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1st LATIN AMERICAN SYMPOSIUM ON THE METRIC STUDIES OF SCIENCE AND TECHNOLOGY

CONFERENCE REPORT BY
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The 1st Latin American Symposium on the Metric Studies of Science and Technology was held from 28th to 30th of August 2019 in Mexico City, organised by the Centre for Research and Advanced Studies of the National Polytechnic Institute (Cinvestav-IPN), the National Autonomous University of Mexico (UNAM) and the Mexico Autonomous Institute of Technology (ITAM), and funded partially by the country's National Council of Science and Technology (Conacyt) and its Scientific and Technological Advisory Forum (FCCyT). This meeting is a follow-on to the International Seminar on the Quantitative and Qualitative Studies of Science and Technology "Prof. Gilberto Sotolongo" that has been held in Havana, Cuba, every two years

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since 2002. The organisers chose an excellent location, namely the UNAM's Ignacio Chávez Seminar Unit which is surrounded by trees and situated beside the university's Botanical Garden. The symposium was inaugurated by Julia Tagüeña Parga, Director of the FCCyT.

One of the main goals of the event was to convene Latin American researchers, policy makers and scientific policy developers, for the exchange of knowledge and opinions on the development of improved and more accountable indicators of science, technology and innovation, from the perspective of bibliometrics, informetrics, scientometrics or webmetrics. The symposium did indeed prove to be a good opportunity for colleagues working on this topic in different countries to come together. The 75 participants came from Argentina, Belgium, Brazil, Colombia, Cuba, Spain and Mexico. The programme was very diverse, covering a range of interdisciplinary approaches for measuring science, technology and innovation.

Wolfgang Glänzel, Director of the Centre for R&D Monitoring (ECOOM) at KU Leuven in Belgium opened the symposium with a keynote speech on new methods for measuring research activity and impact. Other international invited speakers were Hebe Vessuri, National Scientific and Technical Research Council (CONICET) Argentina whose address focused on social studies of science and technology in Latin America; Abel Packer, Scientific

Hebe Vessuri, Francisco Collazo, M Victoria Guzmán, Abel Packer & Ana M Cetto. *Photo copyright: © Jimena Clavijo Olivares, Escuela Nacional de Biblioteconomía y Archivonomía*

Library Online (SciELO) Brazil talking on SciELO, the path to Open Science, and Ismael Rafols, INGENIO, Polytechnic University of Valencia (UPV) Spain on contextualizing and participating in S & T indicators as instruments of governance in Open Science.

The diversity of talks given by representatives of leading institutions were subdivided into topics dealing with different perspectives and debates on the openness of knowledge

Ismael Rafols, Francisco Collazo & Jane Russell, Wolfgang Glänzel.

and publications. In addition, special emphasis was given to the discussion of the cost and benefits of different public policies designed to promote scientific journals at regional level. Given the uniqueness of the productivity of social scientists in the region, there was a series of presentations related to indicators in these fields. There were also several presentations on the history of scientific publications including the Historical Atlas of Science in Latin America. Parallel sessions discussed special topics such as: geohistometrics; bibliometric and scientometric indicators; science, technology and society indicators; and science and technology mapping. In addition, the attendees enjoyed a demonstration of Science Maps, Places & Spaces of the University of Indiana provided by the IPN, as well as a poster session.

Other speakers in person or via videoconference included (in order of appearance): Ana Maria Cetto (UNAM-IF, Mexico), Eduardo Aguado (UAEM, Mexico), Gabriel Vélez Cuartas (Univ Antioquia, Colombia), Fernanda Beigel (Univ Nal de Cuyo, Argentina), Arianna Becerril García (Redalyc and AmeliCA, Mexico), Antonio Sánchez Pereyra (UNAM-Scielo, Mexico), Rogerio Mugnaini (Univ de Sao Paulo, Brazil), Dirce Maria Santin (Univ Fed do Río Grande do Sul, Brazil), Manuel Gil Antón (Colmex, Mexico), Alejandro Uribe Tirado (Univ Antioquia, Colombia), Diego Chavarro (Inv Independiente, Colombia), Claudia N González Brambila (ITAM, Mexico), Eduardo Robles Belmont (UNAM, Mexico), J Octavio Alonso Gamboa (UNAM, Mexico), M Gabriela Arévalo Guízar (UNAM, Mexico), Ismael Ledesma (UNAM, Mexico), Francisco Collazo Reyes (Cinvestav, Mexico), Carlos A Aristizábal Botero (Univ Antioquia, Colombia), Rodrigo A Vega (UNAM, Mexico).

