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# Architects and Librarians under Pressure: Dialoguing about Renovation of a Library in a Constrained Environment

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A powerpoint presentation including before and after photographs is available from http://www.zhbluzern.ch/liber-lag/PP_LAG_08/Friday/Lohisse_Sogno_cpl-def.pdf.

## Abstract

A librarian and an architect conduct the essential dialogue involved in renovating an academic library in Paris, comparing architectural concerns with the exigencies of public use, and juxtaposing technical requirements with the functional organisation of the library.

**Key Words:** Academic libraries; renovation; France; librarian-architect dialogue

## Part I: A Difficult Context (André Lohisse)

### Some History

The actual building of the university was built between 1955 and 1957 to house the NATO integrated military command. It was built by Architect Jacques Carlu, who also realised the project of Palais de Chaillot, which is a monumental construction on the Trocadero hill, facing the Eiffel tower. The building is situated at the western border of Paris, and you can imagine how accurately it was built to house military quarters in those Cold War days. The floors, walls and structures were reinforced and there were even special tunnels to escape from the building to the nearby forest in case of emergency or attack. The Soviet Embassy faced the NATO building and you can also imagine what kind of surveillance was going on between the two buildings (the Russian embassy is still in operation near the university). The premises at Porte Dauphine became vacant in 1966, when General De Gaulle decided to withdraw French forces from NATO and the Americans consequently left the building.

The University was founded following the revolt of May 1968, as an experimental university specialising in economics and management. Some of the learning methods of the university stressing the importance of small group work and teaching were implemented at the time and are still relevant today, as we will see in the architectural planning of the library renovation.

To understand the complexity of the project and of the renovation, you should understand that the NATO military premises were converted into a university, and that the NATO restaurant, on the 6th floor of the building, was converted into a university library. Therefore, information, lending and retrieval desks were installed in the entrance hall of the restaurant and in the 1980s a database consultation room was added.

The previous kitchen was converted into storage stacks for recent collections; the dining rooms and dancing floor were converted into reading rooms and open access areas for library collections; the older collections of the library were progressively stored at the underground level.

## Feasibility Study

A feasibility study was conducted in February 2001. The study involved the assessment of the library's shortcomings and of the needs of the students, faculty and staff in terms of use of the library, the assessment of the existing library facilities and a quantitative analysis in terms of space needed for both collections and readers. Following this study, a renovation strategy was developed.

## Needs Assessment

The needs assessment identified different services that should be provided by the library:

- the need to offer a wider range of spaces and places and as many of them as possible;
- the need to create appropriate library stacks at the underground level of the university;
- the need for broader open access collections of books and periodicals in the public rooms of the library;
- the need to create work areas adapted to the teaching methods implemented at the university, encouraging student work in small groups, as well as individual working conditions;
- the need to provide better access to electronic resources in the library;
- the need to modernise access to the internet, to networks and databases;
- the need to strengthen the presence of the staff in the different areas of the library.

## Assessment of the Existing Library Building: Architectural Assessment

The library was originally a restaurant, built in the 1950s. It was converted into a library, which means that the structure in itself was not really adapted. In particular, it was difficult for the readers to get a good overall picture

of the different areas of the library. The spatial legibility of the library was poor and readers found it difficult to orientate themselves. The hall was perceived as a busy crossover area rather than as the entrance to the library. The arrangement of library stock in the centre of the library was an obstacle to understanding the continuity of library reading rooms. For the readers, the overall picture of the library was quite confusing. The working and studying environment of the building was poor, because of the inadequacies of the building:

- There was no sound attenuation in the building: conversations and transactions taking place at the information desk and circulation desks were heard throughout the hall, as well as in all the library rooms. Because of its high ceiling and hard surfaces, the large hall reverberated from all the noise of conversations, or from people walking on the noisy floors.
- The central patio in particular was a permanently noisy area, which sounded more like a cafeteria than the silent reading room of a library.
- There also was a strong wish for more modularity in the library areas: it could have been interesting to open some of the library rooms, leaving other services closed. In terms of opening hours and planning, this could have provided more flexibility, considering the working hours of the staff.

## Structural System

The existing structure of the library was in a very poor condition. The roofing, the wooden floor, the skylights of the library were in a bad state of repair, especially in the patio and in the central area of library stock, where interior joinery and the glass roof were in bad repair. The storage space used at the underground level was obsolete and inadequate: lighting was faulty or missing, surface treatments and coatings were in terrible condition, and there was no ventilation to preserve collections in good condition.

