

The Roquade project. The library as a catalyst of change in scholarly publishing.

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Abstract

Due to a number of problems the traditional scientific journal has become an obstacle for efficient scientific communication. Several initiatives have been started to realise other ways of academic publishing, using modern information technology. One of these initiatives is the Roquade project, initiated by the libraries of the Dutch universities of Utrecht and Delft. It aims at creating an infrastructure that conglomerates the swiftness of publication which hitherto could only be realised by grey publishing, with quality judgement without the serious delay of the traditional review procedures. Roquade offers a wide number of facilities to a broad audience, based on a common organisational and technical infrastructure. The extraordinary aspect of the Roquade project is marked by the fact that this variety of possibilities constitutes an expeditious way for gradually changing the publication behaviour of scientists.

The project has been started by two university libraries, which consider it as their mission to cover the entire information chain. By reallocation of funds and training of library staff, traditional library functions are gradually replaced by innovated library functions or entire new functions related to the extended mission of the library.

The paper describes the Roquade project, its philosophy, organisation and first results, but also the rationale behind the library's involvement in scholarly publishing.

1. Introduction

Developments in information technology have consequences for the processes of scientific publishing and scientific communication. It is to be expected that these processes will change drastically. This paper analyses these changes and addresses the question whether a university library might have a future role in electronic publishing. It also describes the Roquade project, initiated by the Dutch university libraries of Utrecht and Delft, which aims at creating an infrastructure for electronic publishing. Finally, it deals with the recent initiative Signal Hill aimed at setting up a community of practice for academic e-publishing initiatives.

The structure of the paper is as follows:

Section 2 describes a number of important trends relevant to the future of scholarly publishing. Section 3 is concerned with the role of a university library in publishing. In section 4 is explained how innovative projects like Roquade are started and embedded in a library organisation. Section 5 describes the Roquade project, section 6 Signal Hill, a recent initiative to stimulate interaction and co-operation between academic e-press initiatives. Finally, section 7 draws some general conclusions.

2. Some important trends

The information chain

The role of the library and as well as that of the publisher are often described as links in the information chain. There are currently various problems connected to the information chain. The chain stretches from information production to consumption. Traditionally, the various stages have been strictly distinguished in terms of the chain's main functions, i.e. information production, distribution, acquisition and consumption. Clearly identified parties, such as the publisher, the subscription agent and the library, carried out these activities.

This chain is usually represented schematically. The traditional representation was fairly simple. Lately, however, it seems to have become more complex due to the pressure of an ever-expanding information stream

and as a result of various technological developments. It has even been suggested that the chain is about to explode. However, this metaphor of an exploding chain or cycle is not accurate. The chain is not about to burst at all. In fact, it is the amount of information that is growing explosively, and this is due to the way the information is being transferred. Yet, all the functions in the traditional information chain, i.e. production, distribution, acquisition and knowledge consumption, can be carried out at a so-called integrated work site. Within this context, the image of an imploding chain would be more appropriate, since the system is starting to shrink due to the pressure exerted by the environment.

The configuration of functions within the information chain has been subjected to change, whilst within this changing constellation, all the parties involved are struggling to determine their positions. For instance, all kinds of arrangements have been made between universities and publishers to facilitate the harmonious exploration of their new roles. However, it is important for all parties not to remain fixed in the traditional chain. In view of the developments taking place in the field of information provision, it is clearly necessary to experiment creatively and innovatively with new roles instead of adhering to traditional patterns. All forceful attempts to preserve the old structure will not only impede development as such, but will also expose the structure to the increasing danger of arbitrary disintegration.

The serials crisis

The philosophy behind the familiar adage 'publish or perish' has resulted in a noticeable growth in the number of scientific papers. As a consequence of this growth, considerable problems and bottlenecks are impeding the traditional system of scholarly publishing (see also Savenije, 1997).

1. The system is sluggish: it takes at least six months, sometimes up to a year and a half, for a submitted paper to actually be published.
2. There is increasing doubt as to the system's reliability, particularly since reviewers could use their prior knowledge to take advantage.
3. The system is becoming unaffordable due to considerable price increases that sometimes exceed the general price index. These price rises lead to subscriptions cancellations which in turn stimulate new increases, eventually evolving into almost monopoly-like situations.