Speakers in all sessions were invited by Wolfgang Glänzel, Editor-in-Chief of the international journal, Scientometrics, to submit the full papers of their work for possible publication in a special issue of the journal containing selected papers from the symposium.

Several attendees and members of the organisation team visited the pyramids at Teotihuacan, an ancient Mesoamerican city recognised today as home to many of the most architecturally significant pyramids of the period from pre-Columbian America. The more adventurous climbed the 238 steps of the iconic Pyramid of the Sun.

The event was live streamed via the FCCyT website (https://www.foroconsultivo.org.mx/streaming/) and received 2,250 visitors on YouTube and 3,720 on Facebook during the three days of the event and a total of 12,000 viewings up to September 9th. Four regional newspapers from different states of the Republic also covered the event.

OBITUARY
JUDIT BAR-ILAN (1958–2019)

Dr. Judit Bar-Ilan died on 16 July 2019. She was professor at the Department of Information Science of Bar-Ilan University in Israel. For her outstanding contribution to the advancement of the field of quantitative science studies, she received the Derek de Solla Price Memorial Medal of the journal Scientometrics in 2017.

She was active in many topics of our field. Her widespread research interest comprised, among others, informetrics, information retrieval, library metrics, 'alternative metrics', research assessment, internet research, information behaviour and usability. She was the Editor-in-Chief and founder of the international Open-Access journal The Journal of Altmetrics.

The editors of the journal Scientometrics schedule a commemoration of her academic life and work in one of the following volumes.

Tibor Braun, Wolfgang Glänzel, András Schubert

Following the footsteps of her father, Judit always wanted to be a researcher. She arrived to the world of informetrics from the direction of mathematics and computer science but found herself in the field of webometrics soon enough to become one of its pioneers. She said, she had never regretted trading in her childhood dream, mathematics, for informetrics. Her 30-year-long scientific œuvre incorporates well over 150 publications and about the same amount of papers presented at different international conferences.

Judit often took part in projects that ventured beyond the usual horizon of information science, too. These territories embraced the world of chess, the blogosphere, the online Hebrew literature, information/advice to Israeli citizens, Facebook usage of political parties, altmetric gender bias—just to name a few.

Judit talked to us about all these and much more in the ISSI Newsletter #50, in an interview on the occasion of her receiving the Derek de Solla Price Medal.

Balázs Schlemmer

INTRODUCING THE DEREK DE SOLLA PRICE AWARDEE OF 2019

INTERVIEW BY **LOET LEYDESDORFF**

The awarding ceremony of the Derek de Solla Price Memorial Medal has become an essential part of the programme of ISSI conferences since the foundation of the Society in 1993. The Price Medal was conceived and launched by Tibor Braun, founder and Editor-in-Chief of the international journal Scientometrics, and is periodically awarded by the journal to scientists with outstanding contributions to the fields of quantitative studies of science. This year's awardee is Lutz Bornmann (Administrative Headquarters of the Max Planck Society, Division for Science and Innovation Studies, Munich, Germany). Congratulations to the award-winner!

LUTZ BORNMANN

■ **Dear Lutz, what did you study and how did you become a scientometrician? Can you, please, introduce yourself from this angle?**

→ I studied sociology with psychology and education science as minors at the University of Kassel. As student, I had a job at the International Centre for Higher Education Research (INCHER), an interdisciplinary research unit of the University of Kassel. My first larger research project at INCHER was a study about why students changed fields of study at the University of Kassel; we interviewed students. This study became also the topic of my Master's Thesis (1998).

I got the opportunity to continue my studies at INCHER with a PhD in the sociology of science under the supervision of Hans-Dieter Daniel. We evaluated the peer review process at the Boehringer Ingelheim Fonds, a foundation supporting doctoral and post-doctoral students in the biomedical sciences (Bornmann & Daniel, 2004). We focused on the predictive validity of the peer review process using bibliometric indicators. How are the recommendations by

the referees and funding decisions related to bibliometric scores (Bornmann & Daniel, 2005)? This was my first contact with bibliometrics.

Since that time, I have been fascinated with citations, journal impact factors, co-citation networks, etc. After the doctorate (in 2003), I worked as a postdoc at the ETH Zurich until 2010 (Professorship for Social Psychology and Research on Higher Education, Hans-Dieter Daniel). At that Professorship, I had the unique opportunity to participate in excellent research in an inspiring environment (thanks to Hans-Dieter Daniel and Rüdiger Mutz). After that, I applied for a job at the Administrative Headquarters of the Max Planck Society to provide bibliometric services and to do research on bibliometric topics. During my time at the ETH Zurich, I became increasingly a specialist in bibliometrics.

