

## 16. Can independent and Qualified Science Communication Survive in a Time Dominated by Institutional Interests?

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**Abstract.** Quality control for research has been performed by independent academic journals. This system is under threat because competing universities and libraries fighting for their mission are reacting in ways that have negative consequences for those journals. Governmental intervention can secure their continued existence but probably at the cost of the loss of academic freedom.

**Keywords:** Academic journals, Libraries, Quality control, Science communication, Universities

### Introduction

#### *Quality control by peers*

For many centuries quality control for re-search has been performed by peers and published in free and independent journals. This system functions as a gatekeeper to ensure suitability of the published manuscripts.

The work is made under the supervision of editors that often are chosen from the best researchers in the respective field. For each submitted article their job is to find the best experts on the article's topic and have them—often two—to give their opinion about the article in a long row of questions about its originality and precision in its presentation of the subject, and the validity of the theories and the data behind and its theoretical discussion in the international research society. At last they give their judgement: yes, perhaps, or no to publishing. Often the answer is

“perhaps” and the author has to improve the manuscript.

After this process accepted articles go through another quality process where the language is edited and made precise, with working illustrations, proof reading, lay out, keywords, control of references and much more.

Indeed, the peer review process has secured the progress of research. Consequently, articles that have been published in such journals have served as a reliable source because journalists could trust the quality.

#### *The quality process made in freedom*

This system is managed by independent journals and publishers. The expenses for the editorial process have been paid for centuries by selling the journals to subscribers with a little support from a society or fund.

Under this system, the editorial process has been carried out independent of institutions, universities and the state bureaucracy, functioning as pretty near the ideal to secure “the truth” with a very long arm-width away from politicians and administrators. Often 70 per cent or more of manuscripts submitted are rejected regardless of who the authors are or with what institution they are associated.

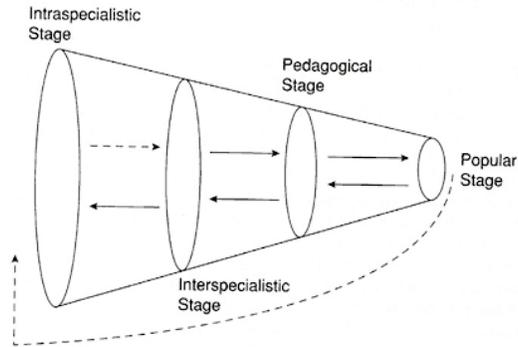
This is very important for the development of science when this judgement is carried out away from institutional and political interests. The other quality systems in the academic world—the examination of students and the employment of teachers and researchers—is made in the institutions, which are often a battlefield of different institutional and political interests.

#### *The perfect public communication process*

This quality system has been the background for the process for the public communication of research. The communication process is not directly from the researcher and to public in a linear model but through several steps in a communication process.

This process is described by Bucchi (1998). As seen in the illustration, the intraspecialistic stage refers to peer reviewed academic journals. The knowledge is published in journals intended for scientists from all disciplines, such as Nature or Science. The next stage is the pedagogical stage with textbooks and popular science journals, and at the end we have the popular stage with TV programs, newspapers and other mass media.

This ideal communication system ensures that the information in the popular stage is trustworthy and valid because it has been through the quality process.



## The Threat From Universities

### *Bypassing the quality process*

Unfortunately, this communication system has changed over the past decade. The communication often happens directly from the researchers (or their institution) and to the popular stage as shown in the bypassing large arrow. At first it could look like an improvement: more research to be published. But when information jumps over the quality process in the peer reviewed journals, the information is published on the conditions of the popular media. It is obvious that the journalists in the tabloid press are not interested in the academic truth or able to judge anything about the quality of the information. They have only one goal, gathering information for a good story.

Therefore we will have a lot of stories about new science breakthroughs that will give cures against cancer and new optimistic forecasts about the enormous potential, fantastic possibilities, and the next industrial revolution.

Of course the popular media always had this goal of a good story, but when news comes from academic journals the information was neutral and not marketed with more power than information from other articles in academic journals.

