



Knowledge: custody & access

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Abstract:

The University of São Paulo celebrates its Integrated Library System 30th anniversary with an exhibition, discussing the problems of retrieval, preservation and access to knowledge resulting from the exceptional changes ICTs produce in contemporary society. It opens up discussions on the main function of the ancient library institution, reinforces its relevance and reflects on technical tools and social practices that make information and basic raw material accessible, generating new forms of knowledge. About the future library, it's a call for reflection on how the brilliant minds of the past projected into the future, which for us are the achievements of the present. The future has already started and expects each one to exercise inventiveness and determination to build it in a human and collaborative sense.

1 NECESSARY DIALOGUE BETWEEN PUBLIC UNIVERSITY LIBRARIES AND SOCIETY

Libraries prioritize the organization, management and, above all, the dissemination of information, incorporating both technical and logical elements, aiming at fulfilling their socio-cultural function and at their consolidation as spaces for sharing and learning. This means that, along the years, decades and centuries, libraries have followed and absorbed technological innovations in favor of collectivities.

Record tools and, consequently, the preservation and dissemination of knowledge evolve continuously. Ceramic plates, tokens (baked clay pieces), clay plates, manuscript rolls, papyrus, parchment, codex, among other supports, invariably, after the printing press was invented by Johannes Gutenberg, are definitely relegated to disuse and replaced with mass-produced books. Later on, it was the time of microfiches, compact discs (CD), digital versatile discs (DVD) and so on until reaching the digital support, when physical libraries start being hosted “in clouds”.

Information retrieval mechanisms, such as printed bibliographies and “index card” catalogues are replaced with *Online public access catalogs* or OPACs, which now give way to electronic documents management systems. Hypertext, hypermedia and interactive documents, which converge texts, images, sounds, links and synchronized movements in the Great Web favor contextualized searches – semantic web – according to each internaut’s profile. Individuals gather around social networks that make them interact with peers, wherever they are, which means the inexorable break up of space and time boundaries and are marked by cooperative production, use, reuse and sharing of information and knowledge data.

The sum of these evolutions leads us to the present library: more than a room to store books and materials, it is now an instance at which ideas are shared, learning is fostered and new knowledge is produced. Hence, its two performance focuses are: anticipating informational demands and delivering to the interested party— whoever and wherever it is – the adequate source of information; and the second, fostering the formation and development of informational competencies in the use, access and production of information, aiming at constant mobilization and knowledge, skills and attitudes that lead to recurrent learning for solving informational problems with innovative proposals.

From this perspective, the exhibition *Knowledge: custody and access* revisits the historical legacy of the knowledge of Humanity deposited in libraries. It thus points to changes in the technological bases of present libraries and in the different socio-economic and cultural contexts in which they transmute into transformation agents and producers of cultural revolutions. It also discusses the impacts of information and communication technologies (ICT) in relation to the contemporary society, highly impregnated by technological innovations, which stimulate social and individual imagination and explore the innovation potential offered nowadays, founded on technological resources for preservation and for access to knowledge. All of this viewing at reordering the way citizens think, in the near or in a far future.

Hence, at the dawn of its 30th anniversary, the University of São Paulo Integrated Library System (SIBiUSP) seeks to make transparent the actuation of over 800 professionals (higher, technical and basic levels) in 44 libraries located in *campi* distributed in nine cities in the State of São Paulo. These libraries host a collection

of over 10 thousand journal titles, 100 thousand theses presented at USP, 594 thousand USP production items, 264 thousand electronic books (*e-books*), 4.5 million books lent every year, 1.5 million yearly reference consultations. There are also nine million accesses to the Capes [Coordination for the Improvement of Higher Education Personnel] Journal Portal, 40 thousand commutation requests met, 18 thousand participants in events and courses yearly promoted by the System, among other data.

They are not mere numbers. They are much more: data reflecting the impact and the determinant role of the System in the USP internal ambit and outwards, once the participation and the presence of its teams in national and international projects and networks has been a constant. Innovative themes and actions, always guided by the advances in information and communication technologies (ICT), represent the maximum expression of the commitment and social responsibility taken or by all of the System libraries and, as a consequence, by the SIBiUSP. The System counts on several partners of state and national representation, especially, FAPESP (The State of São Paulo Research Foundation), UNESP (The State University of São Paulo "Júlio de Mesquita Filho"), UNICAMP (Campinas State University), IBICT (Brazilian Institute for Science and Information Technology) and the aforementioned Capes.

