

EDITORIAL



This year our community has celebrated its 10th biannual international scientific meeting. It is true that the first conferences were not yet organised under the auspices of the Society since it was not until 1993 that the pro-

gramme committee of the 4th International Conference on Bibliometrics, Informetrics and Scientometrics in Berlin decided to found the *International Society for Scientometrics and Informetrics* (ISSI). Since then we have organised conferences almost all over the world, in North and Middle America, in the Near and Far East, in Australia and this year the conference returned to Europe. And we have big plans for the future, too:

The subsequent meetings will take place in Spain (2007) and in Brazil (2009). But for the moment let us come back to today's reality.

The present number of our Newsletter is devoted to the 2005 Conference held in Stockholm (Sweden) this summer. Reports on the meeting and its highlights are supplemented by interesting news and a special feature on Matthew citations.

Enjoy.

Wolfgang Glänzel
ISSI Secretary-Treasurer

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ISSI

ISSI 2005 CONFERENCE IN STOCKHOLM

"Now the bells of Santa Katrina chimed seven and were echoed by Santa Maria's reedy treble, the Abbey and the German Church joined in with their basses, and soon the whole air vibrated with the city's seven bells. And as, one after the other, they fell silent, the last one could still be heard in the distance, singing its peaceful evensong. This had a higher note, a purer ring and a swifter tempo than the others – yes, indeed it had. He listened, trying to make out where the sound came from, for it seemed to wake some memory... The Klara bell stopped and he was jerked from his thoughts by the sound of a footstep on the gravel path."

August Strindberg, *The Red Room*, 1879
(transl. by Elizabeth Sprigge, 1967)



Those of you who attended ISSI 2005 in Stockholm might recall Santa Klara church just across the street from the conference hotels, Continental and Terminus. However, the church was being renovated and hard to see

behind the blue curtains. The bells didn't ring. But, the Swedish author August Strindberg did listen to them 125 years ago and thought they "had a higher note, a purer ring and swifter tempo than the others".

The bells of ISSI 2005 started to ring already in Beijing 2003, and were apparently heard all over the world, since 66 female and 121 male scholars of our field came from 33 countries and five continents, representing a wide range of competence and research interests (See Fig. 1). Amongst us we had doctoral students, post docs, senior researchers as well as the founding fathers of the field. We couldn't have hoped for more!

Bus 47 took us to the Karolinska institute where we could listen to a large number of high note papers in a swift tempo, all purified under the critical eyes of the program chair and his committee. In total, the conference received 190 submissions for reviewing, 75 papers were accepted for oral presentations and another 37 as posters.

The doctoral forum, nicely arranged by Birger Larsen and Rickard Danell, appeared to have been inspiring for doctoral students as well as for the well known scholars who commented upon their research plans. A pre-conference event of this kind could be warmly recommended for future meetings.

The social events were very popular. The conference dinner with the Price award ceremony aboard S/S Stockholm was attended by 190 persons, and the welcome reception the day before the conference start by 150. The walk

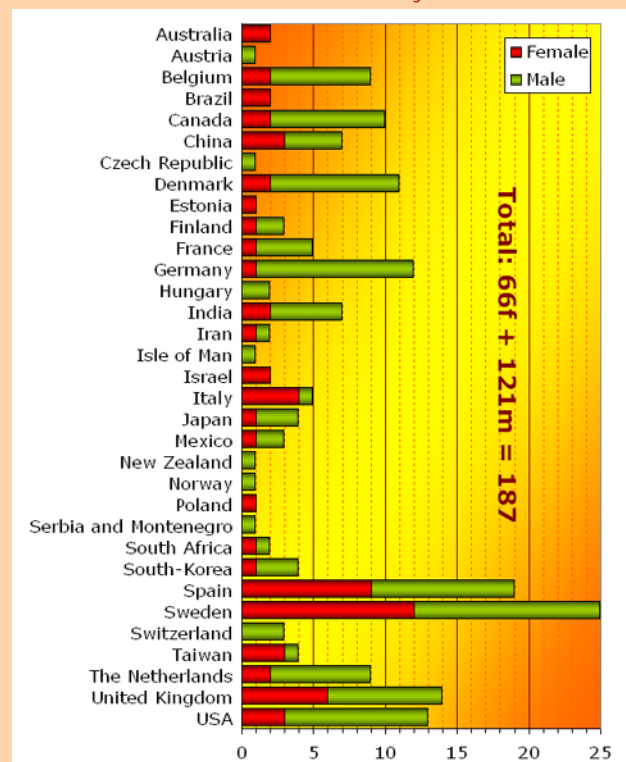


Figure 1 Conference participants by gender and country

about in Old city had 103 participants. We seem to join together like a big family! Organizing this conference was a delight right from the very start, and is the result of Danish-Swedish collaboration. The Danes, Peter Ingwersen and Birger Larsen, were responsible for organizing the paper review process and for editing the proceedings. The programme committee has done a great job reviewing all the submissions. And last, but not least, we wish to thank all authors of submitted papers for their hard work.

