

## Werk

**Titel:** Disabled and the architectural design of public buildings

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**Ort:** Graz

**Jahr:** 1997

**PURL:** [https://resolver.sub.uni-goettingen.de/purl?514854804\\_0007](https://resolver.sub.uni-goettingen.de/purl?514854804_0007) | log30

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## **Disabled and the architectural design of public buildings**

**Joensuu Town Library, Finland**

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The 50.000 inhabitants of Joensuu, a town in North-Karelia in Eastern-Finland, appear to be very avid readers and library users. On average every inhabitant took 32 loans from public libraries during 1994. Over 70% of the population of the city were loantakers.

Besides the main library and the university library there are three public "nearby" libraries plus three public libraries connected to different institutions in Joensuu. In addition, there is also one mobile library, a book mobile.<sup>1</sup>

The city has collections which include 440.000 books and 35.000 units of audiovisual material. During 1994, 1.000 volumes of newspapers and periodicals were subscribed to. The library also has a home service for the elderly and the disabled, which at present has 87 customers.

Since 1988, Joensuu has had a special board for the disabled. The section of the board responsible for building provides statements concerning planning applications and drawings. It also serves and helps designers and municipal authorities in their building projects.

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<sup>1</sup> In Finland there are more than 200 vans designed and equipped especially for library use. They provide more than 19.000 lendings points. Loans issued from these vans reach 10 million annually, which is about 10% of the total loans provided by public libraries in Finland.

One indication of the City of Joensuu's activity is its receipt of the European "Barrier free"-Award which it received last year for its new housing area.

### **The disabled and public buildings in Finland**

Finnish building legislation first took the needs of disabled people into account in 1973. Stipulations and guidelines came into force at the end of 1979 which ensured that the new clause was observed.

The present wording in the building decree or "The Accessibility Clause" as it is known, reveals society's changing attitudes. Twenty years ago the Finnish Building Regulations spoke only about taking into account the suitability of premises from the disabled point of view. Today the regulations examine the matter from the standpoint of equality.

Unlike the previous regulation which only applied to visitors to a building, the new regulation now also applies to people with motor or functional handicaps who work within a building.

Every new building which includes facilities for the public or customers has to be designed according to these regulations. When dealing with the renovating of a building, efforts should be made to bring it up to the same standard as new buildings. The finding of functional and aesthetic solutions which allow the removal of barriers to accessibility, but which still respect the architectural value of an old building, represents a great challenge to the designer and often subjects his creative talents to a considerable test.

A constitutional amendment came into force in August last year, which prohibits discrimination on grounds of disablement or illness. Violating this clause can lead to the imposition of a fine or a sentence of imprisonment for up to a maximum of six months.

The Nordic countries have a great deal in common regarding accessibility in the built environment. Within this field one can talk of a Common Nordic standpoint, although minor differences do exist between individual countries.

In the report *Accessibility in the Built Environment: the Nordic Approach*, by The Nordic Committee on Disability, it is stated that Scandinavia has progressed further (concerning legislation) than any other European country.

Since an European conference in 1987, organized by the Dutch Council of the Disabled, there has been an ongoing project in progress which concerns itself with functional principles and dimensional criteria as a basis for the European harmonization of accessibility standards and guidelines.

At present experts from different European countries are making comments on a draft for this "European Concept of Access" by The Central Coordination Commission for the Promotion of Accessibility (CCPT).

#### **Some details of the Finnish regulations**

Everything within hands reach is often the most crucial for the disabled. The smallest details are the easiest to neglect in a normal building design process.

In Finnish Building Regulations there are clauses concerning the requirements for dimensioning, surface materials, fixtures and design of the details (like steps, signs, handrails, etc.) both for outdoor and indoor use.

Regulations governing attainability require that a building should be reached via a route which is suitable for the disabled. Firstly, the building should be easily reached when using public transport. Secondly, the routes from the street and from the parking area to the building have to be suitable for a wheelchair user. In practice this means, that there should be parking places as near to the entrance as possible, which are reserved for the disabled and which are wider than normal. According to the Finnish Building Regulations there has to be one such parking place for every 2.500 square meters of gross floor or part of.

Routes have to be dimensioned for a wheelchair. Straight sections have to be at least 1,2 metre wide and turns have to be dimensioned according to a 1,4 metre turning circle.

