

Competition and evaluation:
the power system of scientific research
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“People know what they do;
frequently they know why they do
what they do; but what they don't
know is what what they do
does.” Michel Foucault

This is true of research evaluation.

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Learned and scientific publications
hold three kinds of value

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Informational value

Symbolic value

Financial value

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Each form of **value**
holds **currency**
In a particular **network**

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Informational value:

1st network: researchers and
advanced students;

2nd network: external institutions
(e.g. industries, ministries, school
teachers, etc.);

3rd network: public at large

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Symbolic value

1st network: reputation among other
researchers;

2nd network: evaluation for promotion and
tenure;

3rd network: evaluation for research grants

4th network: public reputation (e.g. Nobel
prize)

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Financial value

1st and only network: libraries with
publishers.

Libraries buy; publishers sell!

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Estimating informational value:

- Highly subjective because related to prior knowledge;
- Related to quality;
- Therefore, not easily standardized or quantified.

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- **Estimating** symbolic value
- **Reputation of authors** (prestige)
- **Visibility** (e.g. citations)
- **Response to needs** (relevance)

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Estimating financial value

- Related to symbolic value;
- Negotiated between publishers and libraries (researchers are not involved).

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In short, publishers had to find a way
to relate financial value to symbolic
value (and, perhaps, to informational
value as well)

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To see how,
Let us look DEEPER
into the **financial underpinnings**
of **scientific documentation...**

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After World War II,
a silent Counter-Revolution
took place
in Scientific Communication

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Vast expansion of research after WWII

+

Growth of interdisciplinary research

=

Bibliographic problem/crisis

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Citation Indexes for Science

*A New Dimension in Documentation
through Association of Ideas*

Eugene Garfield, Ph. D.

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- Tracking citations was brilliant, but there were too many citations to track.
- Therefore,
 1. The world of publications had to be made manageable by truncation;
 1. But then, there was a need to justify the truncation;

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- The truncation was justified by inventing a myth: that of core journals; these carry the essential part of core science;
- The rest is not so important; it can be neglected with little risk;

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- As a result, the **Science Citation Index (SCI)** amounted to a **massive expulsion** of most scientific publications in the **world**;
- What is **worse** is that “**core journals**” were portrayed as the “**best**” journals which, in turn, were supposed to carry the “**best**” articles.

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- Then, the “quality” of the “best” journals was translated into a simple, easy to understand, number: the “impact factor” (IF);
- With a quantified IF, journals could be ranked;
- The pressure of rankings grows when the quantitative difference between rankings decreases: with 3 decimals, the pressure of rankings is extreme;
- With such a simple device, competition between journals became fierce.

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- Meanwhile, librarians in North America and Europe all focused on the “core journals”;
- Unwittingly, they PLACED THESE JOURNALS IN AN INELASTIC MARKET;
- Publishers had now, at last, found the way to join “symbolic value” with “financial value”;
- In fact, price began to act as a signal of quality: without a high IF, a journal could not command a high price; conversely, a high price could only mean a high IF and a high IF “meant” high quality.

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- Journals became the proxy for scientific quality;
- Individuals were judged by the journals where they published;
- Institutions have been ranked according to criteria that include where their researchers publish;
- Even countries have been ranked in this fashion.
- Journals thus became the gold standard of scientific evaluation while being submitted to an extremely intense system of competition.

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Journals became the **power lever**
of powerful, international,
publishing companies
that are **accountable**
only to their **stockholders**.

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- However, journals do affect what is researched;
- Journals position themselves in a domain and then try to improve their IF;
- To do so, they will seek to publish on the “hottest” topics with the most visible authors in the most prestigious institutions.

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- What does “visible” mean here?

It means the kind of research results visible from a set of journals, themselves, “visible”, because indexed in the SCI and adorned by an IF.

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- In Latin America, we regularly read: “La ciencia que ne se ve no existe” (e.g. Redalyc).

This covers only one part of the issue.

Who is watching must not be forgotten!

By whom do you want to be seen?

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- If you want to be seen by “core journals” from the (roughly) rich countries, you must fit with the editorial orientations of these journals;
- “Hot problems”, for these journals, broadly address what rich countries are interested in (scientifically, culturally, economically);
- Some of these “hot problems” are not YOUR “hot problems”;
- Spending resources on problems that are not your problems may well be a WASTE.

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It may lead you
into forms of competition
that are not constructive
for your nation, your region.

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It may lead you
into seeking competitive
EXCELLENCE rather than build
QUALITY CAPACITY.

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Resources are wasted on topics
of no use to your **country**,
and it may also lead
to **brain drain**.

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Meanwhile, important problems
are neglected:

- The Zika virus was identified in 1947...
- The Ebola virus was identified in 1976...
- The Dengue fever virus was studied as early as 1906... etc. etc.

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Journals organize communities;

Journals organize and orient questions;

Journals, because of competition, seek secure answers, seek to develop “normal science”
(Thomas Kuhn)

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In Latin America

There is a need to focus again on articles (and, more generally, scientific works);

There is a need to develop an autonomous capacity to raise issues relevant to a national (continental, multi-national, ...) context that is not necessarily the rich North

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This is
where
OPEN ACCESS
can positively intervene

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- OPEN ACCESS

allows for

- Better visibility from all, but particularly those that correspond to the research context that is relevant to the national, continental, international, ... , scene
- New possibilities to evaluate without falling prey to the “global” (different from international) competition for “excellence”.

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OPEN ACCESS

allows for

- A return to the article level as the focus of evaluation;
- A foregrounding of quality scientific capacity (as against “competitive excellence”;
- A restoration of the need to collaborate in science (as against a general competitive ethos).

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This can be achieved by

- Downplaying the role of journals and promoting mega-journal structures instead (which would allow reconfiguring article sets with new communities **at will**). Redalyc and Scielo should become mega-journals.
- Promoting repositories, both thematic and institutional (La Referencia);
- Developing a Latin American search engine that would not be blind to Spanish or Portuguese, and that would promote neglected, **yet important**, problems

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This can be **achieved** by

- Seeking **visibility** from parts of the world with similar concerns, interests, etc. (South Africa, India, etc. by involving some of their **scientists** in Latin American publications and **processes** of evaluation;
- Making sure that the **criteria of quality** used cannot be reduced again to the **simplistic, one-size-fits-all**, strategies of the **IF**.

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The **issue** is not an alleged **tension** between “**national and mediocre**”, on the one hand, and “**international and excellent**”, on the other;

The **issue** is to regain some “**intellectual space**” to elaborate **autonomous research programmes** that can serve **local curiosity and/or local needs**.

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Without such a perspective, the only solution is to become what rich countries are, according to their model (but that is not what they want).

This is not a **healthy internationalization of science**; it is a **very unhealthy GLOBALIZATION** of research.

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*MUCHAS
GRACIAS*