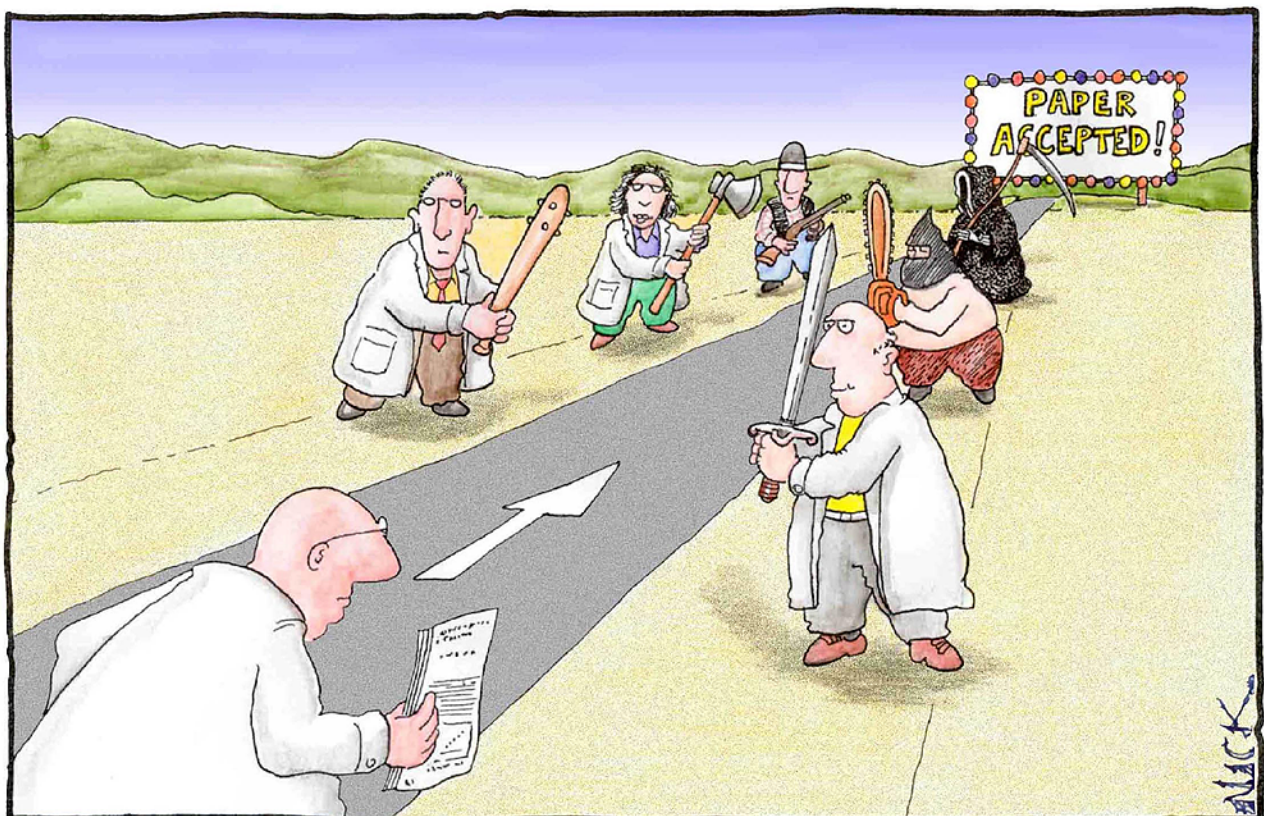
We must not forget Balazs Schlemmer who designed the proceedings cover and the Karolinska University press for printing the proceedings. In addition, Balazs made a Strindberg-walk during the ISSI days, and some pictures from it can be seen at the ISSI website (<http://www.issi-society.info/stockholmpix/album/>).

