Antonia Ida Fontana*, Maria Cristina Mataloni and Rossana Morriello

Academic and Research Libraries in Italy from Past to Future

Abstract: In Italy academic and research libraries were invigorated in the 1990s and again in the 2000s. These years include the automation of catalogues, the development of the National Library Service (SBN), the birth of consortia to deal with organizational and management needs introduced by the digital library with the birth of the World Wide Web and the paradigm shift from ownership to access. The article outlines the main stages of this path at a technological, organizational, legislative, and professional development level up to more recent times in which the vitality of those years seems increasingly more difficult to achieve, despite being crucial to face the challenges raised by the growing complexity of the digital information context.

Keywords: Italian research libraries; National Library Service (SBN); catalogues; digital library; consortia; open access

Wissenschaftliche Bibliotheken in Italien auf dem Weg aus der Vergangenheit in die Zukunft

Zusammenfassung: In Italien kam es in den 1990er- und 2000er-Jahren zu einem Aufschwung der wissenschaftlichen Bibliotheken. In diesen Jahren wurden erfolgreich durchgesetzt: die Automatisierung von Katalogen, die Entwicklung des National Library Service (SBN), die Gründung von Konsortien zur Bewältigung der Organisations- und Verwaltungsanforderungen der digitalen Bibliotheken, die mit der Geburt des World Wide Web eingeführt wurden, sowie der Paradigmenwechsel von Besitz zu Zugang. Der Artikel skizziert die Hauptetappen dieses Weges unter technologischen, organisatorischen, gesetzgeberischen und beruflichen Aspekten bis in die jüngste Zeit. In dieser scheint es immer schwieriger zu werden, die Vitalität dieser Entwicklungen zu erhalten, obwohl sie für die Bewältigung der Herausforderungen durch die wachsende Komplexität des digitalen Informationskontextes von entscheidender Bedeutung sind.

Schlüsselwörter: Italienische wissenschaftliche Bibliotheken; National Library Service (SBN); Kataloge; digitale Bibliothek; Konsortium; Open Access

*Corresponding author: Dr Antonia Ida Fontana, antoniettaif@gmail.com
Maria Cristina Mataloni, mariacristina.mataloni@cultura.gov.it
Dr Rossana Morriello, rossana.morriello@unifi.it

1 Introduction[1]

The richness of Italian historical libraries has for a long time overshadowed or prevented the emergence of other types of libraries, either public or special libraries. The establishment of the new administrative Regions in the 1970s,[2] with jurisdiction over public libraries, had brought the latter to the fore; therefore, it first required the tenacity and professionalism of librarians in Special Libraries for these to have recognition, too. Gradually, other kinds of libraries became stronger thanks to the work of librarians, in particular the Italian Library Association (AIB), because of social, political, and technological changes that happened at the turning point in the late 1980s and early 1990s.

In this article, we will outline the evolution of academic and research libraries, and the National Library Service (SBN). The beginning of our path is the turning point of the 1980s and 1990s, when along with the immense socio-political changes generated by the Fall of the Berlin Wall and the establishment of the European Union, another crucial change happened in the world of information with the birth of the World Wide Web and of the digital library.

2 Academic and Research Libraries in Italy in the 1980s and 1990s: The General Context

2.1 The AIB Special Libraries Committee

The Special Libraries Committee of the Italian Library Association[3] had started its activity in the 1950s. In any case, it was from the beginning of the 1980s, in a changed social and technological context, and under the energetic and enthusiastic coordination of the much-mourned Vilma Albe-

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1 The authors shared and agreed on the content of the entire article: section 2 is by Antonia Ida Fontana, section 3 by Maria Cristina Mataloni, and section 4 by Rossana Morriello.
2 Regions were established by Law n. 291, enacted on 16 May 1970, and the related implementing regulation, D. P. R. 15 January 1972, n. 8.
3 Ronchi Martinelli (1985).

rani, then Director of the Library of the Istituto Superiore di Sanità, that librarians from various Italian regions, with enthusiasm and spirit of initiative, began to produce censuses of the different types of libraries (medical, administrative, musical, etc). The aim was to promote collaboration between institutions belonging to different bodies from an administrative point of view, to disseminate English and French texts on information technologies,[4] and to create collective catalogues of periodicals, initially on paper and then in electronic format.[5] In particular, the collective catalogues were intended to coordinate purchases, to encourage the exchange of duplicate copies and above all to provide the documents in the original or as a copy. In the latter case, it was proposed not only the use of photocopies but also of telex and fax, and the costs and times were calculated.