### *New administrative steering instruments*

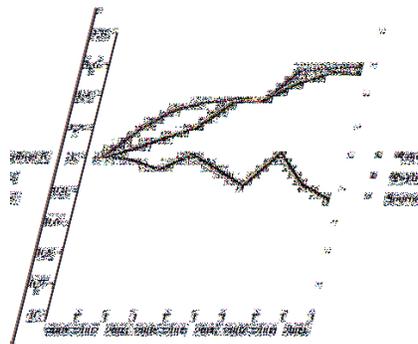
Today, strong institutional interests result in attempts to bypass this system in order to highlight themselves. Regrettably, these institutions are universities.

For example the press coverage in itself is a positive factor. In the performance contract between the Science Ministry and the University of Copenhagen, this measure was counted by the citations in the newspapers. In 2008, the measurement of the success showed an increase of 5 percent.

Please note that there is no effort to track the quality of this press coverage. The object is solely to have a higher number in one of the most popular steering instruments for administrators—the spreadsheet.

The development is the same at all Danish universities. The focus is massive at the managerial level at the universities, and the results are obvious. The diagram below shows the development of the mentions of the universities in Copenhagen and Aarhus compared to the mentions of the Danish top journals in leading newspapers.

The increase of press coverage is enormous for the university stories and the coverage of news through the academic journals is stable or has a tendency to decrease.



***Strengthen of institutional interests***

This institutional egocentrism exists at the expense of the interests of science itself. The attempts at self-

promotion are rooted in various causes.

Foremost the universities are in strong competition with each another. Students are choosing universities based on many factors. Also, universities compete for the best teachers, attention from politicians, and access to large funds.

In an attempt to gain a competitive advantage, universities are arming their information departments with journalists and other communications experts. Those new members of the bureaucracy are trying to sell their institution to the mass media and convince them of their particular university's value and superiority. By using in-house media experts to market directly to the media, these universities are short-circuiting the academic quality control process, given that they bypass a review by independent editors.

***Consequences for the academic journals***

The bypass is not aimed at the university managers but an unintended result of a longer development. The universities are "businesses" with the claim from the governmental administration that they have to be managed by professional management persons.

In Denmark this development was stated by a new university law in 2003 and after that each headmaster, head of a faculty and head of department was appointed by the board and not by his or her peers.

University policy about the learned journals has changed. They are desirable institutions but instead more of a burden.

The examples from the contemporary history of journals are many. For example, the journal *Tidsskrift for Arbejdsliv* is ranked in the official list of improved academic journals. Its chief editor is from the Danish University of Education, some articles are written by researchers from the university, and the journal is used in the education and research at the university. The university does not support the journal—it had to pay a high rate to have its editorial address at a university; in fact, the university does not even have a subscription to the journal. The central institution in relation to the journal has used large sums of money to create its own journal to promote its own researchers.

This story shows the disinterest in journals and activity directly against the journal content. Many editors are asked to stop their work for cross institutional journals; it is well known that academic journals have difficulty attracting qualified editors.

## The Threat From Libraries

***The destruction of journals***

This chapter will discuss a policy with a rather calculated aim to destroy the publishers of academic journals. Seen from the perspective of the journals, they are presented by political demands to put their articles free on the Internet without compensation. This demand is made by powerful governmental institutions that are trying to force the researchers to follow this policy.

The economy of the journals is affected by this policy because until now the income from the journals has come from selling subscriptions and copies. Therefore the journals will miss its economy to pay for expenses for the editorial process.

The result can be catastrophic for the academic world. In 2007, one Danish research council demanded that the journals it supports should publish their articles for free after one year after publication.

This mandate had serious consequences. One of the journals lost 25 per cent of its subscribers in two years. It had to cut its editorial expenses and reduce the numbers of pages by 20 per cent.

Not all journals get off that lightly. The researchers behind six of long standing journals chose to stop the journals; Danish researchers have lost journals established in 1866, 1914, 1955, 1967, 1969 and 1993.

This policy that was set for a few journals is planned to be expanded to all Danish and foreign journals with articles from Danish researchers. The government is working with plans to mandate all researchers to archive their manuscripts in public repositories. Those repositories will function as public-supported publishing in competition with the journals with paid subscribers. When the public sector offers manuscripts for free the competition with result in the same mechanism as mentioned earlier. The journals will miss income and many had to reduce their quality work and number of pages or had to stop publication.

***Partly a planned destruction***

The policy is dangerous because its consequences may be to destroy academic publishing. However, the policy

is made by research libraries and has as one of its aims to weaken publishers.