■ **Do you miss the university? In other words: what does your current environment add in terms of research facilities?**

→ At the Max Planck Society, I work in an excellent context (thanks to Berthold Neizert and Bernd Wirsing). I missed the university, but had the opportunity to intensify the contacts with the Ludwig-Maximilian University (LMU) in Munich. Since 2018, I can supervise doctoral students based on a cooperation agreement with Katrin Auspurg (Professor of Quantitative Social Research). For example, Alexander Tekles recently published about author name disambiguation in bibliometric data (Tekles & Bornmann, 2019).

A few years ago, I had the opportunity to become a university professor, but I decided not to make that step. I enjoy the combination of providing services to the Max Planck Society and having time for independent (bibliometric) research in a worldwide network. Werner Marx and Robin Haunschild, two excellent bibliometricians, are colleagues and

cooperating partners at the Max Planck Society. Recently, Thomas Scheidsteger joined our group. We have access to an in-house database developed and maintained by the Max Planck Digital Library, which is based on the Web of Science. This unique data access facilitates comprehensive bibliometric studies including the development and testing of new indicators as well as the development of methods for network analyses.

■ **Let us move to the field level. What do you think about scientometrics? Is it more than a set of methods? What is most interesting for you in it? Can you say more about your theoretical orientation?**

→ Scientometrics is a very special research field. Although almost everybody is familiar with journal impact factors, h-indices, etc., many colleagues do not know that scientometrics is a field of studies. Researchers come in touch with this field only in the context of research evaluations and this may not be a positive experience. I understand the critique: who would like it to be evaluated by bibliometricians who have no substantive understanding of the field under study?

Anyway, in my opinion, scientometrics should not be reduced to evaluative bibliometrics. Many more things are possible: the growth of science, for example, can be investigated (Bornmann & Mutz, 2015). Andreas Thor, Werner Marx, you and I (2016) developed the CRExplorer for historical analyses based on bibliometrics (see www.crexplorer.net); CiteSpace, Pajek, and VOSViewer software facilitate the generation of fascinating maps of science. Together with Moritz Stefaner, Felix de Moya Anegón, and Rüdiger Mutz, I published science maps visualizing regional performance (see www.excellencemapping.net) and collaboration networks (see www.excellence-networks.net). Recently, new indicators have been proposed for measuring novelty or disruptiveness of research (Lee, Walsh, & Wang, 2015; Wu, Wang, & Evans, 2019).

I am not so much interested in the technical aspects of indicator developments or data issues such as measuring the coverage of publications in new databases (e.g., Dimensions or Microsoft Academic) although I published about these things, too. I am more interested in underlying mechanisms, which aim to explain social phenomena in the sociology of science. For example, Werner Marx and I introduced the Anna-Karenina principle as a way of thinking about success in the sciences (Bornmann and Marx, 2012). The principle is based on the first sentence of Leo Tolstoy's (1875-1877/2001) novel *Anna Karenina*: "Happy families are all alike; every unhappy family is unhappy in its own way." The Anna-Karenina principle states that success in science is only possible when several key prerequisites are fulfilled. If one of these prerequisites is not fulfilled, failure occurs in a case-specific way.

In a similar mechanism-based way, I wrote about mimicry in science (researchers apply strategies that should enable them to comply to bibliometric accountability and to secure funds to their own research, see Bornmann, 2011) and the Hawthorne effect (reviewers' judgements are dependent on the specific conditions under which the peer review process at individual journals takes place, see Bornmann, 2012). The research on mechanisms is in the tradition of Robert K. Merton (1968) and Peter Hedström (2005). Peter Hedström is one of the main representatives of analytical sociology.

A new and, in my opinion, very exciting topic is the discussion of evaluative bibliometrics within the so-called fast-and-frugal heuristics framework. In this context, heuristics are defined as decision strategies, which enable stake-

holders to make quick and accurate decisions in uncertain environments. Gerd Gigerenzer, Peter M. Todd, and the ABC Research Group (1999) developed this program in psychology. In the meantime, the program has been extended to other areas such as medicine, crime, business, and sports.

With Julian Marewsky (2019), I extended the program to evaluative bibliometrics by introducing the term "bibliometrics-based heuristics". These are adaptive judgement strategies solely based on bibliometrics that ignore other possible indicators about performance (for example, the amount of third-party funds raised, the peer review reports of individual publications, etc.). The focus on bibliometrics in well-defined heuristics (and the deliberate ignorance of other indicators) may allow for quick, but nevertheless robust decisions in specific research evaluation situations.

■ **Can you perhaps elaborate an example? Why are the results robust?**

→ A core objective of the heuristics program is that the evaluative tools are empirically studied and validated. Surprisingly, this requirement of validity is often neglected in bibliometric studies; one focusses on the development of indicators as ready-made solutions.