2.2 University Libraries

A turning point in the definition of a Special Library and the role of its librarian occurred with Bill C 1107, approved on 18 July 1985 in the legislative session by the Education Commission of the Chamber. The role of the library coordinator in the University was established by this law. The library coordinator assumed overall responsibility, even if the economic and human resources were still in the hands of others (administrative offices and departments). Co-operation thus began and put an end to the fragmentation and confusion of the small and very small libraries in University Institutes and the absence of centralized University services.

2.3 Special Libraries

This reflection takes into consideration both academic libraries and the libraries of other public or private bodies, dedicated to collecting materials on specific topics for specialized users. Following Italian usage, I prefer to refer to special libraries rather than research libraries, also overcoming the distinction between special and specialized libraries that only a few, including Alfredo Serrai,[6] differentiated. Similarly, I will speak about librarians in their specific

role of managers of information, and thus identifiable with documentalists.[7]

The participants at the Conference on "The Special and Specialized Library"[8] agreed that the term "special" should refer to librarianship techniques and users. It is the needs of users, usually known, that require special services, which can be offered by a special management of catalogues and especially of reference.

2.4 The Centrality of the User and the Development of Automation

Consequently, a profound change in mentality occurred. The focus of the librarian's work was no longer the collections but users and their needs. It was therefore necessary to offer effective services, which would be subject to evaluation, based on access to bibliographic and documentary information. Automation in this context appeared to be a necessary development, despite the awareness that it would require not only a profound change in procedures but also the training of staff and users.

A Sub-Group on Automation was created within the Associazione Italiana Biblioteche (AIB) Conferences and professional journals presented investigations,[9] bibliographies and reports on the introduction of automation in special libraries. They discussed the services and products technology could offer, and above all what hardware and software to choose. The crucial question was whether it was better to create a proprietary system or rely on the various products available on the market, such as DOBIS/LIBIS, ATLAS, TinLib, and ISIS.

The debate on electronic resources, local or online, was lively, as well as the problems of conservation, instability, copyright and, finally, costs. From these issues derived the increasingly urgent need for consortia.

In 1984, 150 databases were produced in Italy, mainly in the legal and economic fields, and above all national telecommunications structures were being developed. In addition, the ITAPAC data transmission network was coming into operation, which would be connected to European and US networks, making research cheaper and stimulating the production of new databases (7).[10]

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4 Special attention was paid, through collaboration with UNI/DIAM, to the identification and translation of English and French terms relating to documentation and information within the ISO/TC46Sc3 Subcommittee: Terminology.

5 See the Catalogue of the Institute for Studies on Research and Scientific Documentation of the National Research Council (ISRDS/CNR) and the COBBUL project (Bibliographical Co-operation of the University Libraries of Lazio).

6 Serrai (1981).

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7 A documentalist is trained in documentation science and specializes in assisting researchers with searching for scientific and technical information, including databases. Later, the term "information professional" was used, but the term documentalist was retained in some countries, including Italy.

8 Guerrini (1986).

9 Carosella (1986).

10 Lazzeri (1986).

2.5 Information Retrieval

Although, the user was placed at the centre[11] and purchases of collections and databases were made to meet users' needs and services were created, the result did not always seem satisfactory. In his report, Pier Angelo Comero observed, not without irony: "despite all the effort to make the library effective, the user obtains from 70 % to 80 % of useful information from other channels."[12] Benedetto Aschero proposed a comparison between traditional and automated research, highlighting the difficulties, costs and poor quality of the information obtained, due to the lack of coordination of the collections and the inadequacy of indexing.[13] On the one hand, the author hoped for an innovative model of virtual integration of the special collections in Italy, regardless of administrative affiliation; and on the other, he urged debate about the representation of the conceptual content of the documents. Among the many scholars who addressed the problem of indexing, we cannot forget Carlo Revelli, Diego Maltese, and Alfredo Serrai. Within the professional association, the GRIS (Research Group on Indexing by Subjects) was created, and the magazine L'Indicizzazione[14] was founded, where different experiences found space, various information recovery programmes were presented, and their effectiveness and precision were evaluated.