Today, the SIBiUSP starts the insertion of its libraries in the digital environment *web 2.0* and thus prioritizes the digitalization of its collection. It develops digital libraries of different contents (digital learning objects, rare works, audio material, etc.), besides ensuring accessibility oriented by international standards. It is involved with the scientific publishing and management of electronic scientific journals viewing the interoperability of its results. For this, it resorts to the technologies based on the open archives initiative, caring about copyright and public access issues. This means privileging the electronic collection (*e-books*, *audio books* and electronic journals), the implementation of an integrated search and recommendation system, providing individuals with a unique access interface to the electronic resources and printed collections available.

This is hence the moment to make effective the necessary discussion between public university libraries and society about the vast role of IES, not only celebrating the SIBiUSP 30th anniversary, but rather reassessing libraries trajectory as institutions essentially social and changeable, and whatever else is to come.

2 CURATORIAL DIRECTIONS AND EXHIBITON SET UP

The exhibition *Knowledge: custody and access* approaches the problematics of retrieval, preservation and access to knowledge to mark the tension involved in the relationship between these elements and the exceptional changes that new information and communication technologies have produced in contemporary society, in the sense of the growing democratization of access to the legacy of human knowledge, which has always been kept in libraries along history. It discusses the role of libraries in the construction of the social phenomenon of knowledge and leads to a reflection on the technical instruments and social practices, which allowed making information accessible and strengthening it as the basic feedstock for constructing new forms of knowledge.

It contextualizes this process in the Brazilian historic field, taking São Paulo and its University as background. Hence, the curatorial eye turns away from the library object to include it into a more open and universal perspective, which allows seeing the city, the Country, the industry engine, the role of technology and its social operators, in sum, the plurality of actors that lend their work force to build São Paulo and its University. However, these constructors feedstock is not stone or lime, but rather intelligence and the art of knowledge. In this context, the University of São Paulo emerges as a power plant, facilitating the access to knowledge and managing social memory, a task it conducts by means of its libraries.

The exhibition route was divided into different segments that will respectively deal with:

- human knowledge collection preserved in libraries under the technological and social aspects assumed at different moments in history while instruments of knowledge organization and management, being above all an eminently custodial perspective, linked to the sacrality idea in relation to its upkeep and access;
- formation of libraries and of universities, having the University of São Paulo and its Library System as an exemplary case to illustrate these processes;
- information and communication technologies (ICT) and their impact on the access to knowledge and even on its production, resulting in democratization movements of profane nature, which are not confined in the universe of knowledge and of thought, but are rather expanded in new forms of action and of social transformation, within the new culture of information society which we now live in.

The exhibition expography was divided into three modules:

Module 1 – Allows a transition, preparing visitors to the exhibition by gradually removing them from the present reality. They will find a scenario on the forms of understanding knowledge, beginning with the Western creationist myths. In this environment, knowledge keeps an origin mark that places it in the condition of “original sin” and, by divine mandate, it turns to be of religious responsibility.



Credit: Anderson de Santana

Opening of Exhibition

This perspective invests knowledge with a sacrality condition, as a counterpoint to the secular or profane world, creating a custody paradigm that only gradually leads to a laicizing process, separating Church and State, clerical power and civil life.



Credit: Rodrigo Fonseca

Custody

Created within a religious universe, not even medieval universities disarticulate this association of knowledge to sacred and only very slowly will they become secular

instruments, even contributing to transfer this sacral aura to the science knowledge universe.



The Universities



The Knowledge and their technical tools

Next, the module traces back the evolution of technical instruments to record and to preserve knowledge, making an inventory from the primitive forms of writing and the

invention of the moving types printing up to the modern information and communication technologies, showing their impact on the ordination of social life.

Module 2 – Makes a retrospective on the construction project of the São Paulo modernity, its progress and civilization symbols as from the historic cycle of the coffee economy up to the 1920s, in which the debate about creating a Paulista university emerged. It proceeds under the new regime installed with the 1930 Revolution and the unfolding of the constitutionalist movement of 1932, until it was consolidated in 1934, under the intervention of Armando Salles de Oliveira, in the USP establishment decree.



