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## NEW CONCEPTS FOR ACADEMIC AND RESEARCH LIBRARIES

### ABSTRAKT:

IT-driven innovation is changing the ways of academic work, be it research or teaching, communication or studying. Libraries have to adapt to these dynamics by analysing the evolving needs of both researchers and students and developing new services and new ways to deliver them. They should reflect on library space, on archiving and on networking in a wider field. This article presents some impressions of the discussion in Germany and some recent attractive library solutions.

### SŁOWA KLUCZOWE:

Academic information infrastructure. Digital humanities. Learning center. Libraries. Research support service. Student support service.

The head librarian of a Technical University in Germany has recently pointed these statistics out: while in 2000 the ratio between the use of printed vs. electronic media was 3:1, in 2014 it had reversed to 1:4. At the same time, there is a discussion among librarians what will become of libraries as content and cataloguing data increasingly “go into the cloud”. The full implications of this development are as yet far from clear. Printed information will not “die out” in the next 5 years – but what about in 10 years time? IT-driven innovation in this market has been much more volatile than most of us reckoned 10 years ago, so who dares to make safe predictions about the future? As Sarah Pritchard, a distinguished American librarian, put it as early as 2008: “Students and faculty now have many options for conducting their work, of which the traditional library is only

one; the future of libraries – and librarians – will thus be in our ability to differentiate ourselves through unique and value added features” [19].

The more pressing it appears to develop a responsible library strategy. This observation applies to questions of access in a synchronic perspective, not to access in a diachronic perspective. We might digitize all our heritage books and manuscripts but the historic originals will not become redundant. We need strategies for keeping these materials accessible, which calls for more than strategies for their physical preservation. It is important that academic libraries connect the synchronic and the diachronic perspective. To put it bluntly, it is not either digital content or the printed book, but resources must extend to both.

In the synchronic perspective, my proposal rests on the idea that if the whole research process and scholarly communication gradually move into the digital sphere, libraries cannot rest content with providing access to content – as challenging as that might still be in financial, technical, and administrative regard. Libraries should develop services accompanying and supporting the whole process of academic work, be it communication, research, data modelling, presentation, or publication.

If we look at the present changes in academic work, we see the following trends:

- The original texts, data, or objects forming the base material for research often come in digital shape or are digitized and stored for better handling, processing and collaborative work.
- IT facilitates the processing of larger collections of data, allowing to pursue bigger scale research questions (e.g. “distant reading” approach in literature<sup>1</sup>).
- Due to the digital material, the hitherto strict divide between research data and the resulting publication vanishes: the data themselves and the mark-up of relations between them can constitute the published result of research.
- Often there is not only one fixed publication, but preprints and updated versions.
- Scholarly communication is taken to specialized social networks like ResearchGate, Academia.edu or blogs like Hypotheses.org.
- There is more interdisciplinary and collaborative research.
- Researchers use corpora or data sets created by other specialists to subsequently apply their own research questions to them, e.g. meteorological data, language corpora.

Up to now libraries have been involved only in the back-end of the research process by providing access to the resulting publications. If the

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<sup>1</sup> See also [17].

whole research process generates data that are of public interest or useful for further academic work, libraries should ponder on how they can offer services in support of this new scenario.

In 2012, the “Wissenschaftsrat” (Alliance of Science Organisations in Germany) published recommendations for the strategic development of scientific information infrastructure [5] based on the “Gesamtkonzept für die Informationsinfrastruktur in Deutschland” commissioned by the “Gemeinsame Wissenschaftskonferenz des Bundes und der Länder” (Joint Science Conference) [7]. It calls for German information infrastructure to take account of the growing global IT-based scientific network. It stresses the need for both researchers and students to acquire an extended information literacy which comprises not only the traditional notion of researching literature and factual information, but also the competence for interoperable data, text encoding, subject-specific metadata, visualizing tools, digital rights management, and long-term storage. This ambitious concept of information literacy poses new challenges for researchers, students, IT-centres and libraries alike and will develop an impact on current curricula.

If we consider the main customer groups of academic libraries, researchers and students, let us first take a look at the students. Today’s students are the first real digital natives that have grown up with the web, have less and less experience with libraries before they enter university, and take Facebook as their daily exercise of switching seamlessly between information and communication. All they want to know is: how do I get my course literature as fast and as easy as possible on my notebook screen?