## Mechanical Systems, Library Security

If we now consider the mechanical systems and library security, the report also assessed the non-conformance of the building to required standards. This concerned electrical systems, the smoke exhaust system, and fire safety arrangements both on the sixth floor and at the underground level. Library premises were not adapted for visitors' and readers' safety: photocopying areas were situated in front of emergency exits and access to the roof of the university building. This is a particularly important point, because security arrangements and legislation were a strong incentive to start the project. Finally, there was no proper heating either in the library or at the underground levels.

## Assessment in Terms of Services

In terms of working conditions, both for the staff of the library and library patrons, all this had a very negative impact. As stated before, the noise was unremitting, especially in the hall and in the patio, which was a permanent source of stress and tiredness for people working or studying in the library, and an issue for standard rules of discipline and misconduct in the library.

Library patrons had to work in poorly or unheated areas, because of the lack of thermal insulation of the premises. Lighting was poor. There was no proper space for visitor reception and orientation, but there were separate counters and desks which covered different kinds of services in the hall: a lending desk, followed by an information desk, and across the hall, a retrieval desk, giving access to the collections in stock.

The library was filled, with little spare capacity for seating and shelves to accommodate open access collections (for both books and periodicals). Access to electronic resources was unsuitable as well: consulting areas and furniture were inadequate, there were not enough work stations, and electricity was not supplied to study areas beyond the hall, which meant that students couldn't plug their laptops into the network of the University in the reading rooms.

There was also a need for better coordination of print and electronic collections in the library, especially for periodicals. Lastly, there was also lack of

staff presence in the reading areas: all library functions were concentrated in the hall, and there were no desks or workspaces for the staff in the remaining areas.

## Objectives

This analysis led to setting the following general objectives:

- Reception facilities for library readers had to be improved.
- The surface allotted to open access collections needed extension.
- The accommodation capacity of the library needed improvement, in terms of surface area and seats.
- Work and study rooms needed diversification.
- Electrical wiring and wiring for PC networks was to be developed in the reading rooms.

The programme set the following goals for the renovation of the library. First of all, more stack space should become available. The University allotted a new area at the first underground level for library stacks. Also, reading and public areas were to be reorganised to offer:

- an extension of 1,463 linear meters for open access collections of books (allowing an increase of 10,000 books on open access shelves);
- an extension of the number of issues of periodicals on open access shelves, from 200 titles to 400 titles in a 5-year period;
- an increase of 20% in the number of seats, to reach a total of 650 seats. These seating areas were allocated to the following functions in the project: reading rooms (for personal work): 345 seats; cabled access in the periodicals room: 80 seats; group work: 170 seats; access to electronic resources, catalogues and databases: 35 seats; training room: 15 seats; access to microfiche viewers: 5 seats.

New areas were to be defined in the premises, to diversify possibilities for reading and studying:

- rooms and carrels for group work;
- traditional reading rooms;

- rooms to access electronic resources;
- catalogue consultation areas;
- training room;
- areas for photocopying machines.

Working areas for the staff were also to be reorganised with the installation of:

- a main information, registration and lending desk (3 PCs);
- a retrieval and lending desk, to retrieve items from underground stacks (2–3 PCs);
- a second information desk in the middle of the library (1 PC);
- a desk for library storekeepers;
- and finally, a rest room for library employees.

Guidelines were also adopted for the acquisition of new furniture:

- new tables were to be fitted with appropriate lighting and separators, and electrical and PC cabling for the reading rooms;
- chairs would be heavy, silent to move, and without a handle, to avoid easy chair transportation from one area of the library to the other.

## Budgetary Constraints

The feasibility study was conducted in February 2001 and led to a realisation programme and to an estimate of the costs of renovation works and installation of furniture. Because of the projected costs of these works and installations, it became clear that phasing the project would be necessary.