The four objectives of the heuristics program are:

1. An empirical description of the use of the indicators in a specific environment. For example, in which situations are the h-index and journal impact factors used by whom in the organisation? Do evaluees inform themselves about bibliometric indicators; for example, by reading bibliometric literature?

2. The second objective is prescriptive: in which environment performs a specific heuristic well in terms of accuracy, speed, or transparency of decision-making? For example: should the use of an indicator be embedded in a peer review process given the objectives of a specific organisation?

3. The third objective combines the first two. One focusses on the optimisation of the use of indicators in the evaluation context.

4. The fourth objective is methodological: how can the use of heuristics in evaluative bibliometrics be investigated? For example, we developed two computer programs to simulate the use of indicators in specific environments (Bornmann, Ganser, Tekles, & Leydesdorff, conditionally accepted for publication).

■ **I would consider this as a systems approach or, in other words, contextualized scientometrics. Perhaps, it can even be considered human resource management. However, the criterion of robustness can be different from truth or truth-finding for its own sake. Do you feel a tension between your role in management processes and as a researcher?**

→ There is definitely a tension between my roles as a researcher in bibliometrics and as professional bibliometrician providing services. Evaluative bibliometrics is a difficult business, because bibliometricians produce numbers, which can destroy careers. However, I am happy to work at the Max Planck Society where the bibliometric results are usually positive. In these situations, all parties involved are happy and further discussions are not needed.

In my opinion, being both a professional bibliometrician and an active researcher adds legitimacy to the advisory role. My experience has been that researchers assess one another in terms

of their publication performance ... and scientific prices! Thus, it won't be bad for my professional work as a bibliometrician to be the 2019 recipient of the Derek de Solla Price Memorial Medal!

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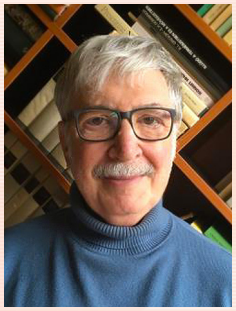
THE EPONYMIC USE OF JORGE E. HIRSCH'S NAME

GÁBOR SCHUBERT
Stockholm University Library,
Stockholm University, Stockholm, Sweden



ANDRÁS SCHUBERT
Hungarian Academy of Sciences, Library and Information Center, Budapest, Hungary

In a recent Handbook chapter [Schubert & Schubert, 2019], we tried to follow up the early history of Hirsch's h-index and its later advancement. Among others, questions regarding the name of the index were also covered. As it is well known, Hirsch himself has always confuting the guess that the index would intentionally bear the initial of his family name. According to his explanation: "I decided to call it 'h' [...] because a high h-index suggests 'highly cited' and 'high achievement'." [Hirsch & Buela-Casal, 2014]

In spite of the creator's intention, we found that in about 5% of the h-index-related literature, the index is called Hirsch-index. Using the Web of Science as main source of literature, the first occurrence of the eponymic name of the index was found in the paper of Frangopol [2005] published in Romanian in December, 2005.

In a correspondence between Jorge Hirsch and Tibor Braun [Braun, 2019], Hirsch affirmed that he first met the eponymous version of his name (in relation to the notorious index) in a paper of Braun et al. [2005] published on November 21, 2005. Indeed, this paper used Hirsch's name eponymously, and was published earlier than that of Frangopol, but didn't use the exact term "Hirsch-index".

Since the completion of the Handbook chapter manuscript (November, 2017) some more information on the topic had been collected and are shared hereby with the readers of the Newsletter.

To our present knowledge, the first printed occurrence of the term Hirsch-index is found in a German Editorial [Brähler & Decker, 2005] published on November 9, 2005. The authors hasten to explain that the origin of the term is the name of the inventor of the index, in order to dispel any possible false associations. Actually, in addition to its first meaning, "deer", the word Hirsch may have in German some pejora-

tive meaning, e.g., an abusive word for a male person, or even cuckold (although this sort of use of the word is nowadays somewhat outdated).

Presumably, this ambiguous nature of the word Hirsch lead the commenter "Tierbeobachter" to make the malicious remark to a blog post [R.U.GAY, 2005]: "Passend daß das ganze dann Hirsch-Index heißt. Und die Moral von der Geschicht: manch eine Name paßt, oder auch nicht." (The whole thing is then suitably called Hirsch-index. And the moral of the story: a name sometimes fits, sometimes not.) What is the actual case, is left to the reader. The post and the comment was published on August 18, 2005, i.e., 15 days after Hirsch had uploaded the first version of his paper to the arXiv [Hirsch, 2005].

Disregarding self-eponymization, this seems to be a speed hard to match.

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