The University of São Paulo and the academic libraries

The university is therefore seen from the perspective of its intellectual operators and from the memory of the historical events that impacted the construction of the Ministry of Education and Health and in the establishment of the University of São Paulo. Individuals connected to the modernist movement and to the 1922 Modern Art Week are especially highlighted here, among which librarian Rubens Borba de Moraes who, along with Paulo Duarte and Sérgio Milliet, under the coordination of Mário de Andrade, participated in the establishment of the Culture and Recreation Department of the São Paulo Municipality in 1935.



Credit: Rodrigo Fonseca

The movement of culture and education in São Paulo, 1922

In it, Borba de Morais's actuation in the modernization of the Municipal Public Library is recalled, as well as the organization of the city library network and his action in 1936, together with Adelpha de Figueiredo, at Mackenzie College, organizing the Librarianship course of the Culture Department.



Credit: Rodrigo Fonseca

The rare and/or special books preserved by USP libraries

They thus developed ideas that influenced the formation and professionalization of librarians in Brazil and molded the São Paulo documentation and collection services. The establishment of the Librarianship course of the São Paulo Sociology and Politics School Foundation in 1938 makes of this professional formation initiative, together with the pioneer course of the Municipality Culture Department, the precursors of the establishment of the Librarianship course and graduate course in Information Sciences at USP and the organization of its Integrated Library System.

Module 3 – Supports the experience and development of information and communication technologies to challenge the visitor as to how the library of the future will be.



The library of the future

More than summoning visitors to an exercise on futurology, the intention is to show the interfaces of this library to be created in the future with the already existing library, because the library of the future will always be the library of social imagination using the technologies available at a given time, from the XVI century visionaries to our days.



Credit: Rodrigo Fonseca

Technology innovations and information support



Credit: Rodrigo Fonseca

The historical typewritten card catalog

As a counterpoint to an index card bibliographic catalogue, several types of access equipment are installed, allowing visitors to get familiar with the SIBiUSP organization, getting acquainted with its services and accessing its collections by an

innovative integrated search system (internationally known as *Web Scale Discovery System*).

General characteristics :



Credit: Rodrigo Fonseca

Information access through time



Credit: Rodrigo Fonseca

Timeline: production, recording, and ccess to knowledge

In each module, visitors find different multimedia installations, printed plotted panels, illustrations of rare books images, showcases with objects and different support to record knowledge, timeline evidencing the trajectory of information production and retrieval, statements by renowned science and culture personalities telling their experiences with university libraries, moving images on the digitization process, *e-books*, computers with *touch screens* and access through IPUSP to the full collection physically and electronically deposited in the USP libraries nowadays.

Along the exhibition, QRCode icons provide other “tips” of research in databases and materials available to visitors.

Poor-sighted, dyslexic, blind and deaf visitors can resort to computers prepared for Braille reading and audio of texts, besides enjoying a tactile map and floor. In all the spaces, the height of panels and hardware, the aisles and the access points were defined in conformity with international accessibility standards.

To tell this history, it was necessary to take into account the technical instruments to which production, preservation and dissemination of knowledge are due, and to understand how those instruments of human intelligence were developed and were capable of making the miracle of knowledge artificial by means of the memory prostheses that are the technological tools of their record and conservation, ever since the first writing expressions, emerging in the early Old Age in Mesopotamia, up to the advances allowed by the new instruments of intelligence, information and communication technologies that shape in the clay of a *tablet* the digital interfaces between knowledge and social life.

3 TO CONCLUDE

Technology has a “weird” effect over libraries: on the one hand it makes possible new concepts of library services, widening its range as an institution of culture and memory; on the other hand, it generates a threatening atmosphere to its existence as a place or as a physical presence. Besides, it also compromises the intellectual substance materialized in books, journals and other printed materials.

It is certainly difficult (or impossible) to foresee if libraries will survive as physical spaces, in some specific situations, as is the case of specialized institutions. The CIT effect is more incisive when we make viable the library without a territory that materializes on any user’s desk – customized, integrating distributed resources, mutable and interoperable – and, therefore, as a space that stands as unprecedented for cooperation. However, for the new library modalities to comply with the utopias of those who have thought about them before, a sophisticated and well practiced librarianship is crucial.

Nowadays, we experience the convenience of advanced library conceptions, paradoxically anchored in ancient concepts. As Avul Pakir Jainulabdeen Abdul Kalam, President of India said, “a digital library is where the past meets the present and creates the future”. Therefore, we conclude by reiterating that, at the end of this report on the dreamers’ saga, librarianship, with its ordination power, wins. The semantic web itself - with its structures and metadata layers – is a clear proof of this statement.

TO LEARN MORE

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