OPEN ACCESS IN THE HUMANITIES: A CASE STUDY OF DEVELOPING THREE OPEN-ACCESS ELECTRONIC JOURNALS IN GREECE

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Abstract
The international movement for open access to scientific content along with advances in information and communication technologies and the Internet are bringing about revolutionary developments in scholarly publishing and communication: the availability of e-infrastructures supporting the management and exchange of the research output in digital format leads to the transformation of existing processes. It allows new ways of collaboration among researchers and facilitates the widespread dissemination of research results. Pioneering applications related to these trends have first appeared in scientific fields that inherently have a closer relationship with technology like natural sciences, engineering and medicine. However, significant relevant activities in the Humanities are also beginning to emerge worldwide. The present contribution concerns a case study of open access publishing in the Humanities, in particular a project that created freely accessible electronic versions of three pre-existing print-only journals of this subject area published in Greece but with international participation and perspectives. The paper provides Greek context in scholarly communication with an emphasis on the Humanities; it elaborates on the goals of the project and the challenges that were encountered and addressed during its implementation. One of the main reported successes of the project was the increased awareness among Greek researchers in Humanities of the capabilities and potentials of modern scholarly communication systems and the creation of a demand originating from the corresponding research community itself for the continuation and expansion of similar activities in the future.

Keywords: electronic journals; Humanities; open access; Greece; Open Journal Systems (OJS).
1. Introduction

Developments in ICT have resulted in profound transformations in the process of conducting and communicating research in recent years, such as the dramatic increase in electronic publishing and the related emergence of new forms of scholarship, along with the mounting international support for Open Access (OA) to scholarly research. While the sciences clearly lead the way both in terms of digital scholarship and integrating OA in the scholarly communication process, advances are also taking place in the Humanities, albeit at a slower pace. Books and journals in print still remain the preferred venue for conducting and communicating research results in the Humanities, while e-publications are far from claiming an equal status [1]. However, surveys carried out in western European countries and the United States reveal that scholars in the Humanities are becoming increasingly familiar with diverse forms of digital scholarship and the OA model [2]. Developments in the OA movement, the institutional, state and private funders’ OA mandates and the restructuring of the economics of research and scholarly publishing are clearly acting as a catalyst on the scholarly communication process in Humanities as well. Relevant developments include an increase in OA journals in Humanities, the emergence of journal e-presses and portals and more recently, the move towards the publication of digital monographs, especially by university presses, with an emphasis on providing OA [3][4][5]. Coordinated state and international efforts are taking place to create cyber-infrastructures that will provide structured access to the vast quantities of digital information that is constantly accruing, along with publication and preservation services [6].

This paper is a case study in developing three open-access electronic journals in Humanities in Greece. It presents our experiences in designing and implementing the project, emphasizing those that we believe to be of interest and potential applicability to other projects. We begin by placing our project in the context of the Greek landscape in scholarly communication, particularly in Humanities. Next, we proceed to describe the scope of the project, and the principles and processes that were adopted during its implementation. Finally, we present the OA journals that have been implemented and provide an assessment of our venture.

2. The Greek landscape

Changes in scholarly communication are instigated mostly by the EU, the primary funder of this transformation, and the academic and research institutions themselves. In recent years, Greek academic and research institutions have moved to-
wards large-scale projects of digitizing their scientific output and creating institutional repositories, thus providing significant volumes of openly accessible data and research results to scholars and the public [7]. Academic and research libraries play a key role in such projects. As a consortium they provide access to a large numbers of international subscription e-journals, whose use by scholars is constantly rising [8].

Greece has been a signatory of the OECD Declaration on Access to Research Data from Public Funding in January 2004. As is the case with e-infrastructures, digital scholarship and the progress towards OA are largely motivated by academic and research institutions and the researchers themselves, as shown by a recent survey about perceptions on OA in Greece [9]. Indicatively, there were two conferences on OA in 2008, one organized by EKT/NHRF [10]. Furthermore, EKT maintains the website www.openaccess.gr with the aim of providing information on OA to Greek audiences. Challenges associated with digital scholarship and OA in Greece include, among others, reservations regarding legal aspects of e-publishing and OA, another fact which is evident in [9]. Additionally, the Greek language requires particular software development to meet Internet publication and usability standards. Only eighteen journals are listed as published in Greece in DOAJ, mostly in STM and sports. Additionally, no data is available regarding the number of non-OA scholarly e-journals published in Greece [11].