At the same time, they are insecure about what it means to move on from being a digital native in the private sphere to the academic realm. They often experience disorientation: what is reliable academic information? What does the university expect of me in writing term papers? How should I deal with all the information I am bombarded with – be it electronic course readers or eLearning platforms? Collecting information or reading literature are no more than a necessary prerequisites for entering scientific discussions, so students have to learn how to work with the information gathered, how to present it and how to reflect on it.

It is not coincidental that library reading rooms are more crowded than ever, although students often do not need to enter the library in order to get the information and literature they are looking for. In the reading room they appreciate the atmosphere of concentrated study, the attention and support by service staff, and the opportunity to meet other students for tandem learning, collaborative work on a presentation, or discussions of a difficult text. They often choose the library as their home base on campus<sup>2</sup>.

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<sup>2</sup> See also [6].

The support libraries can give them beyond providing content and reading areas encompasses scanners, IT help desk, collaborative work spaces with good technical equipment for the use of mobile devices, mobile furniture for individual learning arrangements, rooms equipped for video analysis or work with language corpora and audio material, tutoring for reading techniques and academic writing, good information ethics, presentation and visualization tools, reference managing and research tools, plus – last but not least – relaxing zones and snack areas.

In Germany, two recent libraries exemplify this approach well. The first case is the O.A.S.E. library of the medical school at the University of Düsseldorf [18]. The acronym spells out as “Ort des Austauschs, des Studiums und der Entwicklung”, which means a space for communication, study, and personal development. It was erected in 2011 as a joint project of the university library, the medical school, and the university hospital. Medical students usually carry the heaviest study load and have to sit the most frequent tests. They spend most of the day and many evenings on campus and need a place for all their activities, including taking a nap in-between. The medical students’ union helps to organize the library, which is open every day of the week 8-24 hrs, collects books which have to be returned to the university library and reshelves books taken out from the holdings of the medical library itself. The library offers a wide variety of attractive and unconventional reader spaces, rooms for collaborative work, snack areas, sofas for the occasional nap, and both the students’ union and the students’ administration office reside in the same building.

The second example is the new Learning Center set up in 2014 by the university library in a renovated, high-ceilinged wing of the baroque heritage building of the University of Mannheim [25]<sup>3</sup>. The university has an excellent business school, which helped to find private sponsors for funding the architectural design of a new kind of study space with attractive furniture integrating IT-devices. The library’s IT specialists created a software called PalMA [8]<sup>4</sup> which facilitates collaborative work by displaying up to four screen images from mobile devices (notebook, tablet, smartphone) on to a split-screen monitor, linking web search directly to digital content accessible via the campus network. Thus, one quadrant of the teamwork monitor might display the draft of a presentation, the second quadrant the search for relevant literature, the third quadrant a business calculation, and the fourth quadrant a flow chart of a business process optimization. The learning center also lends mobile devices (notebooks, tablets, e-readers) and offers tutoring in literature search, academic writing, reference management tools, and information ethics.

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<sup>3</sup> See also [20].

<sup>4</sup> See for more detail [9]. The software for studying and presenting in teams can be used by other libraries, e. g. Bonn University Library adapted it for its own purposes under the name of SPriNT.

On the European scale, one of the state-of-the-art libraries is “Kaisa House”, the new main library building of Helsinki University Library [11]<sup>5</sup>. It is the result of redesigning a former inner-city department store and opened in 2012. The library not only succeeds in perfectly zoning quiet and communicative areas, but also offers a great variety of attractive furnishings, e.g. sofas set up by modular elements which can be deconstructed for group work into padded seats around an occasional round table. There are walled-off glass cubicles to listen to music and video analysis, conference rooms with moveable furniture which can be booked both for regular classes and library tutoring, plus mobile reference librarians on all levels of the building.

Another example of an extremely inviting library with new services for students is the Learning Center opened in 2013 on the new campus of the Vienna University of Economics and Business. In addition to the library, the Learning Center offers one-stop shopping for the student lifecycle: the student support team, IT-service, international office, career center, plus a bookshop are located in the same building [15]<sup>6</sup>.

Experiences with learning centers in the Netherlands or Denmark, both countries being in some respects ahead of recent library developments in Germany, indicate that it is not sufficient to offer beautifully equipped rooms to the students, if they are not accompanied by any staffed service (an information desk seems to be the minimum requirement). It is this fact which confirms librarians in their conviction that learning centers should be part of the library.