2.6 The Role of the EEC and the EU

The development of research libraries received great impetus from the EEC Community Action Plans. The increase in information caused an increase in requests for documents. It was estimated that in Europe, libraries had received over 11 million requests for the supply of documents in 1980, and it was expected that by 1990[15] they would receive 28 million, with a strong economic impact and serious legal problems.

In 1981, Carlo Vernimb, Head of the Information Market Directorate (DG XIII) of the EEC, in his belief that scientific progress, industrial and commercial prosperity, and the consequent social and economic development, depended on rapid, secure and low-cost access to information, launched the Community Action plan for electronic publishing and document delivery. The aim was to resolve

technological (pilot experiments, communication satellite projects, etc.), legal and administrative problems, made even more complex by the different systems of the various countries.

The Italian project (Scientific Document Delivery Service) was promoted by the publisher Mondadori, which aimed to make grey literature available, using collaboration with CILEA (Lombard Inter-University Consortium for Automatic Processing).

The 1989 referendum that transformed the European Community into a Union had profound consequences on the collaboration between the institutes of different states, supported by the various community programmes. Limiting ourselves to Italian projects relating to the supply of documents, we recall, within the II Action Plan for Libraries, the AIDA (Alternatives for International Document Availability) project, in which Italian and Portuguese libraries participated, and addressed the problems of interlibrary loan, with particular attention to management processes: and subsequently CASA (Co-operative Archives of Serials and Articles) in which Italian, Parisian and Scottish libraries participated.

By improving the quality of services offered to researchers, special libraries thus contributed not only to the dissemination of research and culture but also to the development of the information society and ultimately to the creation of European citizenship.

3 The National Library Service (SBN)

3.1 The Birth of the SBN

The worth of important intuitions is very often tested on the duration of their actions over time: a litmus test to verify their foresight, solidity, and effectiveness. The National Library Service (SBN),[16] over 40 years after the initial project, has certainly given, and continues to give, an excellent account of itself. This is demonstrated not only by the constantly increasing number of participating libraries but also by the stability of the infrastructure, capable of technologically renewing without, at the same time, leaving behind the more fragile institutions that are part of it. This is the most important cultural infrastructure in Italy, whose National Catalogue is consulted daily by a very large number of users (over 80 million searches per year, more than 20 million pages visited annually from all over the world). In addition to the importance that the SBN has for users, we must not forget the enormous usefulness for the work of

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11 Cantalupi and Pistotti (1988).

12 Conference *L'informazione scientifica e tecnica e il ruolo delle biblioteche* (Milano, 9 marzo 1985).

13 Aschero (1986).

14 *L'indicizzazione: rivista per archivi, biblioteche, musei, banche dati e centri di documentazione.* Trieste, 1986–1994.

15 Sakoun (1986).

16 Italian Ministry of Culture (2020).

the many cataloguers and operators in the sector, through shared cataloguing and the use of the various services that the infrastructure offers.

Technological evolution has given new possibilities, which have been welcomed, marking fundamental stages in the history of the SBN. We can mainly recognize two of them: the evolution of the SBN Index (Index 2), which among many innovations introduced the possibility of joining SBN in different ways, and the Integrated Research System (SRI) project, which allowed interoperability between the databases managed by the ICCU (Istituto Centrale per il Catalogo Unico delle Biblioteche Italiane e per le Informazioni Bibliografiche),[17] also giving rise to a re-engineering of the related portals and the birth of Alphabetica.[18]