As is the case worldwide, the scholarly communication process in Humanities is undergoing a transformation at a slower pace than in the STM fields. Greek scholars rely primarily on print publications to perform and publish their research. Our experience further suggests that scholars of older generations are commonly reticent towards digital scholarship, in particular with respect to its usability, the scientific legitimacy of e-publishing and the perceived threat towards the disappearance of print materials. Web-based technologies are often not an integral part of their work. However, the above do not apply to younger generations of scholars, and we are optimistic about the positive and rapid future developments in digital scholarship in Humanities in Greece. The availability of bibliographic and primary source data bases has contributed to the gradual understanding of the potential of computer technologies as a tool to assist research. Furthermore, various Greek institutions have been quite active in recent years in digitizing part of the country’s cultural heritage with the aim of preserving and promoting it [12]. They also actively participate in European efforts to create digital content, including cultural content, such as the eContentPlus programme [13]. This has led to increased interest in integrating computer technologies in the research process in that part of the scholarly community that engages in region- and historic-specific (i.e. mostly Hellenic) culture studies. Additionally, the Classics and Archaeology, widely practiced in Humanities in Greece, are pioneering disciplines in practicing digital scho-
larship, and this has had a positive influence on Greek practices.

Research in Humanities is published mostly in Greek by universities, societies and presses that offer book and journal titles in Humanities circulating in relatively small numbers. And while Greek researchers of international standing regularly publish in foreign journals which usually maintain an electronic format, e-publishing, OA in particular, is in a nascent state. Awareness is gradually rising, however, and more developments should be expected as the country is becoming part of the global scholarly communication network and is now taking part in shaping the common European standards for digital scholarship in Humanities by participating in DARIAH, the European digital infrastructure for the Arts and Humanities. In what we evaluate as a turning point for future developments we embarked on the project to create OA e-journals in Humanities.

3. Defining the project

The implementation of OA journals in Humanities was a project led by the National Documentation Centre (EKT at www.ekt.gr), the backbone organization of the Greek national infrastructure for scientific documentation, online information and support services for research, science and technology. EKT is part of the National Hellenic Research Foundation (NHRF at www.eie.gr). The latter also comprises six research institutes, three of which in Humanities (Institutes for Byzantine Research, for Greek and Roman Antiquity, and for Neohellenic Research) and three in the Natural Sciences (Biology/Biotechnology, Chemistry, Physics). The journals were created as part of a wider project for the implementation of repositories and electronic publishing, co-funded by the EU and the Greek state, and carried out in collaboration with the research institutes at NHRF.

The central scope of the project was to increase support for OA in the Greek research and academic community by establishing infrastructures such as repositories and electronic journals that afford the digitization, permanent storage and free world-wide dissemination of the scientific output produced at NHRF [14]. Significantly, NHRF has been a signatory of the Berlin Declaration on OA since 2003. The project further aimed at developing the already established publishing activities of NHRF to the next evolutionary stage, electronic publishing. NHRF has a sizeable record in institutional publishing, especially in the Humanities, since its foundation in 1958. The monographs are around three hundred, while numerous journals, series and corpora are also published. The emphasis in the output in books and journals in Humanities was the reason for which Humanities journals were chosen instead of STM ones for the transition to electronic format. Additionally,
we assessed that it is important to provide access to primary data and research results on Greek history and culture produced at NHRF, in view of promoting digital scholarship in Humanities in Greece and abroad, rendering the research carried out at the Foundation more ‘visible’ internationally, and supporting the dissemination of research communicated in the Greek language. Finally, we aimed at complementing the existing infrastructures of EKT with a production-grade, robust, scalable e-publishing platform based on an open-source software stack.

In consultation with the Directors and researchers of the three NHRF institutes in Humanities three journals were chosen to transition to a combination of OA electronic and print publications. At the same time, back issues would be digitized and become openly accessible in the journal websites. There were three reasons behind the decision to transform existing journals as opposed to developing new e-only titles: first, we came to the conclusion that in this way it would be easier to secure an audience in our effort to promote digital scholarship and OA among Greek scholars in Humanities. Second, all three journals were in varying stages of transition directed towards reaching out to the international scholarly community, such as reevaluating their scopes and/or policies, changing the composition of publishing teams and editorial boards. It was therefore deemed that the time was ripe to implement the transition to an electronic format. Finally, this transition in any case would have to take place at some point.

4. Developing the journals: principles, processes, lessons learnt

The project involved the close, and as it turned out very fruitful, collaboration between established research institutes of NHRF on the one hand and on the other hand EKT, specializing in scientific documentation and support services for research and technology, with a strong operational basis in complex projects at the European level. EKT conceive of the project and undertook its planning and management. Furthermore, it was responsible for: developing and maintaining the underlying computing infrastructure; offering technical support to train the members of the institutes participating in the project; digitizing and processing material from past issues; managing the process of converting into the new format and launching the journals; resolving relevant legal issues; registering the journals in international indexes and harvesters and promoting them to the scholarly community. The institutes undertook the scientific supervision of the journals and the management of the editorial process.