On the other hand, the University of Göttingen has just opened its new learning center LSG which is independent of the university library building and only staffed with student assistants and security personnel, but nevertheless seems to be very popular [16]. In this case, the learning center might draw attractiveness from the fact that it offers parent-child-rooms with child care bookable on weekends and that credit points are given for the hours spent studying in this building.

Personal service also helps to supervise a learning center and extend social control over the students’ activities, reducing disorder, garbage, inappropriate behaviour, and vandalism. If students crowd these new study spaces and if state-of-the-art technical support is provided, librarians have to be aware of the obligation to find or reserve funds to renew both the furniture and the IT-equipment every five years.

For researchers, the library as a space is less important than for the students. They have their own offices, little spare time on campus, and in many instances, they obtain relevant literature by contacting the author

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<sup>5</sup> For more detail see [21].

<sup>6</sup> For more detail, see [24].

or via academic social networks like ResearchGate or Academia.edu. We cannot expect them to pay attention to institutional rules, so we should meet them on their own terms and reach out to them to offer them support in their teaching and research activities. This approach opens up a host of new library services:

- eLearning platforms: electronic course readers, online tutorials, self-assessments,
- Scientific publishing, university press<sup>7</sup>,
- Open Access: policies of important grants foundations, information about good vs. rapacious policies of publishers, support of the Green Road with a repository, support of the Gold Road with the administration of a publication fund<sup>8</sup>,
- Registration of research projects in a Research Information System,
- scientometrics,
- Virtual Research Environments for the humanities: consulting about how to set up a VRE and using tools like Textgrid, digitisation of research material, metadata and possibly storage of research data,
- information ethics (anti-plagiarism, electronic rights management),
- Tools and web-based services for researchers as, for instance, statistics software, Wordpress, Wiki software, GoogleCitation, Prezi, Dropbox or other web-based data clouds<sup>9</sup>.

Most of these activities call for a joint effort with the university's central IT-unit.

At first sight, digital science might not appear to be anything libraries can link up to. Especially in STM-subjects, digital science has long been established in international data networks independent of any library structures (e.g. meteorology, astronomy, seismology), but for the humanities the case is different. The source data are usually provided by libraries or archives and librarians could help to prepare them for digital processing. The researchers in turn produce annotations, transcriptions, translations, relations, images/pixels, indices, and bibliographies that have to be formatted, visualized, stored and made accessible for collaborative work. At the end of the process, a critical edition or a digital reference work or an interdisciplinary data base or a simple book is achieved which can be published in a repository. Obviously, a lot of these processes mentioned above can be linked to typical library activities or librarians' competence<sup>10</sup>.

<sup>7</sup> e.g. KIT Scientific Publishing of Karlsruhe Technical University, which is run by the university library. See for more detail [23 ; 3].

<sup>8</sup> The university library of Erlangen-Nürnberg University may serve as one of many examples, compare [22].

<sup>9</sup> Cp. [14].

<sup>10</sup> Several recent publications propose a data curator as a link between library and researchers. Cf. e.g. [1] see also [2].

In Germany, some university libraries have started to develop expertise in these new fields, notably at Göttingen University. In Bonn the first steps towards support of Digital Humanities projects have been taken by recruiting a data librarian with a background in media informatics who establishes a service for supporting researchers in setting up digital research [4]. For almost all the researchers in the humanities digital science is just as much a new field as it is for the librarians, so both sides profit from piloting projects in a joint effort.

Contrary to a lot of researchers, librarians are used to work in data networks. The development of digital science goes far beyond the local perspective and local solutions. Questions revolve around interoperable data formats, metadata, long-term data storage, and rights management in licensing posterior access to research data, not to mention the necessary funding.

These problems can only be addressed in a sustainable manner on a national and international level and have to include national institutions for strategic research policies, the national academies and independent research organizations like the Max-Planck-Gesellschaft, the Helmholtz-Gemeinschaft or the Fraunhofer Institute. In Germany, all these relevant stakeholders have started to discuss a strategy for digital science, and libraries are well advised to join this discussion right from the start and ponder about what services they can offer in this emerging field.

