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# Op Ed -- Leveling the Playing Field: Making Interdisciplinary Environmental Research Available

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## Op Ed — Leveling the Playing Field

## Making Interdisciplinary Environmental Research Accessible

by Reid Lifset (Editor-in-chief, Journal of Industrial Ecology, Yale University, 205 Prospect Street, New Haven, CT 06511-2189 USA; Phone: 203-432-6949; Fax: 203-432-5912) <reid.lifset@yale.edu> <http://mitpress.mit.edu/JIE>

In a research community, publishing is a crucial activity. It is not only the route by which results and insights from research are conveyed to the world, it is also the metric by which researchers are recognized—by their peers, by those who fund their work, and by those who decide their professional futures. This dual role of publication—dissemination of information and professional advancement—is a pivotal theme in an article in this issue by **Henrikke Baumann** of **Chalmers University** in Göteborg, Sweden. Baumann examines the role of citation indexing in shaping the status of interdisciplinary environmental journals (such as this one) that publish what she calls “environmental systems analysis” (ESA). She finds that virtually none of the ESA journals are indexed in either the Science Citation Index (SCI) or Social Science Citation Index (SSCI).

To understand the implications of this finding for the industrial ecology community, one must understand the role of citation indexing and the SCI and the SSCI. Citation indexing refers to the systematic compilation of who has cited (i.e., referenced) the work of whom. The SCI and the SSCI are part of the larger world of abstracting and indexing (A&I) services that summarize and organize the scholarly literature for easier access. (The A&I services perform the tasks that provide the data that researchers peruse when they use on-line bibliographic databases. For a list of the A&I services that index the *Journal of Industrial Ecology* (JIE), see inside the front cover of the journal). The **Institute for Scientific Information** (ISI), the company that produces the SCI and SSCI, dominates the world of citation indexing; it is, one might say, the **Microsoft** of citation indexing.

Knowing the pattern of citations is enormously useful. Researchers can track the development of an idea backward or forward in time by using citation indices. They can also judge which articles have been most influential in shaping subsequent research by looking at which articles are most heavily cited. Most relevant here, citation indexing also allows the calculation of the “impact” of journals (i.e., which ones are most heavily cited). Bibliometricians who study these patterns in the form of “journal impact factors” find that a relatively small number of the vast universe of peer-reviewed journals account for the majority of all citations. It is not surprising, therefore, that libraries use this information to de-

cide which journals to purchase, authors use it to choose outlets for their work, and academics use it to make promotion and tenure decisions regarding their peers.

Whether a journal is indexed is thus pivotal to its long-term viability. Baumann’s finding that the ESA journals as a group are unrepresented in the SCI and SSCI poses challenges for industrial ecology and related endeavors. If the research community is to contribute in an ongoing fashion to industrial ecology, then inclusion in this part of the international research infrastructure (with the consequent impact on funding, promotion, and tenure) is crucial. Without participation in institutionalized forms of evaluation, researchers will be led by the demands of professional advancement to work in other fields.

At the same time, one must realize that the importance of citation indexing is lim-

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*That [interdisciplinary environmental] journals as a group are unrepresented in the SCI and SSCI poses challenges for industrial ecology and related endeavors.*

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ited in two ways. First, citation indexing reflects the importance attached to the work of academics by academics (or, more precisely, the importance attached to the work of authors who publish in peer-reviewed journals by other authors who publish in the same sort of journals). It does not reflect the impact of ideas as they are adopted by the business community, by policy makers, or by environmental advocacy groups. Sometimes the most pivotal work in environmental management and policy is published in the “gray literature,” that is, reports, articles, and studies self-published by government agencies, consulting firms, industry associations, think tanks, and so on. In a field such as industrial ecology that has ambitions to have practical influence in the world, the nonacademic marketplace of ideas is important. In fact, in some arenas, academic articles at times serve only to record well-established knowledge

or ideas in the formal, organized scholarly literature, even though the publication of those academic articles has only limited relevance to “real-world” practice or understanding. The published article serves in such cases only as retrospective documentation of a *fait accompli*. The role and importance of academic publishing is probably clearest in the traditional sciences, where peer review has the most straightforward implementation and where the gray literature has a minimal role.

The tension between publishing in the formal, academic literature and in the gray literature is exacerbated in the industrial ecology community, where many researchers rely on funding from sponsors, such as environmental agencies, interested in analysis of real-world problems rather than knowledge production per se, as is the case with national research agencies (e.g., the U.S. National Science Foundation). Although real-world problem solving and knowledge production are not necessarily in tension, for researchers devoted to real-world analysis and problem solving, publication in academic journals is yet another task to add to their overcrowded professional agenda. Nonetheless, getting the knowledge from such investigations into the formal literature is crucial: the academic literature is conspicuously better organized and indexed than the gray literature, and it has the obvious distinction of being peer reviewed. This is a key reason why the *JIE* straddles the roles of an archival journal of record and disseminator of current research and practice.

Complicating the situation further, the world of academic journals is in transition as a result of the rise of electronic publishing. The primary “unit” of scholarly publishing is moving from the journal (or an issue of a journal) to the article. Many pundits in the publishing industry expect the importance of journals as “packages of articles” to diminish over time, eclipsed by individual articles connected via linked citations and keywords, disseminated electronically and highlighted by table-of-contents alerting services. New one-stop federated search overlays will soon make cross-database electronic searching immediate and transparent.

Until these developments come to pass, however, citation indexing and its impact on the research community will remain important. And even if journals


*continued on page 40*



qua journals become less important, scholars will still have good reason to track citations—because the pattern of citations provides critical insights about the flow and influence of ideas. Further, if journals do become a less significant organizing vehicle for scholarly publishing, peer review, and citation indexing, along with the implicit status and quality hierarchy that they create for journals or other publishing media, will continue in some form. Thus, it is likely that citation indices in some form will persist despite the dramatic changes in the world of scholarly publishing.