Furthermore, we must be aware of the fact that, in addition to these price increases, universities have to pay for these publications more than once, because they also fund:

- the salaries of university staff members who write the articles and papers;
- the salary of the reviewer who, at the request of the publisher, judges whether the articles are suitable for publication;
- the publication's purchase price;
- the archiving of the publications.

A number of problems might be solved with the help of information technology. However, this calls for an innovative attitude towards publishing. Presently, it can be observed that traditional commercial publishers are reluctant to experiment with innovation.

3. The role of the university library

From the trends described above we can conclude that the academic community should endeavour to keep the processes of scholarly publishing in its own hands. Furthermore, universities should use the possibilities offered by information and communication technology to experiment with new publishing models in order to incorporate and emphasise the essential aspect of communication in scholarly publishing.

Traditionally, the university library is responsible for selecting, collecting, preserving and providing access to information. The publisher's distinctive tasks in the information chain are distribution and quality certification. The distribution of electronic documents is a process that shares many similarities with the library's function of providing access to information, particularly when this task is combined with storing and preserving. Regarding quality certification, the peer review is carried out by academics and organised by publishers. There are two obvious organisational alternatives to this:

- the process is organised by publishers, who act not as owners of the information but as service providers hired by the university;
- the process is organised by libraries. One of the advantages of this alternative is the possibility of direct contacts between the library and the scholars and their personal networks.

When the publishing processes and the publishing output are electronic, the support processes that enable scholars to publish their results share many similarities with the digital library tasks. If the academic community wishes to take control of scholarly publishing, an organisation within the university will have to organise the support processes and the back office functions that facilitate scientific publication. The university library is the natural candidate, provided that it is able to make the transition from a traditional to an electronic library.

Two aspects of electronic publishing support can be distinguished (Savenije & Grygierczyk, 2000).

The first aspect involves tasks carried out for the benefit of the 'parent institution' of the library, the university in which the library is embedded. The priorities are to store, preserve and providing access to the university's scientific output (e.g. its own publications). These tasks are very close to traditional library activities. The essential objective of these tasks is to create a digital archive of the scientific output of the university, to preserve this information and make it accessible to the academic community, within as well as outside the university.

The second aspect is more discipline-oriented and takes into account that scientific publishing and communication are not limited to one institution. This is the role that emphasises the necessity of new publishing models that enhance scientific communication, accelerate the exchange of research results and organise open discussions in knowledge domains. The facilitating role of the library in this context is mainly performed by organising the processes needed for electronic publishing. Researchers can put their papers on the website of their institute or initiate electronic journals, as well as experiment with publication servers and new peer review models. The initiative for these activities will come from researchers within faculties, from research institutes and learned societies, but they will be able to make use of the back office support provided by the library, including the organisational and technological capacities.

4. The innovation policy at Utrecht University Library

Due to the developments in information technology a library needs to reconsider its services, but also its strategic position in relation to its environment: its "parent institution", and the other partners in the information chain. This inevitably leads to the need of rigorous innovation.

With respect to the question of how this innovative process needs to be organised, a number of factors is of importance.

First, the innovation process requires a certain amount of creativity.

Secondly, the innovation process is no simple matter due to number of factors:

- The complex organisation of the university library: the relationship with faculty policies often results in organising several branch libraries, which are part of one or several faculty structures.
- The many different categories of library services involved: this implies a comprehensive approach in which a large number of people must participate.
- The rapid technological developments: changes in standards may interfere with the plans concerning the process of change; therefore, a flexible approach is needed.

These factors underline the importance of the special attention the library management must pay to the innovation process.

Project organisation.

The best manner to realise innovation is to introduce a temporary separate organisation assigned for the sole purpose of the innovation project. Or, to be more specific, a project organisation with independent responsibilities, a special project manager, and a separate budget.

As a matter of fact, this is the only way to observe the deadlines and monitor results in a detailed fashion.

When looking more closely at the innovation process, we notice that it actually consists of a large number of subsidiary projects, each with discriminate objectives, different time spans and budgets, as well as various project leaders.