3.2 The Beginnings of the SBN

We can date the beginning of the history of the SBN to the National Conference of Italian Libraries, "For the Implementation of the National Library System", held in Rome in 1979. On that occasion, the Director of ICCU, Dr Angela Vinay, with clear foresight, envisaged the possibility of a library service at a national level, directly involving the state-regions conference. This was a choice also aimed at avoiding fragmentation and differentiation of library services at a regional level. The fortunes of the SBN probably stem from the intuition of involving various institutional subjects from the beginning: state, regions, territorial authorities, the Ministry of Education, University and Research and the Ministry of Culture. The system had to be able, at a technological level, to offer a solid point of reference to the multiplicity of libraries it intended to address, and at the same time be capable of interacting with international library systems. In fact, the peculiar reality of Italian libraries, spread throughout the country in significant quantities (more than 15 000 in the register of Italian libraries alone) and many categories, especially if compared other European countries, needed a national connection that facilitated and offered adequate services to both the public and librarians.

It may seem strange, but the SBN was born with the establishment of the first hubs and later with the opening of the SBN Index. A curiosity is that in the SBN OPAC you can see the first title added to the SBN Index (CFI0000001),

dated 19 June 1985, and created by the first established hub, the CFI hub, at that time a mono-library, belonging to the National Central Library of Florence.

The Central Index was created after several years, in 1992, and is populated, through import procedures, with the data inserted by the already created centres, and with other catalogues such as the *Bulletin of Modern Foreign Works* and the *Italian National Bibliography*. We had to wait until 1997 to see the publication of the National Catalogue on the Internet, while in 1999 the new ILL SBN interlibrary loan service was opened. The Index came into being with characteristics rather different from the current one. Consider the fact that there were separate databases for the various types of material, at least those existing at that date: modern, ancient and music. Even the authority archives were separated from the bibliographic database.

3.3 The Turning Point of Index 2

After about 20 years of ever-expanding activity, new technologies and co-operation needs were becoming more and more urgent. Thanks to a feasibility study commissioned by the National Coordination Committee, the Index 2 project was launched in October 2002. This was a true revolution both in operational methods and co-operation and for its technological aspects. It would be long and probably boring to list all the changes and introductions made, but the summary description of the most important can give an idea of the extent of the change.

The choice was for greater openness to the market through the new SBNMARC communication protocol, which allowed commercial companies to produce hub applications capable of communicating with the Index. The fleet of machines and the architectural structure of the databases were completely renewed. The level of membership in the SBN was made more flexible and differentiated and cataloguing was expanded to include further types of material: in addition to modern, ancient and music, specific data was added for graphic, cartographic, audio and video and electronic material. Direct access to the Index was also possible, thanks to a new application, "Direct Interface", which permitted viewing and modifying Index data without going through the mediation of a hub software.

The transition, as said, was epochal and was preceded by a lively and productive discussion among all the SBN partners in the governing bodies (Technical Scientific Committee and National Coordination). The contribution and experience of the regions proved to be fundamental in this case too, giving voice to the needs of the territories. Consequently, the display of the contents of the National Catalo-

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17 ICCU (Istituto Centrale per il Catalogo Unico delle biblioteche italiane e per le informazioni bibliografiche) is the institution inside the Ministry of Culture that coordinates cataloguing activities for national and state libraries, and coordinates the SBN and the Italian National Bibliography, as well as other services at a national level.
18 Alphabetica: https://alphabetica.it/web/alphabetica/.

gue was also revised and adapted to the needs of the public, necessarily changed after twenty years.

3.4 The SBN, the Internet and the Digital Challenge

The history of the SBN is closely intertwined with the evolution of the Internet, the main site for using the cataloguing data present in the Central Index. The Italian Digital Library project was already structured in the early 2000s, following a feasibility study commissioned by the General Directorate for Libraries, Cultural Institutes and Copyright at the end of 1999. An Italian digital library was thus created, with all the characteristics to align with similar European and non-European initiatives. A group of experts, chaired by Professor Tullio Gregory and comprising representatives of state and regional libraries, museums, universities, and research centres, defined the priorities for action, at the same time indicating common standards and technologies, and linking national level activities with international initiatives. In 2005, the first version of Internet Culturale was born, the front-end of the Teca Digitale Italiana, and, of course, the SBN was involved, through the enrichment of specific fields that facilitated the inclusion of links to digital resources in bibliographic information.