Two principles permeated the project in view of securing successful results, continued support in the future, and further development of the e-publishing ac-
First, achieving and maintaining a strong and consistent involvement in the project on the side of the researchers was perceived as a precondition for its success and viability in the future. Our goal was to gradually fully transfer the journal operation to the research institutes, with EKT maintaining the computing infrastructure and assisting in technical troubleshooting and training. Second, to alleviate potential concerns attributing low quality to OA, it was understood that the revised procedures and regulations of the journals and the editorial advisory boards should be comparable to those of valued international journals and should promote the dissemination of scholarship of high quality.

Flow chart 1 presents a simplified scheme of the most significant stages in the process of implementing the journals in rough chronological order (time proceeds from top to bottom; each task location denotes it start time in relation with other tasks) and depicting dependencies among tasks. The process comprised multiple stages with many operations running concurrently. The project understandably was a multi-disciplinary venture involving specialists in project design and management, ICT, library and information science, communications, graphic design, law and of course, researchers in Humanities.

In implementing the project, we found that the following tasks were critical for project success and also very demanding in terms of time and effort, in some cases due to the particular characteristics of publishing in Humanities:

- providing continued organizational and technical support as well as training to researchers, securing their continued involvement and increasing enthusiasm about the venture despite potential lack of familiarity with computer technologies;

- selecting an e-publishing software platform, itself a multi-stage process. It comprised researches about available e-publishing open-source platforms and created a shortlist (DPubS, GAPworks, Hyperjournal, SOPS, TOPAZ, Projas and OJS); investigating support for fundamental requirements (e.g. workflows covering the entire peer review cycle; use by e-publishing community internationally; considerable project activity); carrying out a qualitative investigation of short-listed systems on more advanced features and finally, installing and evaluating performance locally;

- OJS (Open Journal Systems) was identified by this process as the most suitable system for our implementations. It is by far the most popular open source platform at the international level. Advanced features and qualities that we particularly appreciated about OJS are the support for sophisticated customisable workflows, a wide variety of user roles, inherent Unicode support and many built-in interoperability-enhancing services (e.g., OAI harvester and RSS/Atom feeds, plug-ins for Google Scholar, CrossRef, PubMed);

- customizing the OJS platform in ways that meet the requirements of each jour-
nal implementation. The modifications developed on OJS were of the following types: additions and enhancements to the article and user metadata, including full support for hierarchically controlled vocabularies; functionality and journal workflow customisations; batch importing of previous journal issues; layout, appearance and usability enhancements; handling the case of articles that are complemented with supplementary files (e.g., images) that, in Humanities, form a critical part of the overall research publication; multilingual support, which might be problematic not regarding the management of metadata, but of the actual digital material (e.g., polytonic ancient Greek texts in legacy file formats);

Flow chart 1: The journal implementation process.

- retroactive digitization and ingestion of legacy digital content into the platform as well as production of metadata for past issues. Besides, basic metadata like title, author and publication date, this procedure concerns additional fields like abstract (obtained where available from OCR output with manual correction of errors) and journal-specific subject categories (e.g., assignment of article to
chronological period or geographic areas) that are populated via labour intensive procedures;

- resolving legal issues concerning open access to past journal issues and defining copyright policies of the journals in their new format. More specifically, request and obtain from author copyright clearance to publish articles from past issues; create copyright policies and author agreement forms, terms of use and privacy policies for sites. Significantly, two of the three previous print-only journals did not possess articulated copyright policies or author agreement forms. An additional problem in the Humanities is the need to secure permissions to publish images of objects of historical or artistic value stored in museums, sometimes with no clear copyright status;

- promoting the journals by creating leaflets and emailing them to lists and individuals; by networking; by presenting in conferences.