The explanation is twofold. First, the university libraries are threatened by the technological developments when publishers deliver not only the journals but nearly everything in a digital format. Librarians no longer write on index cards, put journals on bookshelves, retrieve them from borrowers, keep track of loans, etc. Instead, they buy a large packet of subscriptions through a discounted deal. Therefore the policy is a way to maintain the existence of the libraries through building and running databases.

The other part of the explanation is that libraries have an increasing number of journal subscriptions. The numbers of journals are proportional to the numbers of researchers and because of an increase in the numbers of researchers in China, Brazil, India and other countries, more research is done and this research has to be published.

Publishers try to have this research financed by their traditional customers in the U.S., Europe and Japan, and the rise in prices for this—and new digital services—is too much for research libraries.

In reaction, many libraries now require a model of open access called “author self archiving.” Through an international lobby, librarians have pushed for a requirement for researchers to archive their research in databases organized by librarians. With acceptance of this model, librarians could maintain a central role in the future.

At the same time the free manuscripts in databases should give a competition to the greedy publishers to have the subscription prices lowered. This is a well-known argument in the Open Access debate and mostly stated by the “inventor” of the “green” Open Access, Stevan Harnad.

### ***Libraries are stronger than journals***

It can be a surprise to see that the library sector is setting the policy on such an important area in the academic world, but there is an explanation based on organizational matters.

At the universities the research library is a total service that literally has a cable through all departments. The libraries are not competing against each other—at least not that much—while the departments compete against each other. All parts of the library system have to work together because the idea is to have one common infrastructure system. A unified sector is stronger than a fragmented larger one.

The journals, the other part, are not an organic part of the universities as previously discussed. All parts of the universities have the advantage of the journals but they do not have ownership of them. They are not responsible to journals with editors from competing universities on their editorial board.

## **State Intervention Necessary**

### ***An international development***

The development in Denmark is happening all over the world. The competition among universities has increased in the last decennium. The internationalization has increased and students often are encouraged to study at several universities (often abroad) to get an international personal network. Therefore the universities compete for students and their money.

There is an international competition for the best researchers and teachers to be more competitive, and the international competition for money is increasing not only for EEC resources but money in cross-national funding of research projects.

On the organizational level, the development against a managerial dominated university happens in parallel helped by reports from OECD and international conferences with this message. The political system in the EEC is built much more on central planning than the original decentralized academic cooperation; therefore much of the policy from EEC is centralized in its scope.

The research libraries are working internationally in very strong organizations where many have a very articulated target to work with lobbies at an international level.

First, the American libraries got a very narrow cooperation through the Association of Research Libraries and in 1997 the organization established SPARC as an organization with a strong focus on lobbying and fighting publishers. This organization has a European branch, SPARC Europe, founded in 2001 as one of many public funded lobby organizations. One of them is Knowledge Exchange, an organization between Danish, British and Dutch lobby organizations.

These lobby organizations have been very successful in lobbying against the EEC and other international organizations.

Intervention is necessary but dangerous

Unfortunately, all the approaches mentioned pose a severe threat to high quality journals. None of the players mentioned will voluntarily change their policy. The consequences will be visible at different times in different areas.

First the small journals in the humanities and social sciences will be hit by the policy. They are often small because they focus on regional cultures and local societal conditions contrary to the STM (science, technology, and medicine) with their international approach. Often the journals are published in a native non-English language, too. At the same time the humanities and social sciences are the weakest sectors in universities because the managerial ideology often will favour practical business. The small secondary international journals will be hit by the policy second.

On the contrary, the big publishing houses will be strengthened by this development. When their competitors are weakened the large players will stand stronger. Only an intervention from the state can stop the worst consequences from occurring. Yet, this action will rob the journals of their academic freedom, possibly leading to a negative impact on their quality, and of course will be a threat to the academic world itself when the political system is so close to publishers. The political system can arrange its money to “kind” areas while more critical areas will be suppressed. In the editorial process the editors can make other decisions to please the paying hand rather than the academic truth.

### **About the author**

Jørgen Burchardt is chairman of the Danish Science Editors and member of the board of the Danish Science Journalists Association. He is a researcher with many books about knowledge dissemination and business development. For more than 30 years he has worked as an editor of national and international academic journals. In 2001 he organized the first Danish peer-reviewed Open Access journal.

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