If there is a vertical level change of over four metres there should be a lift designed for wheelchair use. Where level changes are less, ramps can be used, but their inclines must be less than one in twenty. Steeper ramps having a maximum incline of one in twelve and a half may be used, but their length can only be 6 metres continuously. Ramps should be equipped with handrails 900mm high. Very exact regulations relate to the details of these handrails.

The building regulations include specifications relating to the design of furniture and other equipment. Doors are especially important. In front and by side of doors there must be enough space for a wheelchair. The door handles, etc., have to be designed and placed in such way that they can be reached from a wheelchair.

There are also regulations concerning coat-racks, service desks, public telephones and cloakrooms. According to the Finnish regulations, the height of a service desk should be 750-800mm. The "knee space" has to be at least 600mm high.

It is recommended that the toilets for the disabled should be connected separately for women and men to the normal toilets. The needs of an independent user of a wheelchair, as well those of an assisted user, have to be taken into account.

### **The Joensuu Town Library (5.715 square metres)**

The Joensuu Library is one of Finland's 3.000 public libraries<sup>2</sup>. The design is based on an entry that won the first prize in an architectural

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<sup>2</sup> Around the beginning of this decade Finland experienced an unprecedented boom in cultural construction. There were approx. 200 libraries built during the 80s. Now this building has almost come to a halt, although library use is still growing.

competition held back in 1981, but the building was not completed until 1992.

During the long design period the project has undergone several changes. In the original brief there were more cultural facilities such as exhibition and auditorium spaces. On the site there is still room for an extension, which can be connected to the entrance area of the library. This demand was one aspect which influenced the final solution.

### **The townscape**

The town plan of the city dates from the middle of the last century. Characteristic of it are the two main axis intersecting at right angles: the axis of Churchstreet, with a church at both ends, a Lutheran (protestant) at one end and a Greek catholic (orthodox) at the other.

The other axis consisted of two streets in between a park area, along which the public functions and squares of the town have been assembled. However, the library plot was designated as a typical residential block along the park zone of the original townplan (plan 1; plans are appended to this paper).

The old residential plots were fairly large and there were usually not enough buildings to fill up all the sides of a block. Instead the gaps were filled in with fences which then completed the image of a closed block.

The later open block construction, built according to functionalist ideals, has eliminated some of the closed street spaces typical of the older urban structure. One aim in the design of the library was to preserve the role of buildings as delineators of the park zone. Thus the library was also sited flush with the street.

### **Room design**

The origin of the spatial solution of the library has some similarities with the town plan. The library facilities of the town were designed using the principle of a "library town".

The facilities are organized into four blocks using interior streets. Near the entrance, at an intersection of streets, is the public café and newspaper reading room. Access to the other reading rooms is also via this intersection.

The staircase and the lift to the lending hall rise from the main street traversing the building. The rectangular volume of the lending hall has been geometrically and structurally sub-divided into open squares and low shelving blocks. One of the squares contains the lending office, while the other is conceived as an oasis with artworks and pools.

The squares are lit by skylights; the sloping soffits over the shelving blocks act as reflectors. Part of the light for the reading rooms enters through an opal glass ceiling. There are different types of prepared natural light and it is brought into the building by various methods.

Bridges over the main street lead from the lending hall to the children's department and to the music department on the third floor. The administrative areas are located along Koskikatu: they are also connected to the lending hall by bridges.

The building also contains a multi-purpose hall for meetings and exhibitions. In the children's department there is a puppet theatre and a room for storytelling. This room is totally dark blue space which, in effect, transports the listener into a world of imagination.

Book consignments via a door in the courtyard. They are opened, covered, and registered in the offices on the ground floor. After that they are either taken by a lift to the first floor lending office, or to the storage areas situated next to the reading rooms.

All the loans are registered in the main lending hall. Customer traffic is designed so that it is guided naturally past the lending office. The loans from the music or the children's department are also registered at this point. Customers are provided with eleven data terminals and one lending automate. The library is equipped with an electronic anti-theft system.

The shelving system is open at floor level and supported on legs, giving a light overall impression and making cleaning easier. The undersurfaces on the shelves are covered with wool fabric in order to dampen sound. Sheetmetal shelves proved to be more rigid than wooden

shelves and were also (surprisingly so in a wood producing country) considerably cheaper.

