
Agents of the Publishing Chain: From Libraries as Academic Publishers to Libraries as Publishers in eScience and Digital Humanities

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Abstract

Whereas Anglo-American universities have had a long tradition and reputation as publishers of scientific research monographs, in Germany, universities, with support of their local libraries, began experimenting with the new role as scientific publishers only two decades ago. The results for member institutions of the “German Academic Press” were relatively modest. The impact factor was far too low to attract authors of high ranked papers and theses to publish them with a small university press or even “university library press”. However, with the transition from print to digital format, the publication chain has changed significantly. Instead of publishing a print version of a thesis, post graduates have begun to search for cheaper alternatives to publish dissertations electronically at almost no costs and at the same time with considerable visibility for their research results worldwide. This was the birth of university repositories in Germany as in other countries as well, managed by faculty as “content provider” and university libraries as online archive.

With the journal crisis and the monopoly of big academic publishers, libraries began to publish open access journals, some in cooperation with faculty. The impact factor again was poor, the content aspect of peer-reviewed high ranked journals led in the end to the golden open access way of publishing, dominated again by big companies.

The next step during the past ten years was the collaboration of libraries with digital humanities projects (e.g. digital editions, text grid activities). Valuable libraries’ manuscripts were digitized (some with help of Google) and published, where libraries held the copyright to do so. They helped attracting new user groups to library activities and getting access to rare books while preserving the original.

With new requirements of e-science (grid computing, primary data repositories) libraries support faculty to archive, classify and publish raw research data for the scientific community. This is a big issue for university and research libraries. In not a few cases, faculty at German universities had to be persuaded to ask libraries for collaboration on publishing primary research data, for libraries are

often seen as competitors in this emerging sector. In my view, this is a big mistake. We all should learn from the Google experience: a commercial company understood the tremendous potential of library collections and undertook the digitization and publishing of copyright-free prestigious books.

Libraries should not wait to be asked to collaborate. They should push and effectively play their role as publishing partners for the sake of a non-profit access to the collective cultural heritage and research results. And librarians should ask themselves: how do we define the role of libraries in the 21st century, how do we make our unique collections public? Will public-private partnership always end up with universities and libraries as content provider and publishing companies as financial profiteers? We should keep in mind that it is the value of collections that should help libraries to participate in the publishing chain as an active player and not only as a “consumer” of published products.

Examples from German library activities will be given and discussed.

Keywords: Digital Libraries, Publishers, German Academic Libraries, EDTs, Publishing Chain, Public-Private Partnership, Open Access, Digital Humanities, Data Repositories.

University Libraries as Academic Publishers

If we investigate the publishing activities of libraries, we should agree upon a definition about what exactly publishing means. Whereas the *Encyclopaedia Britannica* in its last printed 15th edition of 2007 describes “publishing” as “the selection, preparation, and marketing of printed matter – including books, newspapers, magazines, and pamphlets” and the German *Brockhaus Enzyklopädie Online* (2013) defines publishing houses as for-profit companies, “preparing and reproducing books, press products, music, maps, electronic media and artefacts”, Wikipedia gives us the adequate broader definition and helps us to understand why many library activities in the digital age should be called “publishing”.

“Publishing is the process of production and dissemination of literature, music, or information — the activity of making information available to the general public.”¹

In order to evaluate publishing activities of libraries, it is necessary to see the consequences, which the shift from printed to electronic media brought for the publishing process and scholarly communication. When and why did libraries start their activities as publishers?

Librarians have always been publishers as well, when investigating and writing about their collections. But of course these “add-on activities” did not challenge other actors of the media market like publishers or aggregators. Electronic publications, however, offer new chances and business models in the value creation chain. “New roles and tasks of the different players of the ‘value network’ (libraries, booksellers, media and computer centers, IT-providers, publishers etc.) have to be discussed.”²

Libraries were always disseminators and curators of publications; in some cases they acted as university publishers too. Anglo-American university publishers have a long tradition and reputation as publishers of scientific monographs, Cambridge and Oxford University Press

¹ Wikipedia, <http://en.wikipedia.org/wiki/Publishing>

² Degkwitz (2013), p. 88.

going back to the 16th century and US-American foundations being from the late 19th century. In Germany, universities with the help of their local libraries began experimenting with the new role as scientific publishers only two decades ago. They published dissertations, theses, research papers, and conference proceedings. However, the result of member institutions of the *German Academic Press*³ for instance was relatively modest. Members of the academic community were very hesitant to offer their thesis to the university library to be published with the local university press. Its reputation was far too low to attract authors of high ranked papers and theses to publish with a small university press managed by the university library.

