This article begins with an analysis of the current state of scientific publication in Portugal, with reference to the impact of the open access (OA) policies of commercial and academic publishers. It then explores the relationship between academic publishing and institutional repositories, discussing the way they should complement one another, taking as reference the activities of the Portuguese Association of Higher Education Publishers (APEES). Final remarks deal more specifically with the UC Digitalis project from Coimbra University Press (CUP), and the way it is committed to the goal of fostering science produced in Portuguese-speaking countries.

Academic publishers and open access policies

During the Frankfurt Book Fair in 2013, a number of university presses from North and South America, as well as from Europe, Australia, Africa and Asia, met to consider common problems, such as the challenges from an increasingly digitized publishing world, characterized by the dispersion in the activities of academic presses. From that meeting came the decision to create the Association of University Presses. This subsequently attracted more than two dozen academic publisher members from around the world, including Coimbra University Press (CUP), Portugal.

The creation of this Association is actually a symptom both of the troubled times felt in the publishing universe and of the opportunities that they may bring about. Indeed, the growing spread of digital editions has initially created additional problems for publishers, because this puts a great deal of pressure on conventional book distribution, significantly increasing the difficulties of maintaining the same networks of bookstores and warehouses. Further requirements and challenges are arising from central policy decisions governing the funding of science in Europe, such as Horizon 2020. These decisions will mean, in practical terms, that all scientific research produced in whole or in part with public funds must be available open access (OA), either immediately at the time of publication or after a period of embargo. Embargoes may vary according to the subject area, but tend not to go beyond 18 months, even in such areas as the social sciences and humanities where the book remains the dominant output.

The impact of these European directives on the Portuguese research community was made tangible by the Foundation for Science and Technology (FCT) in a document formally adopted on 5 May 2014. In it, the FCT stated that, 'The core of the policy on open access to publications arising from FCT-funded research is that all publications of research outputs, subject to peer-review or another form of scientific review, should be deposited in one of the open access repositories hosted within RCAAP [the Portuguese open access repository infrastructure] as soon as possible, preferably immediately on acceptance for publication. An embargo period is allowed, after which the full content of the publications should be made freely available, at no cost. The policy applies to papers in scientific journals, conference proceedings, posters, books and book chapters, monographs, Masters and PhD theses. FCT funding encompasses project
grants, studentships and fellowships, career development contracts (FCT Investigator).’

The combination of these new realities and policies will have a huge impact on the entire editorial and bookseller environment over the coming years, dragging into the same vortex not only Europe, but also the rest of the world, for OA will have universal implications for the way that information is treated and made available.

At first glance, these contingencies represent a blow for publishing houses, whose sustainability is likely to be seriously jeopardized, at least in what were their traditional areas of activity. However, this same set of problems presents a golden opportunity for the university presses, because they generate exceptional conditions for the academic publishers to re-establish a central role – which they had largely left to commercial publishers during the 20th century – as a privileged vehicle for the production, validation and transfer of science and knowledge. The major problem for academic publishers had always been the physical distribution of printed volumes, a task that commercial publishers met with a clear advantage, creating for themselves the dominant positions in the publishing universe. However, the use of digital platforms eliminates, to a large extent, this constraint, allowing the university presses to regain control of the whole process, along with the associated scientific and economic advantages.

The big question – and the major challenge too – lies in the extent to which the institutions involved in the generation of scientific knowledge will be able to take advantage of creating synergies and strategic alliances in order to achieve gains on a global scale. The first impulse may be (as it is to some extent already, at least in Portugal) to yield to the tempting offers of each publisher to build independently this path to improve the impact and the global dissemination of knowledge. However, we believe that success will be on the side of those who, in a faster, clearer and more programmatic way, understand the advantages of networking and of developing partnerships.

Academic publishers and institutional repositories

In 2007, the Portuguese Association of Higher Education Publishers (APEES) was created, founded by a core group of four academic publishers (later joined by seven more). The Association was founded to promote unity and thereby strengthen the position of higher education publishers, to boost the academic publications and to help find solutions to specific problems affecting the academic presses. Although the current group of 11 publishers covers most of the academic publications produced by the Portuguese higher education system, APEES continues to work to bring in new members in order to further strengthen the scholarly outputs of lusophone (Portuguese-speaking) institutions and to stimulate dialogue with their international counterparts, particularly in Iberian and Latin American countries.

Although there is no exact data about the publishing activity of all the academic presses in Portugal, the experience of APEES shows that most publishers have a relatively low publishing output, in which new publications rarely reach more than 100 new titles a year, usually only a dozen or a few dozen new publications per annum. In contrast, digital repositories at the different institutions have seen significant development in recent years, and are being used increasingly as an indicator for measuring the external impact of those institutions, translated into scores for the number of downloads and searches. The advantages of digital repositories are undeniable and there is no doubt that they have provided excellent service to the institutions and, also, that they will continue to grow in response to the OA policies referred to in the previous section. However, the material available in digital repositories is of variable quality as deposit does not necessarily involve the same level of editorial practice that would be conducted under stringent international
publishing standards. While some of the documents stored in these repositories will be generated by peer-reviewed scientific studies, there is also a large amount of data loaded automatically, as happens, for example, with dissertations and reports. Whilst the provision of such data plays an important role in the perspective of the internal life of the institutions (and contributes to the way in which they evaluate and are evaluated), it is undeniable that other rules and other channels are required to guarantee serious and internationally recognized editorial credibility.