Of vital importance to the project organisation are:

- a general project manager,
- a few project co-ordinators,
- one or more steering groups,
- a number of work groups.

The tasks of the overall project manager comprise:

- the co-ordination of the project as a whole,
- guiding the project co-ordinators and the various project leaders,

- monitoring the progress of the subsidiary projects,
- taking care of external contacts,
- defining and initiating new projects,
- preparing requests for external grants and subventions.

The general project manager is supported by a few project co-ordinators appointed to support a well-defined range of subsidiary projects, e.g. for projects having an infrastructural nature. Furthermore, every separate subsidiary project needs to have its own project leader.

The general project manager is not to belong to the staff of any library department and should report directly to the library head management. The project co-ordinators are appointed to work exclusively for the project. The remaining participants should only be partly relieved from their regular activities and must combine their innovation process contributions with their regular job.

The transfer of results to the regular organisation

During completion of each subsidiary project, the results for the regular organisation should be clearly determined. As to the transfer of results, we can observe the following possibilities:

- The project in question does not require a follow-up in the organisation. Either it has proved to be unsuccessful or, considered from a strategic point of view, it is advisable not to continue the involved activity.
- The project result is of strategic importance, however as of yet does not prove to be ready for transfer to the regular organisation. In that case, it should be continued as a strategic innovation project supervised by a separate project organisation.
- The project in question is prolonged within the regular organisation, either as a project or as a new regular service. In this case, the consequences for the involved staff must be specified: the number of staff required as well as their (new) qualifications.

Actually, the transfer of results to the organisation as a new regular service is the best way to safeguard a project's results. In our approach this can be done as follows:

- involve regular library staff in the projects as well as in the description of the activities involved in a new or renewed service or product as a result of the project;
- the new activity should be implemented within one of the regular departments;
- if the staff members involved in the project are functioning satisfactorily, they are the first candidates for the new regular job that may evolve out of the new activity;
- guidance should be given to the implementation of the new activity by training programs for the staff involved, detailed descriptions of the procedures to be followed, evaluation and (if necessary) adjustment of these procedures.

This process has a number of advantages and disadvantages:

- because of the training of the staff involved, the process described takes almost twice as long, compared with the situation in which experienced project staff is hired; but
- there is more commitment of the participating staff to the results; and
- at the end of the project the activities can be taken over by the regular organisation immediately.

5. Roquade

Roquade is a joint project of Utrecht University Library, Delft University of Technology Library and the Netherlands Institute for Scientific Information Services of the Royal Netherlands Academy of Arts and Sciences. The objective of the project is to set up an infrastructure for electronic publishing. Its mission is to enhance scientific communication by offering scholars a wide variety of facilities and organisational structures, aimed at gradually changing the publishing habits of scientists. The *raison d'être* of this mission is the fact that a relatively large number of scientists still hesitate to use new publishing methods which would liberate them from the monopoly commercial publishers have with respect to the publication of new research results. *Roquade* presents the academic community with an infrastructure for electronic publishing, which facilitates a gradual revolution from traditional publishing to very innovative models. Close Cupertino with similar organisations constitutes a crucial factor in *Roquade's* mission.

Its main features are:

- Enhancing scholarly communication in its full diversity,
- Supplying knowledge, tools and people in the publishing area ,

- Not profit driven,
- A community of practice.

The point of departure is to safeguard the interests of the authors and the academic community. The project is directed towards all disciplines and concerns Dutch publications as well as international initiatives (Savenije & Grygierczyk, 1999; see also <http://www.roquade.nl>).

The main structure of the project

To understand the main structure of the project it is necessary to know that *Roquade* comprises:

1. a number of subsidiary projects with three different variants:
 - a. a moderated pre-print service for grey literature
 - b. electronic substitution for traditional publishing
 - c. a publication site with different peer review models
2. a subsidiary project aimed at a technical and organisational infrastructure which is common for all variants

The first variant consists of a moderated pre-print service for grey literature. In this subsidiary project, grey literature is defined as publications, which are moderated but do not have a formal independent stamp of approval. In this case, dispatch prevails over time-consuming quality judgement.