With the transition from print to digital format, the publication chain has changed significantly. Instead of publishing a print version of a thesis, post graduates began to search for cheaper alternatives to publish dissertations electronically at almost no cost and at the same time with considerable visibility for their research results worldwide. This was the birth of university repositories in Germany⁴ as in other countries as well⁵, managed by faculty as “content provider” and university libraries as online archive of research publications.⁶ In order to publish academic dissertations, you do not need editors, as dissertations have gone through an evaluation process of local faculty. ETDs enable graduate students to effectively and creatively present their research. Libraries are experienced in document preservation and guarantee with their electronic archives long term accessibility of the documents. Discovery search tools and one-stop-shopping access to the full text as open access document attract a broader academic reception of research results than a conventional academic print version would do.

Bremen State and University Library, like many other university libraries, has created a user-friendly facility that enables graduates in Bremen to publish their doctoral dissertation, postdoctoral thesis or research monographs online as digital full text documents through the DINI-certified E-LIB document server (2500 documents).⁷ *The German National Library (Die Deutsche Bibliothek)* is harvesting the metadata and archives the electronic full text copy in the national thesis repository. For citing the thesis, URN-based persistent identifiers are used. In terms of collection development, e-publications of Bremen scholars can be read and downloaded world-wide via the library's document server or via the German National Library. Authors grant the State and University Library of Bremen the right to make their digital dissertation / postdoctoral thesis publicly available through its data networks and to allow users to retrieve copies of this digital thesis. If contracts of commercial academic publishers with authors allow a parallel publication on the university document server, they can be archived in the repository as well. Additionally, a measurement system of German repositories helps getting statistical details of usage.⁸ Nowadays graduates can easily check via *Google Scholar* to see who has cited the open access e-dissertation content in other

³ GAP, the publishing cooperation of university libraries of Hamburg, Oldenburg and Karlsruhe ended when DFG project funding expired in 2003. http://blog.bibliothek.kit.edu/ag_univerlage/. For not-for-profit university publishers in Germany, cf Halle (2006), pp. 809 -817. For European university publishers, cf Association of European University Presses, <http://www.aeup.eu/aeup/> and FIGARO (European Academic Digital Publishing Initiative) <http://www.figaro-europe.net>.

⁴ Most German university publishers evolved from the libraries' work of thesis and dissertation exchange and concentrated on publications of their own universities. Halle (2006), pp. 813 and 815.

⁵ Cf Yiotis (2008), pp. 101-115 and Ahmed; Rahman; Azizur (2014), pp. 438-451.

⁶ Repositories stem from the first initiatives like the subject preprint server ArXiv in physics.

⁷ Cf www.suub.uni-bremen.de/home-english/refworks-and-publishing/publishing-documents/publishing-digital-dissertations/

⁸ <http://oansuche.open-access.net/oansearch/> The Open Access Network of Repositories is the German equivalent to SPARC (Scholarly Publishing and Academic Resources Coalition, <http://www.sparc.arl.org/about>)

documents.⁹ Search engine indexing is the most important step toward increasing the repository's use. Institutional repositories have shown a big potential for changing the value creation chain: Universities act as producers and libraries as repository organizers and disseminators. Whether they will require payment for their service from faculty is not yet decided.¹⁰ Disciplinary repositories created by scholars (e.g. ArXiv for physics and natural sciences), both pre-print archives and servers for parallel publications of printed documents, are in some cases maintained by university libraries¹¹.