5. The journals

The following OA journals in Humanities were created as part of the project:

1) BYZANTINA ΣΥΜΜΕΙΚΤΑ (www.byzsym.org), run by the Institute for Byzantine Research at NHRF. It has been published in print since 1966 under the title ΣΥΜΜΕΙΚΤΑ. It was launched online in April 2008;

2) Τεκμήρια (www.tekmeria.org), run by the Institute for Greek and Roman Antiquity, published in print since 1995. The journal was formerly published at the University of Thessaloniki and as of 2008 at NHRF. It was launched in November 2008;


All three journals have policies and procedures of internationally accepted standards, they practice blind peer-review and are supported by international editorial boards. Their new content is OA and authors retain copyright. They offer OA on most of the content of their back issues [15], depending on whether permissions were granted by authors, and have full-text search capabilities. They publish in multiple languages, a common trait of journals in humanities. The web interface is multilingual for each journal, GR and EN for BYZANTINA ΣΥΜΜΕΙΚΤΑ, GR, EN and FR for Τεκμήρια, EN and FR for the Historical Review/La Revue Historique. The journals are indexed by Google Scholar. At the time of the writing of this article (April 2009), The Historical Review/La Revue Historique has been approved for indexing by ISI.
At the outset of the project, we focused on implementing one journal, *BYZANTINA ΣΥΜΜΕΙΚΤΑ*, which is presented here in more detail. At the time of the planning of the project, the Institute for Byzantine Research was in the midst of revising the policies and procedures of its journal, which was irregularly published until then. The time was thus ripe for a transition to digital format. The Director and researchers were very active in learning about new possibilities in digital publishing and OA, and there was wide participation in relevant discussions. This journal underwent the most profound changes in terms of policies, procedures and editorial board composition. Significantly, it is the only one of the three that manages the entire editorial process online. This is currently a unique feature for a peer-reviewed journal in Byzantine Studies. The web-based management tool can manage the editorial process from any part of the world with internet access for the editors, it constantly archives the process, it allows the authors to view the progress of their manuscript, and affords communication within a system of registered users. The goals of the Institute for Byzantine Research is to increase the volume of incoming papers and produce one issue every year by taking advantage of web technologies to open the journal to the international community, while maintaining high standards for published scholarship. An innovation in the editorial process of this journal is the fact that it publishes accepted and revised submissions immediately on a per-article basis. This practice is not common in e-journals in Humanities. It aims to address the problem of extended waiting-periods for the authors, a common characteristic of journals in Humanities, and attracts papers of high scholarly standards by early career scholars. The print issue follows the completion of an electronic issue annually, unlike the other two journals which publish contemporaneously in print and electronically. As our first engagement with e-journals, the making of *BYZANTINA ΣΥΜΜΕΙΚΤΑ* has not been easy. Conversations with researchers at the institute took a long time, as did the actual implementation, clearly in agreement with [16]. Following the overall positive impressions that *BYZANTINA ΣΥΜΜΕΙΚΤΑ* made in the scholarly community in Greece and abroad, as well as the general stir over a new fully online journal from Greece, the other two institutes followed suit in going digital. However, at the moment these journals do not manage the editorial process via the web-based management tool.

Table 1 provides a brief summary of the website access statistics for the three journals, as obtained from the Google Analytics tool. The data concerns a time span of 3 months, from 10 January 2009 to 9 April 2009. Traffic from the National Hellenic Research Foundation, including EKT, is excluded. Furthermore, non-human visits from software programs like web spiders and crawlers are not taken into account. Note that the bounce rate refers to the percentage of one-page visits.
A noteworthy fact is that a more or less important part of the traffic for all three journals originates from outside Greece, ranging from one-third to two-thirds of the visits. A large number of countries are represented, demonstrating the power of electronic publication in the worldwide dissemination of content. Τεκμήρια and The Historical Review/La Revue Historique show mediocre performance in terms of both volume and quality (e.g., duration, bounce rate) of visits. ΒΥΖΑΝΤΙΝΑ ΣΥΜΜΕΙΚΤΑ has attracted visits with very good quality characteristics: low bounce rate and quite high numbers with regard to pages per visit and average time on site. This indicates that most visitors are really interested in the content of the journal. Given the specialized scientific area of the journal, the volume of visitors is satisfactory. It is worth mentioning that the numbers of users registered in ΒΥΖΑΝΤΙΝΑ ΣΥΜΜΕΙΚΤΑ is namely 113 registered as potential authors and 261 as plain readers receiving email alerts upon publication of new material. These results could be attributed to the fact that the web site of ΒΥΖΑΝΤΙΝΑ ΣΥΜΜΕΙΚΤΑ may be more widely known since the journal has already operated for about a year.

6. Discussion: assessment and prospects

In the context of scholarly communication in Humanities in Greece our project has been successful in many ways. First, we rendered OA a substantial part of the articles published in the past issues of the three NHRF journals. Furthermore, the ex-
tensive discussions with researchers of the Institutes and their involvement in the project resulted in creating awareness within NHRF about digital scholarship in Humanities and OA. This, in turn, enabled the transition to OA e-journals. However, only one of the journals adopted a complete online management of the editorial process. We observed that training researchers of that Institute has been fruitful as they are now able to manage online a significant part of the process by themselves. They have thus become more acquainted with aspects of digital scholarship and are more positively inclined towards it. It is nonetheless clear that we will have to provide organizational support and training to the institutes for at least one more year in order to secure the sustainability of the journals. The statistics on the use of the journals are encouraging. They show a steady interest in them, for the moment centered in, but not exclusively focused on Greece. Greek and foreign researchers use the journals in their new form to conduct research. More focus will be directed in the promotion of the journals abroad, aiming at an increase of their significance as research tools for the global scholarly community.