The shelves have a type of "glass roof". The sheet of cheap wired glass also disperses the light of the shelf lamp. The supporting arm is simply hinged to enable dusting.

### **Structures, materials and technology**

The frame of the building is made of insitu cast concrete. The elevations are rendered and partly faced with local soapstone. Windows facing the sun are covered by a metal slatted grid. Soapstone is also used as a surface material in the foyers.

### **Conclusion**

Finland has had a tradition of public libraries which began 200 years ago. The library is the oldest, most ubiquitous and overwhelmingly the most popular of all the cultural services in Finland. The public library is a living room of community for everyone, equality and independency.

Our societies are rapidly ageing. Structural barriers must not divide people into active and passive ones, into doers and bystanders. It should be possible for all to approach, enter, find their way, move and utilize buildings. But that is not enough - it is the architecture itself which should also tempt people to use a building in such a manner.





**Illustration 1: The library building in the townscape**

**Key for the plans****First floor**

- (Illustration 2)**
- 1 entrance and exhibition hall
  - 2 cafeteria
  - 3 multipurpose hall
  - 4 newspapers and periodicals
  - 5 reference library
  - 6 reading room
  - 7 local history section
  - 8 The Bishop Sormunen collection
  - 9 researches' rooms
  - 10 staff work rooms
  - 11 book stores
  - 12 mobile library garage

**Second floor**

- (Illustration 3)**
- 1 adults' lending section
  - 2 lending office
  - 3 children's and young people's section
  - 4 kiddies' corner
  - 5 staff facilities
  - 6 staff café
  - 7 administration

**Third floor**

- (Illustration 4)**
- 1 music section
  - 2 staff facilities
  - 3 air conditioning room