More generally, the Web offered continuous stimuli in evolving means and methods of interaction with the reference user, which was not limited to users of the National Catalogue but included the sector of technical specialists. The SBN, therefore, needed to propose technologically advanced methods that made data available in forms capable of satisfying the needs of software developers. One of the innovations, considered revolutionary for the Web, was Linked Open Data (LOD) in 2009 and the development of the Semantic Web. The SBN was also involved in this technological innovation, as it is sought both by technicians looking for data to be processed in the simplest and most immediate way possible, and by users, accustomed to less rigid responses, providing broader horizons. The SBN community discussed these aspects internally and in 2016, the Scientific Technical Committee mandated ICCU to start an experiment in this area. The road was not an easy one for many reasons, including the enormous amount of data stored over time, which was not entirely homogeneous (just think, for example, of the variations in rules, which cause disruption in the management of certain data). Furthermore, the lack of standard coding sometimes for information does not allow easy application of LOD. However, an experiment was started but we had to wait until 2022, with the SRI Integrated Research System project, which will be

discussed shortly, for the publication of SBN's Linked Open Data.

3.5 The Integrated Search System

In 2018 the time was ripe to address a more harmonious and general discussion on digital, and to offer new ways of support and help to libraries and a more advanced service to users. With the birth of the Italian Digital Archive (Teca Digitale Italiana), which was also extended to archives, a solution was proposed to this increasingly important topic for libraries, but now a new leap in perspective was necessary.

The Integrated Research System project sought to respond to various needs. For example, specific display cases have been re-engineered and optimized for those who need a "turnkey" service, while a so-called remote display case was proposed for those who wish to manage digital material independently while maintaining visibility of the resources in the portals managed by ICCU. There are also important innovations for users, such as the option of using digital resources that respond to the IIIF protocol through a viewer integrated into the portals. Furthermore, a personal account is made available, in which it is possible to save and share research and bibliographic records, designed above all as a teaching aid.

Another key project innovation is the connection between Edit16, Manus Online and SBN databases, historically created at different times and with specific purposes, without envisaging an integrated approach at any level.

The SBN Catalogue is therefore enriched with information from Edit16[19] and Manus Online[20] and at the same time it allows the option of navigating between the information present in the different data structures. The most important innovation for users is provided by Alphabetica, Italian libraries' new bibliographic portal, which is also intended for a less specialized audience than that for the OPAC SBN and those more inclined to browsing that can lead to unexpected and unforeseen results. These new possibilities are based on the use of semantic tools, such as the conceptual map, the high-resolution radar, and the preparation of numerous new ad hoc generated indices. The attractive graphics and the presentation of the results in thematic boxes help the user navigate the different types of material in the SBN.

Another hallmark of these times, unfortunately, is the increasingly pronounced shortage of staff in libraries. The

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19 National census of Italian editions of the 16th century: https://edit16.iccu.sbn.it/.

20 National census of manuscripts from Italian libraries: https://manus.iccu.sbn.it/.

consequence is twofold: on the one hand, the peripheral government bodies, the SBN Hubs (Poli SBN)[21], to which many of the key activities for the good performance of the network are delegated, are depleted of personnel and skills, so that they struggle with basic activities, and have difficulty in helping the participating libraries, at the very moment when there is a greater need. On the other hand, the quality of Indice data tends to decline due to a lack of sufficient qualified professional figures. We are trying to address these problems, although partially, through SBNCloud, the result of the re-engineering of the SBNWeb hub application. The new Cloud platform relieves the hubs of management expenses and burdens, allowing the release of precious resources for coordination and organizational activities.

3.6 Project Indice 3 and IPAC

In recent years, it seems that the speed of technological change is further accelerating (in addition to the driving force for new digitization projects with funding from the National Recovery and Resilience Plan (PNRR)). This is expressed in the SBN by two other projects in which ICCU is involved: the re-engineering of the SBN Index (Index 3) and the Institute's participation in the "Infrastructure for the Cultural Heritage (IPAC)" project, coordinated by a recently established body, the Central Institute for the Digitization of Cultural Heritage. It is a structure designed to preserve, manage, and enrich the digital cultural heritage of the country and involves libraries, archives, and museums, since it arises from the need to overcome the fragmentation of the user systems and from the need to manage data that is heterogeneous in format, type, domain, and protection policies.