The *JIE* is working hard to get into the SCI or SSCI. (As **Baumann** points out, it is not obvious in which index the *JIE* and related interdisciplinary journals belong. This may be part of the problem, but that is a topic for another day.) The **ISI** makes the decision to include journals in its indices based on the journal's basic publishing standards, its editorial content, consistent on-time publication, the international diversity of its authorship, and the citation data associated with it. Use of international editorial conventions, English language article titles, abstracts, and keywords, and the use of peer review are also prerequisites.

The prospects for getting the *JIE* into the SCI and the SSCI are good. The *JIE* is indexed by twelve **A&I** services. It has been favorably reviewed by the prestigious journal *Nature*. It is rated as an A in the journal ranking system of the **Vienna University of Economics and Business Administration** ([http://hal.boku.ac.at/fao/journal\\_ranking](http://hal.boku.ac.at/fao/journal_ranking)). The larger challenge to the industrial ecology community revolves around whether and when other allied journals are picked up by the SCI and the SSCI. Unless multiple journals in our field are covered by the citation indices, the actual impact factors for articles in the *JIE* will be artificially low.

One moral of this story is that we must all be sure to cite our colleagues, even when they are our intellectual competitors, as this both influences the citation indexing calculations and increases the likelihood that the allied journals will be carried by **ISI**. We sink or swim together. A second moral is that the institutions that provide the framework for our research and our efforts to improve the world are important, complicated, and difficult to change, but most definitely worthy of our attention. Researchers and practitioners need each other, and the systems that undergird our professional work need to support rather than inhibit that interaction. 

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## Interview with Andrejs Alferovs

### Vice, President, Sales and Marketing Coutts Library Services

by **Jack G. Montgomery** (Editor, *ATG*) <[jack.montgomery@wku.edu](mailto:jack.montgomery@wku.edu)>

**ATG:** *Andrejs, I understand that you're new to Coutts North America. Tell us a little about yourself.*

**AA:** At the **ALA/CLA** I attended the **WESS** meeting to present the **Coutts Nijhoff** award. It was the first time that I had been to a gathering where most of the delegates knew my background from my name and I must say that this is a tribute to the members of **WESS**. Well, they were almost right. I was born in England but both my parents came from Latvia at the end of the second World War. They actually met in Bradford. I was born and raised as a Latvian in the U.K., going to Latvian school on a Saturday, learning the language, history and culture. It was pointed out by members of **WESS** that my accent was not very Latvian. That is because I was brought up as part of that little known tribe, the Yorkshire Latvian.

In many ways I am a typical Brit — I like warm beer, real football (soccer) and rugby. I am starting slowly to receive my North American sports education. But having arrived in the Niagara region in early January during one of the coldest spells in recent history, I have had very few opportunities to sample outdoor sporting life, but hopefully this will arrive during the summer.

I realize that it sounds a little clichéd, but I have always had a love of books — my education was definitely more on the side of the arts. As a typical arts graduate, one had to think about employment and when I saw the advertisement to work in the Slavonic Section at the **British Library** I thought that this would be for me. So I started my career at the **British Library Document Supply Center** working in various departments including both serial and monograph acquisitions.

**ATG:** *Tell us a little about your position at Coutts? What if any specialized training or education did you receive before getting into the book business?*

**AA:** It really has been a progression of experience and education. The **British Library**

gave me my start and during this time I gained a post-graduate Diploma in Librarianship and Information Work (a sort of **MLS** equivalent of its time). In my final post at the **BL**, I worked in Monograph Acquisitions and it was there that I was offered a post as Area Sales Representative for **Holmes MacDougall**, a U.K. Library bookseller, with a core client base in the public library sector.

From there I moved into publishing with **HarperCollins**, where I spent five years working in sales and looking after key accounts in wholesale and library supply. Working with **HarperCollins** gave me very sound sales training — in a very tough and highly competitive environment. They had numerous restructures during my time there, not least when **Rupert Murdoch** merged **Collins** and **Harper and Row** — in many ways this gave the taste of things to come in the publishing and library supply industries during the 1990's.

I suppose I never really wanted to leave the library world, despite some of the glamour of general trade publishing. However, I could not resist the draw when I decided to join **Faxon** to run their fledgling operation in the U.K. During this time the company sponsored my Diploma in Company Direction. However, the company was to remain fledgling despite our hardest efforts as the European Division was sold off in 1994 to **SwetsBlackwell**.

It was at this time that the Managing Director of a young British company, **BMBC**, approached me to run their sales operation. The business developed quite rapidly during a dramatically changing bookselling landscape in the mid 1990's, especially with the impact of the collapse of the Net book agreement in the U.K. I was appointed to the Board in 1996.

**ATG:** *Can you tell us a little bit about the company's history and its overall philosophy?*

**AA:** The **Coutts Group** has evolved from the merging of four companies, **John Coutts Library Services** in the U.S.A and Canada,


*continued on page 42*

#### TEACHing Online: from page 36

- ✔ Don't put it on your open Website; use course management software that will authenticate the student.
- ✔ Make sure only students that are registered in your class (or grad assistants) can access course material.
- ✔ Show the performance only for a limited time period.
- ✔ Make sure students can't copy, download, or pass on to others.

✔ Inform students that material is copyrighted.

✔ Follow university rules.

Distance education holds the power to change lives by eliminating many of the social and geographical barriers to higher education. With the recent changes in copyright law, distance educators can finally do the same things via course management software that they can do in a traditional classroom. With these changes, the promise of distance education can finally be fulfilled. 

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