The Profit and Not-for-Profit Sector of Journal Publishing

With the serials crisis, especially for STM journals and the monopoly of big academic publishers¹², academic libraries began to promulgate open access journals, some in cooperation with faculty. Most of them were not competitive with high ranked journals of commercial publishers. Journal editors need a long time to establish a journal's reputation in the scholarly community. For a journal to be top ranked, the entry barrier of competitive journals is very high. Libraries have to purchase these "need-to-know-titles" no matter how costly for first quality journals of the STM faculties (e.g. Elsevier).

For open access publishing, SPARC (the Scholarly Publishing and Academic Resources Coalition) is the leading international library membership organization at present that promotes the open sharing of scholarship. SPARC in cooperation with scientific societies started a direct competition with big journal publishers, and successfully encouraged publishing partners (societies, academic institutions) to launch new titles as an alternative to established high ranked journals.¹³ For 2015 it is planned to build a relationship with LIASA (Library and Information Association of South Africa) to establish SPARC-branded activities in South Africa.¹⁴

One open access journal among others deserves mentioning as an example of cooperative institutional publishing in Germany too: *German Medical Science* is a peer-reviewed German and English online journal established by 140 medical associations (which supply the editorial board), the Central Library for Medicine in Cologne, and the German Institute for Medical Documentation and Information (DIMDI). The library does the copyediting and technical realization. DIMDI is responsible for the archiving of documents. All full texts will remain accessible free of charge. Documents are linked with relevant reference databases like Medline. GMS established a publication portal using all the potential of electronic publishing for the scientific community.¹⁵

⁹ Pauly; Stergiou (2005), pp. 33-35. Coates (2014) found out that search engines' users constituted the majority of users in the world (not including USA) group of ETD repositories as subset of institutional repositories (p. 287).

¹⁰ Tennant (2002), pp.28-31; Andermann; Degkwitz (2004), p 49.

¹¹ Cf. e-print server arXiv.org, founded by physicist Paul Ginsparg, maintained by Cornell University Library: <http://arxiv.org/>, supported by Simons Foundation and the Alliance of Science Organizations in Germany (TIB, MPG, HGF) and Andermann; Degkwitz (2012), p. 46.

¹² Andermann; Degkwitz (2004) p. 38.

¹³ Case, M.M., "Capitalizing on Competition: the Economic Underpinning of SPARC," <http://www.sparc.arl.org/resources/papers-guides/case-capitalizing> <30.4.2015>. For a list of competing commercial journals of the alternative program of SPARC, see. Andermann; Degkwitz (2004), p. 53.

¹⁴ <http://www.sparc.arl.org/about/current-program-plan>

¹⁵ <http://www.egms.de/dynamic/en/journals/gms/index.htm>. The initiative is comparable to eScholarship of the University of California and SPARC, https://escholarship.org/about_escholarship.html, to the English

When big private publishing houses realized that libraries had to unsubscribe journals when they were unable to meet the tremendous increase of subscription prices in the STM sector, and that at the same time universities started to act as publishers with “open-access” journals (“the green way”), they reacted and offered a so called “golden way” of open access publishing. Such journals are not paid any more by libraries, but by authors. Publishers were flexible in terms of new business models but in no way would they accept that universities and university libraries as non-profit organizations might threaten the profit margin of publishing companies. On the golden way, authors have to pay for publishing, depending on the impact factor of the journal: for one article the charge can be anywhere between €300 and €2,000 or even more. The free access for readers helps disseminate research results, which will be cited more often worldwide. Open access helps diminish the digital divide in developing and emerging market countries, as university libraries worldwide can provide access to articles. However, we should keep in mind that not all researchers of emerging and developing countries and their institutions might be able to finance their research publications the “golden way”. So there is a danger that the digital divide might maintain and only shift financing barriers to other institutional members of the publishing chain.

In order to support the open access initiative, the *German Research Foundation (DFG)* is funding the article processing charges for authors of university faculties. The publication fees are settled by a prepaid membership of the university at open access portals such as *BioMedCentral*, *SpringerOpen* and *ChemistryCentral*, *Public Library of Science*, where the payments are administered by the local university libraries. The disadvantage: The open access movement as reaction to the serials crisis did by no means break the market power of “the big five” private journal publishers, but it led in the end to the golden way of open access, dominated again by big companies. When scientific foundations like the *German Research Foundation* or the *US National Science Foundation* insisted upon open access publication of publicly financed research results, publishing companies were once again flexible and offered the possibility of a an Article Processing Fee (APC) within a licensed journal portal (e.g. *Open Choice*), in order to guarantee free access to that article, paid by the author with financial support by the research foundation. Who pays for the article is negotiable, unlike the profit margin of publishers.