To finish this quick overview of the progress, two distinct applications that use Artificial Intelligence (AI) techniques are currently being tested: the hidden SBN project and a chat box for the Alphabetica portal.

The hidden SBN aims to record in the Central Index, in a semi-automated manner, bibliographic information of particular interest (especially relating to cartographic, graphic, and audio-visual material) which for various reasons is only present in local databases. Sometimes, such information is accompanied by digital content, which is therefore not usable through the renewed services of the ICCU digital ecosystem. By exploiting the potential of AI, this process will be able to take place more effectively and safely.

Alphabetica's chat box "Alphy" is designed for a younger audience not accustomed to the structured language of cata-logues. Through natural language, even complex questions can be asked which, thanks to the use of generative AI, offer results like those of a traditional search, while remaining within the scope of the data present in Alphabetica.

Thanks to the inclusive capacity demonstrated so far, the SBN network will certainly be able to involve an ever-increasing number of institutions and keep itself technologically up-to-date with the times.

4 Evolution of the Academic Library

4.1 The Turning Point of the Digital Library and the Winds of Openness

The transition from the 1980s and 1990s saw a concentration of epochal events, the impact of which was enormous for society in all its aspects. Libraries, as social institutions, were inevitably affected by such changes. The changes recorded between the 1980s and 1990s undoubtedly represent one of the most significant and challenging phases in the evolution of libraries, particularly in academic libraries. From a technological point of view, during these years Tim Berners-Lee and Robert Cailliau created the World Wide Web, which in the 1990s would bring radical changes to libraries in relation to cataloguing, acquisitions and collection development and other services. With the advent of online digital information resources, a real paradigm shift took place in libraries, from ownership to access, well known and widely discussed in the professional and research literature in those days. As is well known, the invention of the World Wide Web and its related protocols was deliberately left open and free and was not patented. The inventors left the possibility of implementing the Web to all those who had the skills. The choice was far-sighted and effective, and we witnessed the rapid evolution of a tool that in just over thirty years moved from the military and academic laboratories and research institutes of its beginnings to the daily lives of all of us. The developments from the early Web to Web 2.0 and then to Web 3.0 or the Semantic Web were fast and consistent, precisely because the option of implementing it was left open to everyone, although the results were probably not foreseeable even by its inventors.[22] Berners-Lee's choice of openness created an important first step towards the open access movement, which about ten years later would be formalized in the Budapest Open Access Initiative (BOAI).[23]

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21 The SBN Hubs are the peripheral structures through which the SBN libraries exchange data with the central system (SBN Index).

22 Berners-Lee (2020).
23 BOAI (2001).

This push for openness occurred within a context that saw a change and global opening in the socio-political structure because of the Fall of the Berlin Wall and therefore a desire for general openness and sharing. It is not a coincidence that one of the central documents of the movement, the *Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities*, issued in 2003, was located precisely in the city that symbolized openness and the fall of barriers. In Italy, in 2004, the principles of the open access movement were embraced and confirmed by the Messina Declaration,[24] signed by most Italian universities in support of the Berlin Declaration.

In Italy, we began to observe developments at a European level, also fuelled by the intellectual, technical, and socio-political wind of change, brought about by the World Wide Web and by the almost contemporary Fall of the Wall, with a new perspective, full of hope and open to numerous possibilities. A strong impetus or co-operation at a European level had already come previously from the European Community and from DG XIII-B of the Commission of the European Communities, the organization preceding the birth of the European Union. Since 1986, the year of the signing of the Single European Act (SEA), through which twelve countries expressed their willingness to establish the European Union (EU), DG XIII-B had undertaken some studies and data collections on European libraries.[25] In 1985, the first barrier was broken with the signing of the Schengen Treaty.

4.2 The Era of Consortia

In the field of academic librarianship, Italy looked to international consortia already active in other countries to model the forms of co-operation that were emerging.[26] Within Italian academic libraries, a strong push for internal co-operation and the consequent introduction of university library systems led to the adoption of information technologies in library catalogues, including electronic catalogues and OPACs. In general, in those years there was a trend towards co-operation projects in Italian libraries, an objective that arrived later than other countries, and which was pressing and necessary with the rise of new technologies, which at one and the same time facilitated their implementation.