The second variant can be described as electronic substitution for traditional publishing. Two categories of publications can be distinguished:

- dissertations and conference collections
- scientific journals

There are two subsidiary project types concerned with scientific journals:

- Publishing new and existing electronic journals: this involves providing support to editors who prefer the traditional form of electronic publishing, in which the electronic journal is an electronic 'copy' of the traditional paper journal.
- Co-publishing: setting up a series of digital publication services for publishers, for instance for electronic versions of existing paper journals.

It appears that most of the editors, who are interested in setting up an electronic journal, want to begin in a more or less traditional way, which involves mainly text and pictures. The concept of volumes and issues, typical of the paper journal, is maintained in the starting phase and, as in the case of traditional paper journals, peer review takes place before publication.

Gradually, a whole spectrum of additions and alterations are possible:

- the concept of issues will become obsolete as work is presented as soon as it is ready for publication;
- research data can be added;
- communication and discussion facilities can be added;
- multimedia can be used to enrich the publication.

The third variant is a publication site with peer review. The main feature of this variant is the initiation of a series of pre and post-publication peer review processes, which makes as much use as possible of experience and knowledge gathered in traditional and digital academic publishing processes. Subsequently, the traditional process of peer reviewing is to be transformed into several new types, thereby preserving the traditional advantages as much as possible. Simultaneously, the benefits of the new medium and organisation should be exploited to the fullest extent. In this variant it is possible to achieve speed without omitting the time-consuming peer review process by delaying peer reviews until after publication. This variant also offers the possibility of experimenting with different forms of quality assessment.

These variants reveal the main objective of the *Roquade* project: a gradual transition from less innovative solutions (for instance a publication site for grey literature or a traditional electronic journal) to more innovative solutions (such as a publication site with post-publication peer review). Not is this objective feasible, in some cases, it is even natural.

The phases of the project

In the project the following phases can be distinguished.

1. The preparation phase (May 1999– July 2000)
This phase comprises analysis and a user survey, assignment of project activities and setting up collaborations with similar initiatives and organisations.

2. The start-up phase (September 2000 – December 2001)
The main elements of the start-up phase are:
 - a. Setting up the infrastructure:
 - the organisation and the production process
 - availability and presentation
 - archiving and storage
 - security and authorisation
 - b. Pilots for each variant:
 - moderated pre-print service for grey literature: facilitating the transition to variants with peer review
 - launching new electronic journals
 - co-publishing initiatives
 - publication site with peer review for one or two selected disciplines
 - c. Financing
 - d. Evaluation

3. The development phase (January – July 2002)
The objective of this phase is to adapt and further expand the organisation, on the basis of the experience acquired in the pilot projects. The result should be a viable organisation with a good reputation.

4. Expansion phase (July – December 2002)
The objective of this phase is scale enlargement of:
 - available material. This involves initiatives for increasing the number of journals, articles and grey literature on offer, increasing the number of disciplines and setting up new initiatives for collaboration.
 - the audience, by means of focused PR activities.

At this moment the project is in the starting up phase, in which the infrastructure is built up and, contemporarily, tested out in satellite projects.

The organisation

The organisational structure of Roquade is as follows:

- A steering group. This consists of the library directors of the Dutch Royal Academy, and the Universities of Delft and Utrecht, plus a general project manager.
- A back office, consisting of a co-ordinator and a pool of specialists in Delft, Utrecht, Amsterdam for the maintenance and upgrade of self-publishing and administrative tools.
- Front offices, which are franchisees of the Roquade brand (Delft, Utrecht, Amsterdam, and new front offices, together with a central contact and help-desk.
- Satellites: these are autonomous publishing initiatives and projects. They, in fact, are the clients of the front offices.

With this organisational structure Roquade hopes to prevent the presence of a strong intermediary organisation which sooner or later will have its own persistence as an important goal, thus becoming an obstacle for self-publishing initiatives.