“In the media and content sector power has shifted from the production of content to its distribution.”¹⁶ Libraries should not give away any chance to play an active role in the electronic publication business of academic articles, for instance the chance to build up large research tools for institutional pre-print repositories of open access publications worldwide. *Bielefeld BASE* and *Oan (Network of Open Access Repositories)* are the German responses, as SPARC is the international response to the goal of open scholarship.¹⁷

Digitization of Books as Publishing Initiative of German State and Research Libraries and their Support of Digital Humanities Projects

equivalent SHERPA, <http://www.sherpa.ac.uk/>, or DARE, Univ. of Amsterdam, Netherlands, <http://dare.uva.nl/cgi/bib/bib-idx?c=uvadare2;cc=uvadare2;sid=14a5ddd7e65cf292f846cb771eadb757;lang=en;page=index>.

¹⁶ 10 facts about media and content industries. MEMO/12/805. European Commission. Brussels, 25 October 2012. [http://europa.eu/rapid/press-release MEMO-12-805_en.htm?locale=en](http://europa.eu/rapid/press-release_MEMO-12-805_en.htm?locale=en) <April 27, 2015>

¹⁷ “BASE is one of the world's most voluminous search engines especially for academic open access web resources. BASE is operated by Bielefeld University Library. ... BASE is a registered [OAI service provider](#) and contributed to the European project "Digital Repository Infrastructure Vision for European Research" ([DRIVER](#)).” It provides access to 72,000,000 documents.

In the general book market, libraries are distributors rather than publishers in the traditional definitions of “publishing”. When we define the re-editing of printed books chosen to be digitized from the library’s book collection, we have to redefine outmoded terms. In a broader sense, many digital library collection initiatives have to be seen as publishing activities.

When Gutenberg revolutionized the print using movable single letters, he still copied the way of handwriting, using ligatures for instance for abbreviations. With the transition from the printed to the digital era, digital publications again tend to copy the features of printed publications. At the beginning, libraries’ copyright-free manuscripts were digitized and published as one-to-one copies of books. Digitizing activities of libraries in Germany started at the beginning of the new millennium with a digital version of the Gutenberg Bible from 1452.¹⁸ Library curators of *Göttingen State and University Library* “edited” a digital version, registered with *Unesco Memory of the World* in 2001. Additionally libraries publish born-digital books mainly as a modern way of publishing grey literature on library topics or related to their collections, and have incorporated these books into institutional academic repositories.

Bremen State and University Library digitized in close and successful cooperation with the Bremen Institute *German Press Research* newspapers of the early 17th century¹⁹. The library also realized a complete digital version of the Journal in gothic print “*Die Grenzboten*” (1841-1922) for scholars of the Bremen faculty of humanities and in a second step the existing OCR (Optical Character Recognition) text has been structured and automatically corrected on the character level in order to be added to the *German Text Archive (Deutsches Textarchiv/DTA)* at the Language Research Center of the *Berlin-Brandenburg Academy of Science*, a core corpus of more than 1300 significant German texts from various disciplines originally published between 1600 and 1900.²⁰

The *German Research Council (Wissenschaftsrat)* and the *German Research Foundation (DFG)* published recommendations for a further development of academic infrastructures to improve digital research conditions.²¹

Digital Humanities represent a new culture of cooperation between different academic fields and institutions. Digital Humanities in Germany (*DHD*)²², the European Association for Digital Humanities (*EADH*), Digital Research Infrastructure for the Arts and Humanities (*DARIAH*)²³ and *Clarín*, a Consortium of digital working humanists and social scientists, all started to build up a collaborative interdisciplinary and transnational research infrastructure. Whereas the different roles between scholars, libraries and publishers were clearly defined in the past, the digital humanities now form a new triangle between faculty, IT-departments and libraries. All players have to redefine their roles.