In the 1990s three consortia were established: CIBER (Interuniversity Coordination of Databases & Online Pu-

blishing), which covered the Central and Southern area, made up of 26 universities, some research centres, and the International School of Advanced Studies (SISSA/ISAS), and relied on the technical support from CASPUR (Interuniversity Consortium for University and Research Supercomputing Applications), in charge of the digital platform EV (Virtual Newspaper Library) for shared access to all electronic journals of the consortium, the permanent archiving of resources on its servers, and other services, including the analysis of usage statistics; the Users' Committee – the Cilea Digital Library (CdU-CDL) was made up of representatives of 50 institutions, of which 26 were universities, distributed throughout Italy; and CIPE (Interuniversity Co-operation on Electronic Periodicals) covered the North-East and Central area, and arose from an initiative by a group of twelve University Library Systems, which were represented within a management committee and a technical committee that directly negotiated with publishers.

University consortia mainly managed the acquisition of digital resources and dealt with publishers, and this has been their limit since negotiation and attempts to escape from models imposed by publishers, such as the Big Deal, have absorbed all their energies, slowing down the development of other types of co-operative services. However, academic librarians were aware of the problems that the transition from ownership to access implied, starting from the preservation to the cataloguing of resources, and from the constraints imposed by the Big Deal to the increase in prices. In the professional and research literature, there was a constant discussion on these themes.[27] In 2005, the three consortia signed an agreement with the CARE Group (Coordination Group for Access to Electronic Resources) of the CRUI (Conference of Rectors of Italian Universities), which today centrally manages acquisitions for all universities at national level.

4.3 From Library 2.0 to Library 3.0

In the first phase of development of the World Wide Web, there were many reflections on the opportunity and the need to catalogue digital resources, how best to accomplish it in a context in which acquisitions through big deals took place for packages of hundreds and even thousands of journals and e-books. In an article in the Italian journal *Biblioteche oggi*, Michael Gorman postulated that electronic resources have the same attributes as other bibliographic entities and that it was possible to catalogue them in a

24 CRUI (2004), Alosi (2014).
25 Fuegi (1990), Friend (1999), Di Majo (2002).
26 Giordano (2001).

27 Santoro (2001), Badalamenti (2002), Bevilacqua (2005), Di Majo (2002).

similar way to traditional resources or at least in such a way as to allow them to be integrated into library catalogues.[28]

In practice, there were some experiments,[29] but over time this task became too onerous for academic libraries, as well as for other libraries, and the task was, in fact, left to publishers. Academic libraries subscribed – and still do – not only to digital resources but also to the platforms through which they are accessible and to publishers' cataloguing and indexing services. Progressively, academic libraries gave over the functions of selection, collection development and cataloguing of digital resources, leaving them to publishers. This has severely weakened university library systems, which today, in some cases, have lost their centrality in the university system. Digital research periodicals are not catalogued in OPACs and are not in library databases: they are in publishers' databases. A 2002 article reports the results of a survey carried out at the University of Florence according to which only 50 % of the research journals produced in the University could be identified through bibliographic tools, and only 10 % were in the OPACs of Florentine university libraries.[30] This situation was certainly not any different in other academic libraries and has not changed today.

The transition to Web 2.0 (and Library 2.0, as it was defined) still left some hope of being able to manage and control the large quantity of digital resources,[31] but the fragmentation of resources and datafication introduced by Web 3.0 make today's scenario even more complex. The phase of great openness and strength of the 1990s has given way to a much less firm situation for university library systems.