As a concluding remark, let us return to the diachronic perspective. The talk about “heritage” and “treasure”, as well-intended as it might be in the effort to protect written traditions, tends to treat these records as static objects. Rather, the task to keep these records accessible has to be understood as a continuous activity on several levels. Technological, intellectual/cultural and economic issues have to be related to each other in an ongoing process. Both the digital and the physical preservation call for networked solutions. The tragic events of the fire in the Anna Amalia Bibliothek in Weimar in 2004 [10] and the collapse of the Kölner Stadtarchiv in 2009 [12] have brought home the vulnerability of institutions for the transmission of written traditions. Academic and research libraries have to take a systematic approach to such interrelated issues as electronic long-term storage, physical storage planning including aspects of climate and microbiology, funds for mass de-acidification, strategies for de-acquisition including a systematic documentation of last copies, and a specific information literacy for the reception of these historical records by both the librarians and the academic users.<sup>11</sup>

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<sup>11</sup> For in-depth discussion of these diachronic issues cf. [13]

**BIBLIOGRAFIA:**

- [1] Correll S.: *Roles and Responsibilities. Libraries, Librarians and Data*. In: *Managing Research Data*. Ed. G. Pryor: London 2012, 105-134.
- [2] Cremer F., Engelhardt C., Neuroth H.: *Embedded Data Manager – Integriertes Forschungsdatenmanagement. Praxis, Perspektiven und Potentiale*. „Bibliothek – Forschung und Praxis“ 39 (2015), s. 13-31. ISSN 0341-4183.
- [3] *Der Verlag* [online]. [http://www.ksp.kit.edu/Der\\_Verlag](http://www.ksp.kit.edu/Der_Verlag).
- [4] *Digital Humanities. Service- und Beratungsangebot der ULB für Wissenschaftlerinnen und Wissenschaftler* [online]. [Data dostępy: 31.07.2015]. Dostępy w World Wide Web: <http://www.ulb.uni-bonn.de/nutzung-service/digital-humanities>.
- [5] *Empfehlungen zur Weiterentwicklung der wissenschaftlichen Informationsinfrastrukturen in Deutschland bis 2020* [online]. [Data dostępy: 31.07.2015]. Dostępy w World Wide Web: <http://www.wissenschaftsrat.de/download/archiv/2359-12.pdf>.
- [6] Fansa J.: *Bibliotheksfirt. Bibliothek als öffentlicher Raum*. Berlin 2008. ISBN 978-3-88347-264-5.
- [7] *Gesamtkonzept für die Informationsstruktur in Deutschland. Empfehlungen der Kommission Zukunft der Informationsstruktur im Auftrag der Gemeinsamen Wissenschaftskonferenz des Bundes und der Länder* [online]. 2011. [Data dostępy: 31.07.2015]. Dostępy w World Wide Web: [http://www.allianzinitiative.de/fileadmin/user\\_upload/redakteur/KII\\_Gesamtkonzept.pdf](http://www.allianzinitiative.de/fileadmin/user_upload/redakteur/KII_Gesamtkonzept.pdf).
- [8] *Gruppenarbeit im Learning Center* [online]. [Data dostępy: 31.07.2015]. Dostępy w World Wide Web: <http://www.bib.uni-mannheim.de/index.php?id=1279>.
- [9] Hänger C., Wagner A., Weil S.: *PalMA – Present and Learn nicht nur in Mannheim – die clevere Alternative zum Bildschirmkabel*. „B.I.T.online“ 17 (2014), s. 329-335.
- [10] *Help for Anna Amalia* [online]. [Data dostępy: 31.07.2015]. Dostępy w World Wide Web: <http://www.anna-amalia-bibliothek.de/en/brand.html>.
- [11] *Helsinki University Main Library* [online]. [Data dostępy: 31.07.2015]. Dostępy w World Wide Web: <http://www.librarybuildings.info/finland/helsinki-university-main-library>.
- [12] *Historical Archive of the City of Cologne*. In: *Wikipedia* [online]. [Data dostępy: 31.07.2015]. Dostępy w World Wide Web: [https://en.wikipedia.org/wiki/Historical\\_Archive\\_of\\_the\\_City\\_of\\_Cologne](https://en.wikipedia.org/wiki/Historical_Archive_of_the_City_of_Cologne).