¹⁸ <http://www.gutenbergdigital.de/gudi/start.htm>

¹⁹ <http://www.suub.uni-bremen.de/home-english/catalogs-and-collections-/digital-collections/> both projects were funded by the German Research Foundation (DFG).

²⁰ Jurish; Thomas; Wiegand (2014), p. 1. Cf <http://www.deutschestextarchiv.de>

²¹ <http://www.wissenschaftsrat.de/download/archiv/2359-12.pdf> and http://www.dfg.de/download/pdf/foerderung/programme/lis/positionspapier_ditiale_transformation.pdf

²² Digital Humanities im deutschsprachigen Raum: <http://www.dig-hum.de> <May, 7,2015>

²³ <http://www.dariah.eu/>

Academic libraries cooperated with projects of the digital humanities and published “critical” digital work editions from their collections. *Trier University Library* published a digital version of the works of Frederic the Great, a searchable full text edition of the Johann David Erdmann Preuß edition of 1846 to 1872, as well as the political correspondence edited by Reinhold Koser, based on the *Oeuvres de Frédéric le Grand* and the German edition of his political correspondence, as a new virtual critical edition of his work. With the French original text of the complete works, several German translations and biographies are correlated, and the full texts are searchable.²⁴ *Bavaria State Library (BSB, Munich)* even started marketing initiatives like the publication of iTunes apps for famous collections (oriental books, Ludwig II, magnificent manuscripts, Bavaria in Historical Maps) as a result of digitizing initiatives.²⁵ They may help in attracting new user groups to library activities and help getting access to rare books while preserving the original. If electronic dissertations for instance still correspond one to one to the analog printed world, this is not so anymore with this type of electronic publications.

The *Bavaria State Library* signed a contract with *Google* in 2007 to scan more than one million out of print and public domain publications in various languages of our cultural heritage. The *Austrian National Library* agreed to have 600,000 books from the 16th to 19th century scanned in 2010.

International major research libraries as partners of the *Google Books Library Project* had to sign a confidential nondisclosure agreement, which means that they have to keep the contract details secret. These agreements do not contradict the principle of public control, because no public money was spent on the project.²⁶ Over 30 million books have been scanned already. Because of copyright issues, the process slowed down. The former president of the *Bibliothèque Nationale de France*, Jean-Noël Jeanneney, suggested that Europe should build up its own digital library as a non-profit alternative to *Google Books* and started the French digitizing project *Gallica*.²⁷ There are non-profit initiatives of collaborative repositories of digital content worldwide: *Hathi Trust*²⁸, *Europeana*²⁹, with its partners, the digitization projects of *Unesco Memory of the World*³⁰. Will they be able to compete as a long-term memory?³¹ Do public institutions have the financial potential at all to do so? Who will win the dominance over the world cultural heritage? The public? In my view, the danger lies in the imminent quasi-monopolization of publishing the world’s knowledge as a commercial enterprise. In 2014, a US court dismissed the complaint of the Authors Guild against *Google Books*. *Google* does not violate copyright by scanning and making searchable millions of books. The *German Cultural Council (Deutscher Kulturrat)* prompted German politicians to take this as a warning and demanded to enable *German Digital Library* and *Europeana* to efficiently and successfully compete with commercial publishers.³²

²⁴ <http://friedrich.uni-trier.de/fr/>

²⁵ <https://www.bsb-muenchen.de/en/services/virtuelle-angebote-app0/>

²⁶ Lucke (2010), p. 62 and 69ff.

²⁷ <http://www.lefigaro.fr/debats/2009/08/27/01005-20090827ARTFIG00001-bnf-et-google-l-tete-a-queue-.php>, 2009.

²⁸ <http://www.hathitrust.org/>. International research libraries are invited to include content digitized via the *Google Books* project as well as content digitized locally.

²⁹ <http://www.europeana.eu/portal/>

³⁰ <http://www.unesco.org/new/en/communication-and-information/flagship-project-activities/memory-of-the-world/about-the-programme/objectives/>

³¹ Hathi is the urdu word for elephant as an animal with a long-term memory.