We the Swedes, Irene Wormell and I, focussed on financing and practicalities. We are greatly thankful to our sponsors: The Swedish Research Council, Vinnova, Thomson ISI, Scopus and Garfield foundation. We are also very grateful to Karolinska institute for hosting us and to Per Olsson and his sympathetic staff of the Library of Karolinska. Mrs Eva Ljungqvist from SKD Euroconf has been with us from the very start and we are happy for her competent management of thousands of small details.

I hope you enjoyed Stockholm and I'm looking forward to meet you again at ISSI 2007 in Madrid!

Olle Persson

General conference chair



Most scientists regarded the new streamlined peer-review process as 'quite an improvement.'

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PRESIDENT'S REPORT



The following represents the substance of my report to the ISSI Board and some of the results of our recently held Board meeting following the Stockholm meeting. First, I want to thank all the Board members for their contributions to ISSI over the last two years, and particularly Wolfgang Glanzel, Secretary-Treasurer of ISSI, for his continuing efforts on behalf of the society. I think the state of the society is good, although there is much work to be done to increase our membership and improve our financial foundation. There is a growing awareness of the importance of scientometrics and informetrics, the unique contribution that ISSI can make, and our members continue to innovate and move the field into the 21st century.

1. Annual Meeting

Our 10th Annual meeting in Stockholm was, by all accounts very successful and noteworthy in a number of ways. The setting at the Karolinska Institute proved ideal, and the combined boat trip/awards ceremony was a highlight. Many thanks to our conference chairs Olle Persson and Irene Wormell. It was the first time we used electronic peer review of the full texts of conference papers. The quality of papers was, as a result, considerably improved. We had roughly a 50% rejection rate. The two conference proceedings volumes came out on time, and represent a major contribution to the field. Thanks to our program chairs Peter Ingwersen and Ed Noyons. Also, for the first time we held a Doctoral Forum with presentations from

12 doctoral students. This Forum was capably organized by Birger Larsen and Rickard Danell.

We were very fortunate in our 10th biennial meeting in Stockholm to obtain substantial levels of support for the meeting. Much of the credit for this goes to our conference chairs, who managed to obtain large grants from local organizations in Sweden. On the corporate side, we were able to obtain grants from both Thomson Scientific and Elsevier (under the Scopus banner). For the first time we were able to offer a doctoral

scholarship funded by the Eugene Garfield Foundation. The competition was electronically reviewed through the same system used for reviewing conference papers. For our next meeting I would like to expand sponsorships to include other companies and organizations in the

publishing, database, patent, and internet fields. Please let me know if you have specific suggestions on organizations we might approach.

Regarding upcoming meetings, we had previously accepted the bid of CINDOC to host the 11th biennial ISSI conference in Madrid, Spain. This 2007 conference will be organized by Isabel Gomez and Maria Bordons. In the closing session of the Stockholm meeting we enjoyed an excellent slide presentation by Isabel Gomez previewing the sights of Madrid. Also I am

pleased to report that at its recent meeting the Board formally accepted the bid of BIREME to host the 2009 conference in Sao Paulo, Brazil. This conference will be organized under the direction of Abel Packer.

2. Linkage with other Societies

Some initial strides have been made to create links with other societies. In 2004 we held our first joint technical panel at the annual meeting of the American Society for Information Science and Technology in Providence, Rhode Island.

On the occasion of the 10th International Conference on Informetrics and Scientometrics (Stockholm, Sweden), an official Board meeting of the Society took place on 27 July 2005. The most important decisions made by the Board:

Individual and institutional membership fee changed (details at <http://www.issi-society.info/membership.html>)

11th ISSI Conference 2007 in Madrid (Spain) 2007 confirmed

Application for the ISSI Conference 2009 in Brazil accepted

Following elections of the ISSI Board to be held on the Web

The sessions were jointly sponsored by ISSI and SIG Metrics of ASIST, and organized by Mari Davis on the topic of scientific collaboration. Ten papers were presented in two sessions. Attendees thought the event was successful, and the presentations were well attended. Subsequent discussions with ASIST officials indicate a willingness to hold future joint sessions and also possibly grant ISSI the status of an affiliated society, pending approval by the ASIST board.

I have also made contact with the 4S society to explore the possibility of a joint session at their annual meeting, or other joint initiatives. I submitted a proposal for a joint ISSI/4S session on information visualization to be held at their meeting this fall in Pasadena, California. Due to the lateness of my application, I was unable to open up contributions to the full ISSI membership. Nevertheless a panel has been assembled consisting of three ISSI members, and if accepted this will be the first ever joint ISSI/4S session.