Current Roquade satellites

The current Roquade satellites are:

Journals

- International Journal of Integrated Care
- International shipbuilding progress
- European Journal of Transport and Infrastructure Research
- Kronos - Journal of Cape History
- Veterinary Sciences Tomorrow
- The Veterinary Quarterly
- Ars Disputandi
- Studies in Mycology
- Ancient Narrative
- Neerlandistiek.nl
- Cahiers voor Geschiedenis en Informatica

Journals in co-publishing

- Pedagogiek
- Tijdschrift voor Hoger onderwijs

Publication sites

- Design Research Internet Magazine
- Interactive Publication: European Journal of Transport and Infrastructure Research
- Syntactic Microvariation

Grey Literature

- Newsletter Historia & Informatica
- Unitwin Series for Namibia

6. Signal Hill

Signal Hill is a recent initiative of the University Libraries of Utrecht and Delft (initiators of the Roquade project) and Firenze University Press to stimulate interaction, communication and co-operation between academic e-press initiatives (<http://www.signal-hill.org>).

Mission

Signal Hill is a European partnership for academic publishing. The aim of the partnership is to create a community of practice for organisations engaged in electronic academic publishing to enable them to combine forces and share their experiences.

Initiatives have been introduced in several countries in Europe to support academic publishing without involving traditional commercial publishers. Information technology is being used to create an infrastructure to facilitate and promote academic publishing by scientists and scientific communities, with an emphasis on communication. The main objective of some of the initiatives is to promote new models of academic publishing; others have as their core objective to make the scientific output of their own institution or of a well-defined group of scientists widely available. If this kind of publishing is not free, at least it is less expensive and user-friendlier than traditional forms of publishing. New business models are still being developed and elaborated.

Signal Hill targets university presses, libraries and research organisations that are involved in electronic academic publishing.

The objectives of the partnership are:

- to create awareness of innovations in academic publishing;
- to share experiences with new methods of (supporting) academic publishing;
- to share support software for academic publishing;
- to share access to publications;
- to present linking facilities;
- to set up a network of facilities for printing on demand.

Signal Hill will evolve into a Europe-wide community of practice for electronic academic publishing. Relationships will be established with comparable networks and organisations outside Europe, such as SPARC, and organisations such as LIBER have been asked to lend support.

Activities

The following activities are currently being pursued:

- a survey of European activities related to electronic academic publishing (starting from March 2001),
- the organisation of an intranet for participating organisations to facilitate the exchange of experiences (result: April 2001);
- the organisation of a European conference to promote the aims of the partnership (February 2002 in Utrecht);
- a project investigating new business models;
- an active search for new partners.

Members

Membership of Signal Hill is open for organisations such as university presses, libraries and research organisations that are involved in electronic academic publishing. Their missions should have at least the following elements in common:

- They are part of (an organisation within) the academic community.
- They concentrate on electronic publishing, possibly offering the option of printing on demand.
- They are non-profit.
- Their publications are offered at the lowest possible price, and preferably free of charge.
- The copyright remains with the authors.

Membership is free of charge. Members of Signal Hill are expected to provide information about their activities, their plans and their experiences. This information is only available to the other members of the partnership on the intranet.

7. Conclusion

The experiences with the Roquade project thus far show that there is a new and real challenge for university libraries, to be engaged in the support of electronic publishing. This challenge is real because projects like Roquade are not only initiated on the basis of a strategic analysis by the library management, but even more so because scientists within our university have come to the library asking for the support they need to make a successful transition to electronic publishing and new publishing models.

It is impossible to predict what the future for academic publishing will look like. Furthermore, it is rather shortsighted to declare a standard for what the future should look like. Therefore, one should not impose one preferred model onto scientific communication. The academic community should take initiatives that, in a flexible way, facilitate new structures in scientific information processes, which are favourable for the academic community itself. Roquade is such an initiative. The project will have benefits for the academic community, as well as for the libraries that take the initiative.

Its intended benefits for the academics (both authors and readers) can be summarised as follows:

- Rapidity
- Quality
- Transparency of the reviewing and publishing process
- Positive attitude of scientists towards digital publishing
- Technological innovation
- Fair price
- Usage statistics

The intended benefits for the library are:

- Opportunities for applying gained experience of digital publishing and for exploiting the existing infrastructure in order to support the information and communication requirements of researchers.
- Better position in negotiations with publishers active in all fields in order to slow down the rising of subscription rates as well as improving financial benefits for the academic community in the long run.
- International co-operation.

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