4.4 Have the Walls Really Fallen?

In the 1990s, when libraries had to manage digital resources and the shift to an online environment, co-operation and national demands were inspired by the winds of change blowing from Berlin. In 1990, Eve Johansson expressed the great expectations of the library community from the 56th IFLA General Conference to be held in Stockholm from 18 to 24 August 1990. She defined it as an "historically important" event[32] for two reasons, one of which was the *glasnost* following the Fall of the Wall, while the other was another desire for opening that towards the Third World with the launch of the new ALP Core Programme, *Advancement of Librarianship in the Third World*. Johansson wrote that:

In the USSR and its republics *glasnost* immediately had a stimulating and liberating influence on the library profession, and stimulated new debates, which had been missing for forty years, on the role of the library in society and towards political independence and the neutrality of the profession; expression of the new awareness was the formation or rebirth of library associations.[33]

The theme of the IFLA Conference "Libraries: Information and Knowledge" was expressed at various points on the agenda, including that of libraries as promoters of international co-operation, as well as the new model for the "multimedia library" as it was defined at the time before the common use of the expression "electronic library" and then "digital library". In her report on the IFLA Conference published in the journal *New Library World*, Eva Johnson wrote that "participants came from 120 countries – more than ever before – with unusually strong representation from some, such as Iran, both China and Japan, and the Baltic states and USSR",[34] and then rather ironically complained about the difficulty of communicating with people coming from countries whose "lingua franca" was not English but German or Russian.

In Italy, academic libraries were at the height of their strength in the 1990s, and at the level of the library community in general a phase of co-operation seemed to open marked by the development of the SBN (National Library Service), which was discussed above in this article. Consortia of academic libraries for acquiring digital resources were possible, and later in the following decade, as well as the union around the ideal of open access to knowledge, which fixed in the academic and research field the aspirations that had broken down walls and borders at a socio-political level. However, in 1998 the academic librarian Gabriele Mazzitelli, in an article titled "The Berlin Wall",[35] questioned whether the library walls had really been torn down or simply ignored. He stressed that political decisions in Italy had often not really helped to break down those walls, due to the lack of attention to central social institutions like libraries. This is a consideration that is unfortunately still true, in an era in which barrier-free access to knowledge has become crucial and should be a central focus of every political agenda.

The modern academic library is a more complex institution that must prioritize providing access to digital collections, data,[36] and numerous other aspects, many of which are relatively new, such as research data management, re-

28 Gorman (2001) 13.
29 Bassi and Bettoni (2001).
30 Tammaro (2002).
31 Morriello (2010, 2011).
32 Johansson (1990).
33 Johansson (1990).
34 Johnson (1990).
35 Mazzitelli (1998).
36 Anderson (2011).

search evaluation, artificial intelligence,[37] and increasingly opening to citizens through public engagement. Today more than ever, it is necessary to strengthen the role of the academic library.

5 Conclusions

The growing importance of libraries, and particularly research and academic libraries, is not questioned by any political institution, at any level. For example, the European Union Recommendation CM/Rec (2023)3 highlights the role of libraries as crucial centres for a more cohesive and inclusive society.

This undisputed recognition, however, has not been followed by concrete action on the part of political decision-makers. For several decades, libraries have seen their professional staff decrease and they are consequently forced to cut services and opening hours to the public. This serious problem not only affects the users themselves, but also the quality of the data in the catalogues, whose accuracy and and timeliness is increasingly decreasing.

On the other hand, however, funds for digitization projects and the creation of new web portals are multiplying in libraries. While it is important to make as many digitized materials as possible available to the public, using technologically advanced systems, including artificial intelligence, if these activities are not supported by acceptable data quality, the service risks being inefficient and ineffective.

Although the situation leaves little room for optimism for positive change, we nevertheless once more must trust in the potential of the library community, which has demonstrated on many occasions its ability to deal with complex situations and challenges by responding in an effective and innovative manner.

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Dr Antonia Ida Fontana
Former Director
National Central Library
Florence
Italy
antoniettaif@gmail.com

Maria Cristina Mataloni
Librarian
ICCU Istituto Centrale per il Catalogo Unico delle Biblioteche Italiane e per le informazioni bibliografiche
Viale Castro Pretorio, 105
I-00161 Roma
Italy
mariacristina.mataloni@cultura.gov.it

Dr Rossana Morriello
Assistant Professor of Library and Information Science
Department of History, Archaeology, Geography, Art, and Entertainment
University of Florence
Via San Gallo, 10
I-50129 Firenze
Italy
rossana.morriello@unifi.it