Contact was also made with the History of Science Society and the International Network for Social Network Analysis. Both agreed to list our conference on their web sites. In the contacts with all these groups, there seemed to be an interest in ISSI, perhaps because there was relatively little by way of scientometrics or informetrics at their meetings, and we could offer a unique perspective.

3. Membership

Our membership remains small, perhaps around 100 members following the Stockholm meeting. This is in contrast to the roughly 200 people who registered for the meeting. The Board recognizes the need to promote ISSI membership though publicizing its membership benefits. Obviously, the biggest single incentive for membership would be a subscription to a society journal. Currently ISSI members can obtain a special annual subscription rate of \$100 to the journal *Scientometrics* made available by the publisher Springer. At its recent meeting the ISSI Board discussed the possibility of associating with *Scientometrics*, including the DeSolla-Price Awarding, as the society journal with its Editor-in-chief, Tibor Braun.

4. Publications and Communications

Meanwhile, an important new development is the publication of initial issues of an electronic newsletter edited by Wolfgang Glanzel, Ronald

Rousseau, Balazs Schlemmer, and others. This is released quarterly, and is accessible via a password by members only through the ISSI web site. This is a new member benefit and should become an attractive new means of communicating short research notes and news items.

The society web site (<http://www.issi-society.info>) is now being maintained at KU Leuven under the direction of Wolfgang Glanzel with the assistance of Balazs Schlemmer, building on an initiative of Mari Davis. Another possible member benefit discussed at the Board meeting is to create an expertise database, or Yellow Pages, accessible to ISSI members. This database would contain professional competency and contact information for members electing to participate and submit profiles. Such a database might entice new corporate or government members who are seeking local experts in the field as well as allowing individual members to publicize their expertise and research interests. Another idea that was discussed was to make all conference papers available through the ISSI web site.

5. Bibliometric test database

I am pleased to announce that Thomson Scientific (formerly ISI), has agreed to provide a sample bibliometric database for use by ISSI members. The purpose of this database is to allow members to test and illustrate various scientometric and informetric ideas on real data, and perhaps serve as a tutorial for new members. The exact content, format, and mode of distribution of this dataset are still in the planning phase and I would appreciate your input. One possibility is to provide a multi-year dataset for the journal *Scientometrics*. This file will be offered as a download from the ISSI web site.

6. New Elections

In the coming year we will be organizing a new round of elections for officers and board members. It was decided at the Board meeting that four of the current Board members will continue to occupy office beyond their four year terms in order to provide continuity. Four new Board members and a new president will be elected for four-year terms starting in 2007. We will hopefully be able to use our web site with its provision for member password access to conduct these new elections.

Henry Small,

August 8, 2005

ISSI 2005 DOCTORAL FORUM REPORT

by

Birger Larsen¹ and **Rickard Danell²**

Doctoral Forum chairs

¹ Department of Information Studies, Royal School of Library and Information Science, Birketinget 6, DK-2300 Copenhagen, Denmark (blar@db.dk)

² Inforsk, Department of Sociology, Umeå University, SE-901 87 Umeå, Sweden (rickard.danell@soc.umu.se)

For most delegates at the ISSI 2005 conference in Stockholm the event began in a leisurely manner with the Welcome Reception on Sunday evening as the first part of the programme. A small group of PhD students and senior researchers had, however, already done a full day's conference work as participants of the ISSI 2005 Doctoral Forum.

The Doctoral Forum was the first its kind to be held at an ISSI conference. The purpose of the Forum was to provide doctoral students in the field with an environment in which to discuss their research projects with senior researchers and other doctoral students. An important motivation in the establishment of the Forum was to facilitate the interaction between students and experienced researchers in the field, in particular for those students who rarely get a chance to do so. This is especially important in a

relatively small field such as ours where the research groups are small and scattered around the world, and doctoral students rarely have a chance to interact with experienced researchers in the field. In addition, the Forum was an opportunity for the doctoral students to set up contacts with other students at the same stage as themselves. Indeed, the Doctoral Forum was

deliberately placed *before* the main conference program in order to encourage interaction amongst students themselves and between students and senior researchers during the rest of the conference.