³² https://www.google.de/?gws_rd=ssl#q=author+guild+v+google and <http://www.kulturrat.de>

With *Google*, a for-profit “library of Alexandria” or even a version of Jorge Luis Borges’ *Biblioteca de Babel*, a “virtual” universe is on its way. Does public-private partnership help to provide public access to knowledge? It might be a big chance for researchers worldwide to get access to the world knowledge anywhere at any time. But will it really promote the democratization of knowledge or rather influence it for profit maximization? As in the past, libraries will always rely upon the cooperation with publishers’ and booksellers’ know-how. Of course, publication efforts cannot be for free, the accounting and licensing of content will play an important role. But what happens, if one global player (*Google* or *Elsevier*) monopolizes the market taking over the content, tasks and expertise of other players (publishing companies, libraries, authors)?

The Future: Libraries as Co-Publishers of Research Data

The variety of media type and format has augmented with the growth of digital information. Not only texts but also images, audio, and video data need a more interactive access. With new requirements of e-science (grid computing, primary data repositories) libraries help faculty to archive, classify and publish raw research data for the science community. This is a big future issue for university and research libraries.³³

Libraries change from curators of the cultural heritage to active providers of big data and its structures not only in terms of indexing and long term preservation, but also providing a better access to information material and data migration.³⁴ Their mission, however, can only be realized with the investment of additional financial resources. Whether a public-private partnership will be the solution without hindering non-profit basic research is difficult to answer. It is a tightrope walk.

As it comes to “e-publishing”, Andreas Degkwitz refers to the *DRIVER II*³⁵ definition of future publications as “enhanced publications” (including digitized texts, research data sets, audio, video, pictures, extra materials or post-publication data like commentaries or ranking). Although I do not entirely agree with his postulation, that the research paradigm is changing (as a shift from hermeneutical and/or theoretical research to empirical-based knowledge), I reason that new media developments and networks will cause the decline of documents or texts, and future publications will rather be objects than documents, including not only of data but also of structures of data³⁶ as far as empirical research in natural sciences, social sciences, medicine and technology is concerned. “New collaborative services in a new ‘value network’ are needed. Players within the value chain of scholarly communication (libraries, media and computer centers, publishers and commercial IT provider) have to implement and integrate new tools and responsibilities in their service portfolios in order to achieve ‘open science’.”³⁷ Even where documents don’t play the leading role any more, the valuating, the peer-reviewing of research results, no matter whether part of enhanced publications or as traditional documents, will still be an issue in the future.

*TextGrid*³⁸ is thus a consortium of ten partners, funded by the *German Ministry of Education and Research (BMBF)* and maintained by *Göttingen State and University Library*. It has

³³ Shiri (2014), p. 365.

³⁴ Meister; Veit (2014), p.265.

³⁵ Woutersen-Windhouwer; Bransma (2009),p. 23 ff.

³⁶ Cf. Degkwitz (2013), p. 90 and Shiri (2014), p.360.

³⁷ Degkwitz (2013), p. 83 and 89.

³⁸ <https://www.textgrid.de/home/>. Mittler (2012), p. 32-80.

established an infrastructure for a virtual research environment and offers scholars of the humanities a sustainable editing, storing and publishing environment for their data.

Because of huge storage facilities, research data are exploding. The scientific community's demand for services like data sharing is growing. Whereas in the STM sector sharing big data has become a necessity for researchers, challenges for humanities and social sciences might be difficult to handle, especially where personal data is involved in the raw data set. "It is important that libraries close to specific communities, with their expertise, take an immediate leading role in this revolution."³⁹ Storage and providing primary research data requires commonly accepted standards and an agreement on how long these data should be kept. Data and metadata of different disciplines are heterogeneous, organization structures have to be defined. The experience from *PsychData*⁴⁰ showed that a retrospective data documentation and archiving require big efforts. Self-organization of faculty has not always worked, the consequence being an uncontrollable loss of raw data. German libraries support the attempt to archive permanently only a selection of data after 10 years.⁴¹