The first difficulty encountered was that the renovation works were to be connected to and become part of the works that had to be realised in the University as a whole, to comply with new safety regulations involving electrical wiring, roofing, the installation of smoke exhaust systems and fire safety arrangements. This connection was very difficult to realise. The second difficulty involved raising appropriate funds for the whole programme, from different sources, i.e. the University; the Ministry of Education and Research; the region (Ile-de-France), and the city of Paris. All these sources could contribute to the funding, but at different levels, within different time scales

or programmes, and they introduced different programming constraints: Ministry funding was to be programmed within the four-year financing plan of the library; the Region financed renovation works in a first phase, and the acquisition of furniture in a second phase, as part of a special library funding programme; the city of Paris participated in the renovation with extraordinary yearly funds; the University financed most of the works, with particular regard to safety, electrical and roofing works. And finally, the library had to contribute from its own resources, which meant a significant reduction of its book acquisitions during the two years of the renovation.

Applying for necessary funding was a very stressful period for the library director and administration and involved a lot of paperwork, telephone calls and administration of files, especially when these files had to be rewritten because of programme changes in the administration. The total cost of the operation amounted to € 4,600,000, including € 880,000 for the furniture and computer equipment in the library. On the positive side, the projected costs equated the realised costs, which is relatively rare in renovation projects. For a total of 3,352 $m^2$, this meant that the renovation cost per square meter amounted to € 1,372.

## Phasing the Operations

Renovation works were initially programmed in two phases: Phase 1 works were to include the entrance hall, group workrooms and the stacks of the first underground level. The idea was, that once these works at the underground level were completed, it would be easy to empty the stacks at the 6th floor level to continue on to phase 2. Phase 2 works were to include the renewal of the 6th-floor central stacks and reading rooms, and structural improvement of stacks at a second underground level.

However, all this didn't take place as planned. There was little progress between 2001 and 2003 due to a number of problems. In Autumn 2001, the stacks at the second underground level were flooded as a consequence of heavy rains and a downspout failure. 52,000 books had to be sent to the National Library for decontamination during 2002. It was decided at the time

that the underground levels wouldn't be used again until they had been completely renovated.

The architect was selected at the end of 2002 and a simplified preliminary draft, followed by the tender design, was launched in 2003, without any funding. The idea was that the library needed to prepare a document in order to get money through the four-year financing plan of the library (2004–2008). However, the projected phasing of operations underwent a dramatic change. The University had embarked upon a programme of improvement of the fire safety and security of the University building as a whole and the only building project that was ready at the time was the library project. (When you sign for a project, the rule is that it must begin within one year.)

For economic reasons, and because the opportunity arose, phase 1 and phase 2 merged into a single phase. Phasing would have been costly and difficult to organise for both the architect and the library. It meant that some areas of the library would have been used by the students while renovation work was in progress: it meant using emergency exits to enter the library, a lot of noise, construction dust, additional isolation of working areas, inaccessibility of the collections and so on. 2004 was devoted to financial planning of the four-year library contract and to finding the money: a lot of discussion and negotiation went on with local authorities at the regional and municipal levels, in order to get subsidies and works started in 2005.

## Part II: From Functional Objectives Analysis to Construction, from Space Planning to Furniture Equipment (Françoise Sogno)

### Need for Dialogue

Because of the absence of a detailed programme, we were obliged to try to understand the expectations and objectives of use through analysis of malfunctions and we had to try to learn what the real job of a librarian constitutes.

## Diagnosis and Review of the Existing Building Characteristics

We had to analyse functional objectives and to try to match the programme principles with opportunities and space capacity, always keeping in mind technical constraints:

- density constraints, increased number of reading seats: we had to use the building structure in the best way within the space available to organise more than 600 public seats and the greatest number of rooms for group working;
- main technical points: iron structure, technical vertical ventilation pipes (for the lecture room below), water pipes for evacuation of rain from the roof. All those vertical lines crossing through the library involved a singular layout of rooms with three separate zones. We had to imagine the partition of space and to organise a logical progression from the entrance to the end of the building (with a view on Dauphine square) and back to the main exit. Questions of fire safety were also very important, with a special security layout, in terms of zones, of special doors with existing emergency staircases.

- architecturally interesting points to value :

    - The library is located on the 6th and final floor, on the top of the building: this is a single space under the roof with many different sources of natural light, from the sky and from above with skylights, glass partitions in the upper parts of the space.
    - One of most remarkable and obvious points was the location of the University building between Paris and the immediate neighbourhood, with two façades onto the Bois de Boulogne park and La Défense on the west side, offering amazing views of the city, with a huge skyline and a wonderful clarity.
    - Another particular point: the iron structure eliminates the need for structural panels and gives the opportunity to organise very large rooms with transparency and lighting from both sides. In this way, we tried to imagine a path for documentation research which would be permanently in natural light, as are the reading rooms.