The doctoral students applied with four-page papers describing their doctoral research project and their motivation for participating in the Forum. A total of 15 applications were submitted, of which 12 were accepted and presented to the senior researchers. Brief abstracts of the

papers can be seen in volume 2 of the conference proceedings (p. 721-725). The participating students came from six different countries, and represent a broad range of perspectives on the field. Based on the papers and presentations at the Forum six senior researchers, experienced in different subfields of Scientometrics and Informetrics, gave feedback to the

students and discussed their projects with them. The participants were split into two groups, allowing each student up to 20 minutes for presentation and 25 minutes for discussion.

Our overall impression is that the Doctoral Forum was a success: it had both intellectual and social benefits. Besides the benefit of receiving comments and creative suggestions

Participating in the ISSI 2005 Doctoral Forum was a timely and unique opportunity to discuss my research project with experts in scientometrics. As these researchers are expected to be unbiased, for they are not involved in our research, their contribution may be quite relevant. In my case, I got constructive feedback especially on the qualitative aspects of my research and, as I am at the beginning of my PhD, the forum was a real boost for my project! My advisors and I are now working on a short publication, which, I believe, can be considered one of the outcomes of this forum. I'm certainly biased to say that, but the ISSI 2005 Doctoral Forum was "the icing on the cake"!

Sonia Maria Ramos Vasconcelos
Doctoral student
Federal University of Rio de Janeiro, Brazil.

from prominent experts in the field, the doctoral student's had the opportunity to get to know each other and the experts before the conference started. We can, based on our experience with organizing and participating in the Doctoral Forum, conclude that Doctoral Forum is an excellent way of attracting new talent to the conference. It is our impression that several of the doctoral students were drawn into the ISSI conference via the Doctoral Forum. Since organizers, experts and doctoral students thought that the Doctoral Forum was a positive experience, we hope that it will become a permanent feature at the ISSI conferences. We wish to thank the Programme and Conference Chairs for inviting us to organise a doctoral forum at ISSI 2005, and to thank Dr. Pia Borlund for valuable advice on the running of doctoral fora. It is our hope that the Forum

will become a permanent part of the biannual ISSI conferences, and that it can contribute to the development of new researchers in the field and thus to the continued growth of the international community of Scientometric and Informetric researchers.

Finally, as chairs, we would like to express our sincere thanks to the senior researchers for their efforts involved in participating in the Forum. They were:

Judit Bar-Ilan, *Bar-Ilan University, Israel*

Katherine McCain, *Drexel University College of Information Science & Technology, USA*

Bluma Peritz, *Hebrew University of Jerusalem, Israel*

Ronald Rousseau, *Catholic School for Higher Education Bruges-Ostend (KHBO), Belgium*

Henry Small, *Thomson Scientific, USA*

Mike Thelwall, *University of Wolverhampton, UK*

NEWS, SHORT REPORTS

edited by Aparna Basu, (based on report by Hildrun Kretschmer)
& Ronald Rousseau

COLLNET- extra Session

An extra session on COLLNET was held in conjunction with the 10th International Conference of the International Society for Scientometrics and Informetrics (ISSI), Stockholm, Sweden, July 24-28, 2005. COLLNET is the collaborative network of scientists and scientometricians working on aspects of collaboration (<http://www.collnet.de>). The most recent ISSI conferences took place in Colima, Mexico (1999), Sydney (2001), and Beijing (2003). Since Sydney, 2001, COLLNET – extra Sessions are part of the biennial International ISSI Conferences. About 45 scientists participated in the session with 12 presentations from 12 countries (9 oral presentations and 3 posters from Belgium, China, Estonia, Finland, France, Germany, India, Iran, The Netherlands, UK, USA and Mexico.) The 7th COLLNET meeting will be held in May 2006 in Nancy, France.

Journal of Information Management and Scientometrics

A new journal, *Journal of Information Management and Scientometrics* was introduced by Hildrun Kretschmer at the extra session on COLLNET during the ISSI Conference at Stockholm. This journal is an international peer reviewed journal (ISSN 0 972-9925) published from Roorkee, India, and incorporates the COLLNET Journal. Proceedings of COLLNET meetings are published in special issues of this journal. Papers presented at the 5th COLLNET Meeting in Roorkee, India, March 2005, are published in the December 2004 issue. This issue is dedicated to Donald deB. Beaver. Papers presented at the Stockholm COLLNET extra Session will be published in the December 2005 issue. Authors are welcomed to submit papers to the journal.