On a technical level, we now possess a scalable e-publishing infrastructure. Based on OJS, we now manage and operate a complex computing systems infrastructure and mechanisms supporting many journal implementations designed to scale up to many more (e.g. staging environments for the development/data entry/quality assurance/production installations for each journal). Additionally, they have been customized and they undergo continuous improvements to serve the specifications of the Greek language to the benefit of Greek-speaking researchers around the world.

Through this project and the diverse activities that were necessary for its implementation we have achieved operational, technical expertise and the computing infrastructure to run an academic e-press at NHRF. We are already planning the publication of more journals in collaboration with other research and academic institutions in 2009. At the same time, we are working on enhancing the current e-journals in terms of usability and gradually extending the publishing model with the integration of other types of content, which may lead to a virtual research environment. We also plan to extend our activities to e-book publishing in Humanities, including experimenting with OA publishing [17].

Finally, in order to be able to support scholarly communication inside and outside of our institution in Greece most effectively, it is necessary to study in detail the financial implications of the transition to a digital format, and indeed in an OA model. Overall, we believe that more operational time is necessary for an in-depth assessment of the impact of our project.
7. Conclusions

Scholarly communication is rapidly changing throughout the world, empowered by advances in computer technologies and the increasing demand for OA. Scholars in Humanities in Greece rely heavily on print publications during the research process. In recent years, however, the situation has been gradually changing, particularly in fields specializing in Hellenic studies. EKT, in collaboration with the three Humanities Institutes at NHRF, has designed and implemented the transformation into electronic OA format of three journals published by these institutes. During the transition, journals were upgraded in terms of their policies and procedures and editorial board composition. The project called for continuous engagement in the form of dialogue and training with researchers in the collaborating institutes, and involved a diverse set of activities, such as establishing and customizing the open source software, digitizing past journal issues, and tackling copyright issues, promoting the journals and the project, among others. As a result all three journals are operational, with most of the articles of their back issues OA. One of the journals is managed entirely online. Use statistics for the journals are promising, although clearly continued effort is necessary to secure their sustainability and impact. Particular effort will be placed in researching the financial implications of the transition and choosing the appropriate business models for the future, as well as promoting awareness about digital scholarship and OA to researchers.

We intend to use the infrastructures we developed and the lessons learnt as a basis to expand our activities. Future plans include experimenting with extending journal functions in the direction of creating digital research environments, publishing more e-journals and e-books in Humanities in collaboration with institutions in Greece and abroad, and becoming part of international networks that promote common standards and the integration of such infrastructures in conducting and communicating research.

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Notes and references


[5] OAPEN (Open Access Publishing in European Networks at www.oapen.org) is a consortium of European University Presses with the initiative to develop an OA model for peer reviewed books in the Humanities and Social Sciences. Open Humanities Press is an OA publishing collective in critical and cultural theory (www.openhumanitiespress.org). www.revues.org is an online humanities and social sciences portal.

[6] See, for example, DARIAH, the European infrastructure for the Arts and Humanities at www.dariah.eu; ADONIS the French infrastructure in Social Sciences and Humanities at http://www.tge-adonis.fr/.

[7] A portal offering access to repositories and other digital collections in Greece and major OA websites outside of Greece is www.openarchives.gr, interestingly a private initiative.


[11] The journals currently run by the National Documentation Centre in collabo-
ration with the Humanities research institutes of NHRF are in the process of being evaluated for inclusion in DOAJ.


[14] EKT also developed the IR of NHRF, Helios (http://helios-eie.ekt.gr/), Pandektis, A Thesaurus of Primary Sources for Greek History and Culture (http://pandektis.ekt.gr/) and the National Registry for Ph.D. Theses (http://phdtheses.ekt.gr).

[15] In BYZANTINA ΣΥΜΜΕΙΚΤΑ 122 of 265 articles of past issues 1-17 are OA. In Τεκμήρια 70 of the 94 articles of past issues (1-8) are OA. All articles of the past issues (1-4) of The Historical Review/La Revue Historique are OA. Some authors of past articles were not located and others refused permission to post their work online. In these cases we provide only the abstracts of the articles.


[17] EKT is a member of the OAPEN network.