Bremen State and University Library, Bremen University E-Science Lab and *GESIS Leibniz Institute of Social Sciences* are partners of *Qualiservice*, the first German project to develop organizational and technical structures to archive, retrieve and share qualitative research data of the social sciences. The project is financed by the *German Research Foundation (DFG)*. The library helps develop the metadata design for modern retrieval systems using modern standards like *DDI (Data Documentation Initiative)*. The primary data are interviews that need metadata enrichment for modern information retrieval. We consider it as a future role of research libraries to edit and provide research data permanently for the scholarly community.⁴²

The aim of the *RADAR* project of the *German National Library of Science and Technology (TIB Hannover)* is to set up and establish a research data infrastructure that facilitates research data management, which is currently lacking in many scientific disciplines. As such, *RADAR* makes a key contribution to ensure that independent research data are sustainably available, preserved and published.⁴³ Faculty at first did not contact the library for support or collaboration. They had to be persuaded that libraries were adequate partners in data archiving or metadata editing projects.⁴⁴ Where universities fight for external financial support for e-science projects, libraries might be seen as competitors for funding. In my view, this is a big mistake. An evaluation from Elsevier in 2010 concluded that academic libraries guarantee the return of investment (ROI) for universities in the context of research, especially when researchers are applying for research funds.⁴⁵ Collaboration is the only way for libraries and researchers to survive in the globalized world of the media market. We all should learn from the Google experience: a commercial company understood the tremendous potential of printed library collections for the future information market, digitized copyright-free rare books worldwide and made them accessible with full text search tools. Quite a few

³⁹ Dallmeier-Tiessen; Mele (2014), p. 223. The platform, curated at DESY, will provide users with access to full text journal articles and preprints, conference slides, multimedia. It will enable novel text- and data-mining applications, and deploy new metrics to assess the impact of articles and authors.
<https://inspirehep.net/info/general/project/index>

⁴⁰ <http://psychdata.zpid.de/>

⁴¹ http://www.dfg.de/download/pdf/foerderung/programme/lis/forschungsprimaerdaten_0108.pdf

⁴² Betancort; Kretzer (2014):<https://opus4.kobv.de/opus4-bib-info/frontdoor/index/index/docId/1496>.

⁴³ <http://www.tib-hannover.de/en/research-and-development/projects/radar-research-data-repositorium/>

⁴⁴ Depping (2014) download:<https://opus4.kobv.de/opus4-bib-info/frontdoor/index/index/docId/1419>.

⁴⁵ Tenopir (2010), p.23.

researchers in the social sciences and humanities claim that in spite of numerous digitizing errors and poor indexing, *Google Scholar* and *Google Books* are valuable new research tools.⁴⁶

The publishing market for print and digital media has been globalized, and so has access to library collections.⁴⁷ Information and research results from all over the world have to be provided for a global scientific community. The importance of international partnership is constantly growing, not only for publishing companies. Libraries and their maintaining institutions too are trying to cooperate internationally in their publishing and archiving efforts, as some of the mentioned supranational initiatives and coalitions have shown. In spite of several national and collaborative initiatives, we are still lacking a supranational strategy for the digitization of all relevant analog research resources, for the transformation of the cultural heritage into a digital infrastructure. The *Bavarian Academy of Sciences* and the *Bavarian State Library* signed a cooperation contract for a new centre for digital humanities in July 2013. The centre will support a new infrastructure of electronic publishing, open-access models in cooperation with publishers and the scientific community and will encourage a Bavarian network of publication platforms.⁴⁸ A joint international strategy should pursue similar objectives.

Libraries should not wait to be asked to collaborate in the publishing value chain. They should push and effectively play their role as partners for the sake of a non-profit access to the collective cultural heritage and research results. And librarians should ask themselves: how do we define the role of libraries in the 21st century? How do we make our unique collections public? How do we help scholars to publish and retrieve research results? Will public-private partnership always end up with universities and libraries as content provider and publishing companies as financial profiteer? We should keep in our mind that it is the value of (“enhanced”) library *collections* that should help libraries to participate in the publishing chain as an active player and not only as a “consumer” or distributor of published products.

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⁴⁶ Cf. Organ (2006). <http://www.dlib.org/dlib/november06/organ/11organ.html> <May, 13, 2015>.

⁴⁷ Schwartz (2014), p. 92.

⁴⁸ Horstkemper (2014), pp. 78,79.

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