CALL FOR PAPERS:

2006 Annual Conference of Canadian Association for Information Science (CAIS/ACSI)
June 1 - 3, 2006, York University, Toronto. More info: <http://www.cais-acsi.ca/2006call.htm>

The Matthew Effect for Countries (MEC): Its Impact on Information Science

Revised version of a paper presented at the VINITH-CSTI-Conference
Information services for basic and applied sciences,
May 27, 2005, Moscow

Manfred Bonitz

Dr. rer. nat. habil.

Halbkreisstr. 17, Dresden/Germany

Phone: +49 351 4010760

E-Mail: bonitz@fz-rossendorf.de

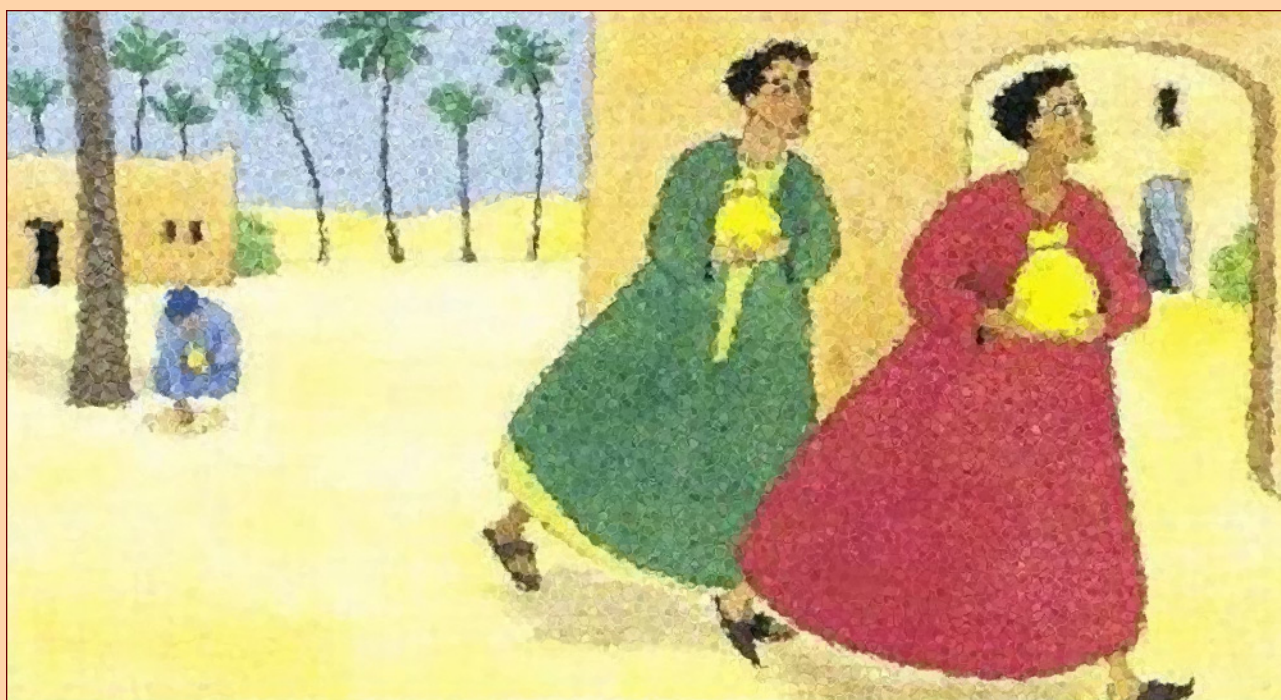
How came the *Matthew effect* into being, what is its essence, and why is it important in our days?

The term *Matthew effect* was coined about half a century ago by the American sociologist of science, the late Robert King Merton, who used the famous biblical parable of the entrusted talents as a metaphor for some social phenomena in science. The parable contains this sentence: “For unto everyone that hath shall be given, and he shall have abundance: but from him that has not shall be taken away even that which he has” [ST. MATTHEW 25:29]. A widespread misunderstanding of the parable’s essence is that quasi-automatically “the rich are

getting richer and the poor poorer”. Rather, “richness” and “poorness” depend, in its most general form, on skill and activity of the “players” involved in the corresponding field.

Merton (1968) did not make scientometric efforts to back the effect.

