extract the best engagement from the best researchers, for example by analysing the instruments for identifying this excellence, without weighing negatively on the behaviour of those who are not among the "best" but who are nevertheless necessary.

Much of the current competition is driven by journals, their prestige, visibility and authority, which suggests that in order to modulate scientific directions in Latin America or any peripheral region of the world, attention must be paid to the mechanisms underlying the production of these journals. Who controls them? For what purpose? How are they financed and how is the production of the symbolic value of research intertwined with the earnings of the big international publishers?

Furthermore, in the current system, which scientific issues are not considered or are even ignored, despite their importance for national and regional needs?

To what extent do "peripheral" researchers really contribute to solving problems that mainly affect rich countries? This is certainly a kind of "help" in reverse, since in this case nothing is expected in return.

If we compare the social sciences with STEM, there is no doubt that many of the classic aspects of the latter are often present in social research: well-articulated hypotheses and systematic tests, precise and quantitative measurements, as well as careful concepts and observations, publicly verifiable methods, sophisticated conceptual frameworks, rigorous perceptions and clear paradigms shared by a considerable number of expert communities that persist over long periods of time.

However, method problems are more common in the social sciences than in STEM: the social sciences do not produce a different kind of knowledge, with specific laws connecting independent variables to a dependent variable. Quantitatively precise descriptive techniques are not accompanied by a corresponding convincing theory.

The in-depth knowledge offered by the social sciences is not consensual, which is not to say that in-depth knowledge in STEM is always consensual. But: if the social sciences produce both the multiple truths of our time and a set of contradictory, intricate and ever-changing perspectives and diagnoses of our society, and if these truths exist in the practices and understandings of a research community, when that community disappears, its truth succumbs into history along with the society it sought to understand.

One issue that is hardly considered in developed countries, fuelling Southern concerns about the fairness of the scholarly communication regime, is that of access to international communication channels, which is key to achieving the goals of participation and sustainable development. The issue is that the only ways to participate, publish, be recognised and have visibility seem to involve expanding access to international journals, indexing services and databases, stimulating the growth of a specific type of journal: those that are closer in parameters to those already indexed by the SCI.

The right to participate in "international" science, now global, must take into account the South's perspectives on visibility and invisibility. In fact, it is possible to say that the various discourses of Southern science share a crucial principle, that of a strategy of participation in conventional research

Caroline Wagner (2008)[2] states that there has been a shift in the balance of power between international and global science as a result of the flow of communication across borders. From her perspective, international science now includes activities in which people work in more than one country or receive their equipment or funding from more than one country or both. Collaboration basically takes place between nation states and groups working together, with the support and protection of governments, in a process that remains broadly compatible with an ideology of scientific "nationalism". On the other hand, global science realises shared activities in which

2 Wagner, Caroline S. *The new invisible college: science for development*. Washington D.C.: Brooking Institution Press, 2008.

researchers are free to join forces to solve common problems, regardless of their geographical location.

Wagner (2008) says that global science works when it is a business because it basically has financial needs. He favours this aspect over the needs of those working in a knowledge creation system. However, in his opinion, every researcher is a "free" agent, who seeks to improve his reputation or gain access to resources, even despite the interests of his nation of origin and the costs to him.

In the case of the social sciences, humanities and arts, due to the increasing similarity of the evaluation criteria with those of the natural and physical sciences, more and more authors are seeking to publish as co-authors in international journals: the logic behind the movement towards greater international collaboration, from the perspective of Latin American research, was analysed by Russell (2008)[3], who showed, for example, a predisposition on the part of Mexican researchers, in a context of international collaboration, to publish preferentially in journals outside the region. In this way, regional journals missed out on publications that could have promoted their greater presence in the world with an international impact.

In this type of publication-orientated information policy, where a positive correlation has been found between the research results achieved in a given degree of international collaboration and the impact levels measured by the number of citations received, it is also possible to observe that although Latin American co-authors receive fewer citations than their European or North American colleagues, they still enjoy an increased degree of visibility.

However, there is a price to pay associated with this apparent gain: among the reasons supporting this strategy, it is safe to assume that the aspiration to publish in English is present. However, there is greater penetration and acceptance of the results when they are published in national journals, especially when they are published in the local language. Of course, the risk of them being ignored is greater, simply because they are not accessible to the international scientific community.

In both the South and the North, research, and in particular the scientific elite, generally adheres to the principle that scientific quality is only determined when it is found in international publications and journals.

Therefore, everyone would be satisfied if the South followed a path that mirrored that of the North. However, many alternative voices offer different visions of international scientific participation, highlighting the problems of access and questioning the mechanisms by which recognition and visibility are obtained. These are voices that criticise this one-sided perspective of research growth

3 https://biblat.unam.mx/hevila/e-BIBLAT/Biblio/Russell_2008.pdf

and call for broader and more effective approaches to information policy for the production of knowledge.

Not surprisingly, these voices express the opinions of researchers from the global South and North who criticise this dominant regime of knowledge production. In the South, this perspective limits their prospects for effective participation in the discussion of science, while in the North it is seen as a latent perpetuation of a world order in which only the North determines research priorities.

The issue of scientific research in the South, which cannot be separated from the problem of development, is placed in an asymmetrical relationship in the research principles. Issues related to development problems in these policies are absent or, when present, appear from the perspective of the developed countries, with few contributions from alternative visions. Fortunately, scientific quality and the right to development are not destined to remain in eternal tension, although it all depends on what is meant by alternative quality.

At the end of the 1980s, the internationalisation of Latin American research became a concern or even an obsession. By the year 2000, the results were still disappointing, and the participation of Latin American authors in international research was around 3% (RYcit)[4].

In fact, it could be argued that quality research carried out in Latin America simply didn't seem interesting to traditional media evaluators, either because the topics were unfamiliar or because the names of the authors and research institutions were unknown and therefore didn't achieve the prestige of a conventional journal.

The explanation that research is of quality if and only if it is integrated into mainstream science is clearly unsatisfactory: at best, it is the necessary condition for the research to be published in a "central" journal, which offers some, albeit not absolute, guarantees of quality.

A lot of quality Latin American research, however, is not offered to conventional journals for a number of reasons ranging from predatory pricing to difficulty of access for linguistic reasons, among others.

The information policies adopted in recent decades have rapidly changed this situation: institutional repositories are online, while several international portals cover all types of production by research institutions, which display their journals nationally and internationally.[5]

What remains to be done is to make sure that this impressive amount of research is recognised globally for its value, and not for the value assigned by indices such as Web of Science or Scopus

4 RYCyt. *El estado de la ciencia. Principales indicadores de ciencia y tecnologia iberoamericanos/interamericanos 2001*. Buenos Aires: Red Iberoamericana de indicadores de ciencia y tecnologia, 2002.

5 https://www.redalyc.org ; https://latindex.org/latindex/ ; https://www.scielo.br .

This is the real issue that needs to be addressed, since quality is sufficiently covered by adequate publishing tools and, in this sense, the dynamics of the convergence of the growth of research output along with that of Open Access can be understood.