- [13] Hollmann M., Schüller-Zwierlein A.: *Epilog. Grundlagen zukünftiger Zugänglichkeit*. In: *Diachrone Zugänglichkeit als Prozess. Kulturelle Überlieferung in systematischer Sicht*. Ed. M. Hollmann, A. Schüller-Zwierlein. Berlin 2015, s. 455-483.
- [14] Horstmann W., Jahn N., Schmidt B.: *Der Wandel der Informationspraxis in Forschung und Bibliothek*. „Zeitschrift für Bibliothekswesen und Bibliographie” 62 (2015), s. 75-76. ISSN 0035-8126.
- [15] *LC. Library & Learning Center* [online]. [Data dostępu: 31.07.2015]. Dostępny w World Wide Web: <http://www.wu.ac.at/campus/architecture/lc/en/>.
- [16] *Learning and Study Building* [online]. [Data dostępu: 31.07.2015]. Dostępny w World Wide Web: <http://www.uni-goettingen.de/en/447835.html>.
- [17] Moretti F.: *Distant reading*. London ; New York 2013. ISBN 978-1-78168-084-1 (PBK) ; ISBN 978-1-78168-112-1 (HBK).
- [18] *O.A.S.E. – Ort des Austauschs, des Studiums und der Entwicklung* [online]. [Data dostępu: 31.07.2015]. Dostępny w World Wide Web: <http://www.medizin.hhu.de/studium-und-lehre/oase.html>.
- [19] Pritchard S.: *Deconstructing the Library. Reconceptualizing Collections, Spaces and Services*. „Journal of Library Administration” 48 (2008), s. 219-233. ISSN 0193-0826.
- [20] Rautenberg K., Klein A., Usinger J., Dombrowe A.: *Vom Lesesaal zum Learning Center – Ein neues Raum- und Benutzungskonzept an der UB Mannheim*. „B.I.T.online“ 17 (2014), s. 321-327.
- [21] Sinikara K.: *Opening a new Helsinki University Main library – a future vision, service design and collaboration*. „IFLA Newsletter” 2013 No.1 / Section on Library Buildings and Equipment, p. 4-13 [online]. [Data dostępu: 31.07.2015]. Dostępny w World Wide Web: <http://www.ifla.org/files/assets/library-buildings-and-equipment/newsletters/2013-1-en.pdf>.
- [22] Söllner K., Kolbe S., Hofmann J., Faust J., Putnings M.: *Vorsprung durch Kompetenzentwicklung und Veränderung*. „BuB. Forum Bibliothek und Information“ 67 (2015), s. 293-294.
- [23] Tobias R.: *Universitätsverlage sind ein wunderbares neues Geschäftsfeld für Bibliotheken*. „B.I.T.online” [online] 18 (2015), 170-176. [Data dostępu: 31.07.2015]. Dostępny w World Wide Web: <http://www.b-i-t-online.de/heft/2015-02-interview-tobias.pdf>.
- [24] Werner K.-U.: *Neubau des Library & Learning Center (LC) an der Wirtschaftsuniversität Wien*. „ABI Technik“ 33 (2013), s. 208-222. ISSN 0720-6763.

[25] *Willkommen im Learning Center der UB Mannheim* [online]. [Data dostępu: 31.07.2015]. Dostępny w World Wide Web: <http://www.bib.uni-mannheim.de/1278.html>.

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**NOWE KONCEPCJE BIBLIOTEK AKADEMICKICH I NAUKOWYCH****ABSTRAKT:**

Innowacje oparte na technologiach informatycznych zmieniają sposób pracy akademickiej: w badaniach, nauczaniu, komunikacji oraz studiowaniu. Biblioteki muszą przystosować się do dynamicznych zmian, analizując potrzeby zarówno naukowców, jak i studentów, oraz wprowadzając nowe usługi i sposoby ich dostarczania. Biblioteki powinny wziąć pod uwagę kwestie związane z powierzchnią biblioteczną, archiwizowaniem dokumentów i wymianą informacji w sieciach (networking). W artykule autorka dzieli się swoimi spostrzeżeniami z dyskusji podejmowanych w Niemczech i przedstawia wybrane, najciekawsze rozwiązania dla bibliotek.

**SŁOWA KLUCZOWE:**

Akademicka infrastruktura informacyjna. Humanistyka cyfrowa. Centrum nauczania. Biblioteki. Dział wsparcia projektów badawczych. Dział obsługi studentów.