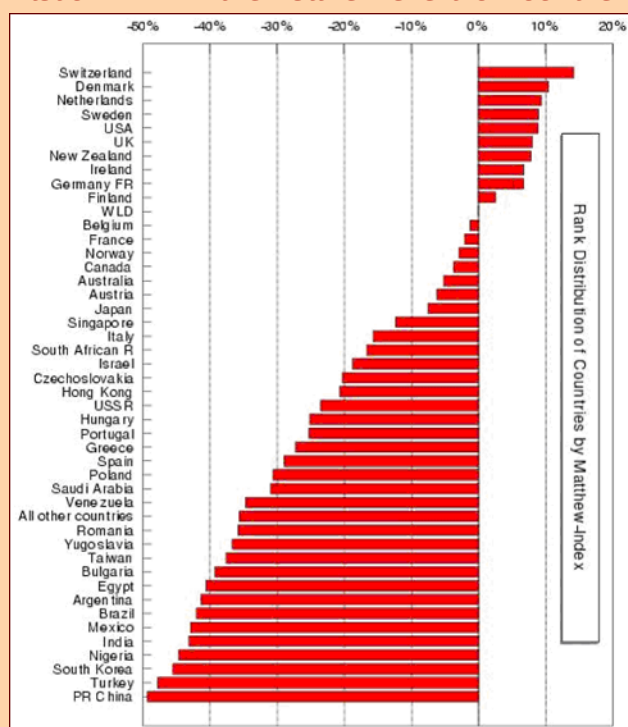
Ten years ago, a quarter of a century after Merton, we (Bonitz, 1997, Bonitz et al., 1997) discovered the *Matthew effect* as a measurable phenomenon in information science. We called it *Matthew effect for countries* because our empirical data covered the 45 most active scientific countries. Only later we were able to understand that the effect has more general



Source: © Albert Hari and Charles Singer: *Das Grosse Jesus Buch*, 1993, Stuttgart: Christliches Verlagshaus. Reproduced with the permission of the publishing house.

features and could easily be named *Matthew effect in scientific communication* because it is not restricted to countries, but valid for scientific papers, authors, and institutions as well.

What have we measured and which were the results? We made, for every country, a comparison of the number of citations which were expected and which were actually received (observed). We found, that “a minority of countries, which is expecting already a high number of citations, is receiving even more citations, while the majority of countries, which is expecting a lower number of citations, is getting even less citations”. This is the *Matthew effect for countries*.



The figure shows that, after some transformation of the data into a suitable index all countries can be ranked, as we might say, by *the effective usage of their scientific talents*.

The effect does not necessarily depend on the physical size of the countries – all Scandinavian countries and Switzerland are playing a significant role in the game.

An effect is not yet a theory explaining that effect. Therefore the managers of national science systems have a lot to think over the consequences emerging from the *Matthew effect for countries*.

A few words about effects in general. There are hundreds of them in the basic sciences, but they occur very seldom explicitly in the social sciences, to which information science belongs.

Yet a simple rule is uniting them all: *any effect is necessarily based on some expectation which by observation (or measurement) can be fulfilled or not*.

In our case the expectation values for each country are derived from the impact factors of the journals in which the nations publish their papers hoping them to be cited as frequently as possible. Each impact factor constitutes an expectation value: it gives the number of citations received by an average paper in that journal. This follows from the construction of the impact factor. Unfortunately – and every scientific author knows that – *average papers* practically do not exist. For example, an author who has published two papers in a journal with the impact factor 5.7 might receive for the first paper 9 citations, for the second only one citation. In the first case he registers a “deviation of + 3.3 citations”, in the second case a “deviation of – 4.7 citations”. These “*deviations from the impact factor*” we call *Matthew citations*.

To our surprise the *Matthew citations* opened a new research front which is not exhausted up to our days (e.g., Bonitz, 2002).

Irrespective of certain strange properties of the *Matthew citations* (they do not exist in reality – they are just computational, they can be positive and negative – but they add up to zero, they are not integer numbers and so on) these *Matthew citations* turned out to play a most independent role in numerous areas of the system of scientific communication. Only a few of them can be named here.