- the assessment of defects identified that all the rooms designed for a few hundred people visiting the NATO restaurant at the same time are

completely oversize and therefore of limited use. It was a question of scale, scale of the volumes, which required a composition of the space with dimensions proportional to the size of a person, of a student.

All those characteristics were shown and explained so that the librarians might think about the new library, imagine and re-invent it according to the available space.

## Space Planning: How to Use Spaces Designed Originally as a Restaurant?

A concept was developed around three remarkable spaces:

*The main hall, main entrance, reception area*: The challenge of this room was how to give the library staff a really comfortable and efficient working space, creating a reception, registration and information desk with all the commodities for efficient work with students and readers (requiring electricity for computers, telephone, fax, printers, etc.). This working space needed to be quiet: elimination of noise was important, as before, within the huge and empty space; a study of acoustic absorption suggested a sort of roof above the desk like a canopy. We named this place a 'kiosk'. We tried to create a space like a box so library staff could feel that they worked in a safe and comfortable environment.

It was also a challenge to offer an arrival space, an entrance space where the students could find everything they need the first time they come to the university library, for registration, for information, etc.

*The old kitchen* became a storeroom. The double height ceiling was originally opened up to bring natural light into the kitchen and to allow good natural ventilation. We had to work with this height in the centre of the library and with all the available windows around the space. We thought that there was an opportunity to build a floor halfway between the main level of the library and the roof, allowing capacity for a further 16 seats.

*The old patio* was an outside terrace, a very noisy space, closed with a roof when the library was a restaurant, with a basic wooden floor and poor ceiling; the old glass wall and doors to be retained. We had an obligation to rebuild the roof and the floor. We decided to organise a comfortable space for reading and to add value to this space with skylights to allow natural light into the centre of the building. We took advantage of the new roof for studying a new scheme for skylights, with two big glass roofs with sunscreen inside and outside to cope with all weathers.

## How to Use the Construction Systems of a 1950s Building?

The iron structure of the 1950s presented problems of fireproofing and stability of the building within which 7,000 people are studying and working; problems of asbestos insulation which was too hard and too expensive to remove. The best way forward was to keep it and to not touch it.

In terms of space, the columns of the iron structure were interesting, because they were not very straight. A second structure was needed for the stability of the old patio. Therefore, we had two types of columns without a really straight line. It was the moment to think about small working carrels to provide different types of reading area. A small box could be inserted, with artificial light only, but close to the glass roof. This would be a space where a student could imagine being very quiet, perhaps for computer research.

Keeping in mind the need for book storage, we decided to enclose the outside of that box with stacks. The envelope of this structure consists of plaster panels (for fireproofing) and then wood panels.

The length of both façades on west and east with a series of windows which give panoramic views of Paris and the suburb and would allow for large rooms where the density of tables and seats along the windows could be an advantage. I did not want to have stacks across those beautiful long façades.

Another challenge was how to create work rooms for 4 to 10 people out of disproportinate spaces, as organising work rooms was a major challenge for the library staff. We decided to create a series of rooms with different sizes and layouts, but all built to the same principle: transparency for easy control by the staff; good acoustic absorption; wherever possible, natural lighting for working comfort –: where work rooms have no windows and views on the exterior, we created large glass walls on to the circulation space.

## Colour Works, Colour Study: Bonnard Paintings as a 'Source of Inspiration'

To add value to the renovation project, I asked some specialists to draw up a colour proposal. It was a good way to get another point of view on the project and to bring it to completion.

The colour project took the value of natural light as an inspiration and was to show the obvious differences of spaces and separate rooms. Colours demonstrated the atmosphere of the layout and highlighted all the characteristics, the transparencies, the clearness … and the existing skylighting. We called them 'magic lanterns'.

## Furniture Equipment

The final phase of the project was to equip the library with furniture. When choosing tables, seats and shelves, we used the same ideas as in the architectural project: the same type of wood for the tables and the radiator covers; pale wood and white metallic shelves reflecting the coloured light from the skylights; colours of seats according to the room's colours or the type of room, for example, light grey for the large reading rooms, orange for the working rooms.