It seems very unlikely that the whole corpus of material stored in institutional repositories will become eligible for indexing in international databases such as ISI Web of Science or Scopus. While recognizing that the widespread availability of online content brings constant changes in shaping the evaluation of science, it is also true that this same evolution increases the need for more complex and more comprehensive systems for the quality filtering of information. For all these reasons, it is very plausible that institutional repositories and academic publishers will be called on to work more collaboratively, but is also likely that their impact will be achieved through similar channels, whilst retaining certain distinctions in the way they deal with the information provided.

**Coimbra University Press: old age and maturity facing new challenges**

At a time when it is celebrating 240 years of existence, CUP is equally conscious of the need to systematically address the new challenges that academic publishers have to face. It was with this in mind that, over the last three years, it developed the UC Digitalis project\(^4\). UC Digitalis aims to establish itself as a wide-ranging international strategic project for scholarly research produced in Portuguese-speaking countries, with special emphasis on the social sciences, arts and humanities. It is devoted to increasing the visibility of the research outputs in the fields, in accordance with international standards. UC Digitalis is not, therefore, a simple digital repository, and the digital platform itself is seen as an instrumental component of a much broader project. In fact, it is a major goal of UC Digitalis to promote the wider academic use of this valuable collection so that the lusophone contribution to science and culture is properly taken into account. Therefore the selection of material adheres to two key principles:

1) works of a high academic standard should be chosen;

2) the visibility and impact of publications, particularly in the area of social sciences, arts and humanities, should be improved by close collaboration with research institutions, and especially with academic publishers.

UC Digitalis contains more than 15,000 documents already. An average of 50% of those documents are available OA, but all of them are fully downloadable and accessible to the entire Portuguese higher education system through B-On, the Online Knowledge Library\(^5\). B-On services have existed for ten years and were developed by the National Foundation for Scientific Computing (FCCN) to provide access to the publications of major international publishers. In 2014, CUP signed an agreement with FCT/FCCN. UC Digitalis now hosts three complementary digital libraries:

1) **Alma Mater\(^6\)**: the ancient document digital collection, containing a vast assemblage of works, mostly ancient books, manuscripts and similar material held at the General Library of the University of Coimbra and at libraries of other faculties, such as the Faculty of Law, Faculty of Letters, Department of Botany (Faculty of Sciences and Technology). This is the only part of UC Digitalis that is exclusively linked to the University of Coimbra. The digitization of these particularly valuable documents serves a double purpose: firstly, enabling their preservation, and, secondly, fostering their international dissemination. It is available only through subscription.
2) Pombalina: a digital book repository, named in honour of the Marquis of Pombal (who founded CUP in 1772). It is directly connected to the publishing activities of CUP, and thereby all new books are uploaded there. A growing number of Portuguese and Brazilian publishers have already expressed an interest in contributing their content to this part of the platform, thus supporting its role in the dissemination of knowledge and culture produced in other Portuguese-speaking countries. Some of the books are available OA, but all of them are fully downloadable through B-On.

3) Impactum: contains academic articles and periodicals, encouraging a process of requalification of journals and helping them in the indexing process. Although it is based at CUP, it is open to collaboration with the best journals throughout the Portuguese-speaking world. To date, there are around 8,000 articles available at this digital library and all of them are fully OA.

Specific milestones, challenges for the near future and some conclusions

Despite its short existence, UC Digitalis is already the biggest lusophone digital platform based in the scientific and cultural setting of a traditional academic publisher. It is available in Portuguese, Spanish, English and Chinese. It is the first and sole lusophone publisher to be included in B-On, thus disseminating the documents stored to the entire Portuguese higher education system. The major goal for the future is to make UC Digitalis universally available to all the research institutions of Portuguese-speaking countries.

Coimbra University Press is committed to submitting its entire corpus of scientific publications for indexing in international databases of peer-reviewed literature, such as ISI Web of Science and Scopus. It is also directly involved in the promotion of interconnectivity with the European Strategy Forum on Research Infrastructures by including UC Digitalis as a contributing infrastructure in the Digital Research Infrastructure for the Arts and Humanities (DARIAH), as well as seeing it as a significant stepping-stone towards Portugal’s membership of DARIAH-EU.

Although a project originally developed by the University of Coimbra, UC Digitalis is working directly with institutional partners (such as APEES, FCT and FCCN) and will devote much of its effort and resources to serving the best researchers and publishers of all the Portuguese-speaking countries, for only when institutions work cohesively to achieve common purposes will they be able to promote themselves together in a deeply globalized and competitive scientific universe. Isolated, any lusophone academic publisher – however big it is or imagines itself to be – will always be too small to have a real chance to establish itself as an internationally recognized reference by its peers and by the institutions that assess science.

As the oldest academic publisher in the Portuguese-speaking universe, CUP is admittedly facing some threats to the traditional way of perceiving its activity, but challenges like OA policies, digital publication and digital dissemination represent, on the other hand, and if well understood, major opportunities that can put academic publishers once again at the core of science publication.

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