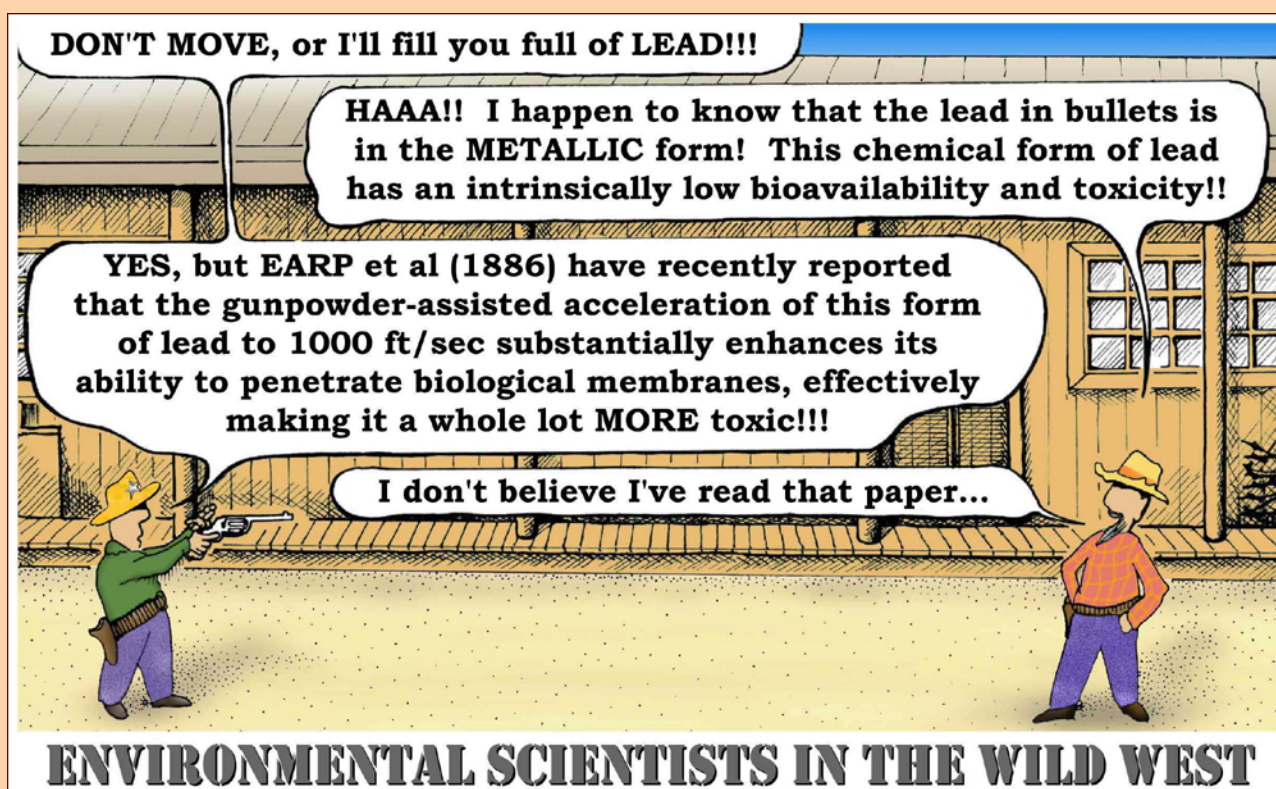
Every scientific journal possesses its characteristic number of *Matthew citations*. This indicator is very skewly distributed over the journals: half of all *Matthew citations* contained in about 3000 journals which we investigated are concentrated in only about 150 journals. These journals we call *Matthew core journals* and we have produced an atlas of them. Quite surprisingly, the *Matthew core journals* appear to be the most important journals in scientific communication, topped by SCIENCE and NATURE.

Due to their additivity, *Matthew citations* do possess a useful evaluation potential, not only for countries – where it all began – but also for papers, authors, and institutions, in other words at

all levels of aggregation in scientific communication. Last but not least: through the *Matthew citations* in journals and their distribution over countries we could establish a link to a science field outside information science, namely to economics. Competition, although in very distinct ways, is an essential feature in the science systems as well as in economy. Scientific journals can be treated as “markets” where competition in science is going on. There exists even a measure for the competition strength in a journal, it is – its number of *Matthew citations*! Neither is the field fully experimentally and theoretically explored, nor even recognized. Further research in these directions would be a good sign of gratefulness to our Biblical forerunners, but also to the father of Matthew thinking in our days – Robert Merton.

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 Wolfgang Glänzel: wolfgang.glanzel@econ.kuleuven.be | Ronald Rousseau: ronald.rousseau@khbo.be | Liwen Vaughan: lvaughan@uwo.ca
 Aparna Basu: basu.aparna@rediffmail.com | Balázs Schlemmer: balazs.schlemmer@econ.kuleuven.be

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