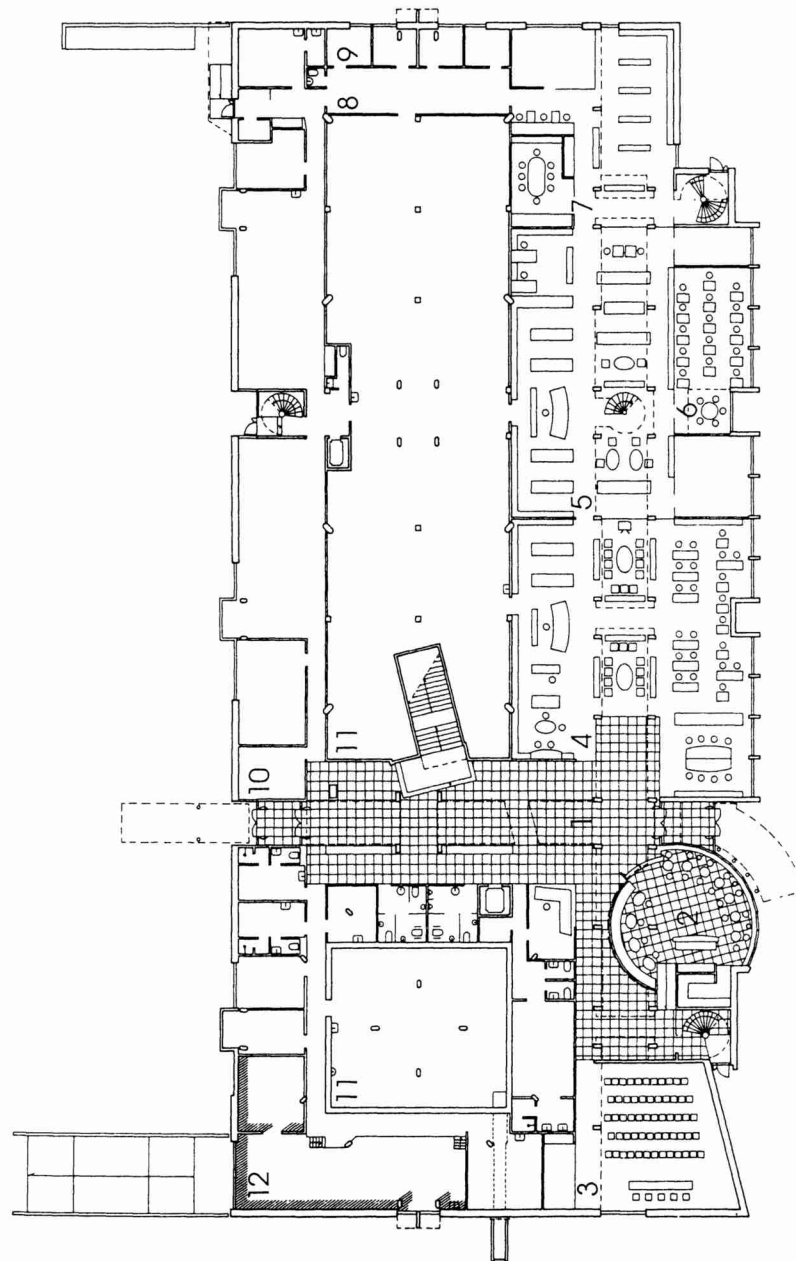


Illustration 2: First floor

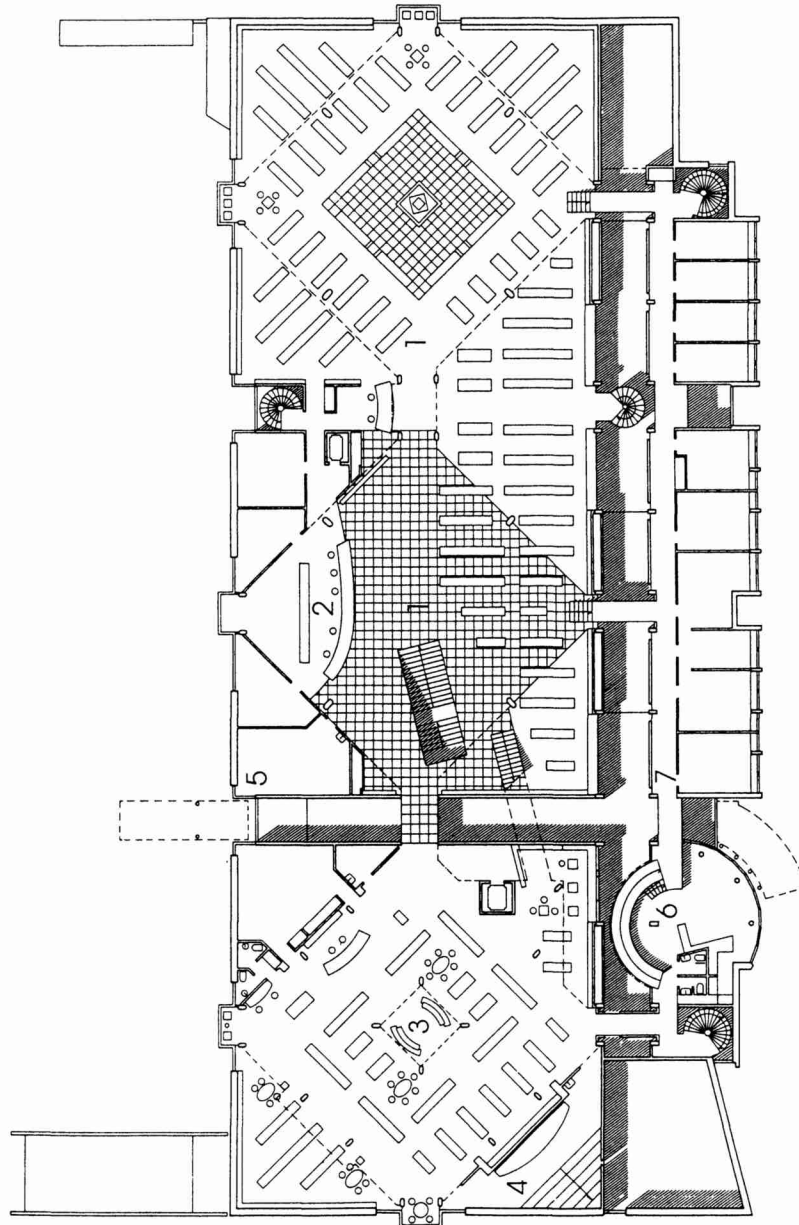


Illustration 3: Second floor

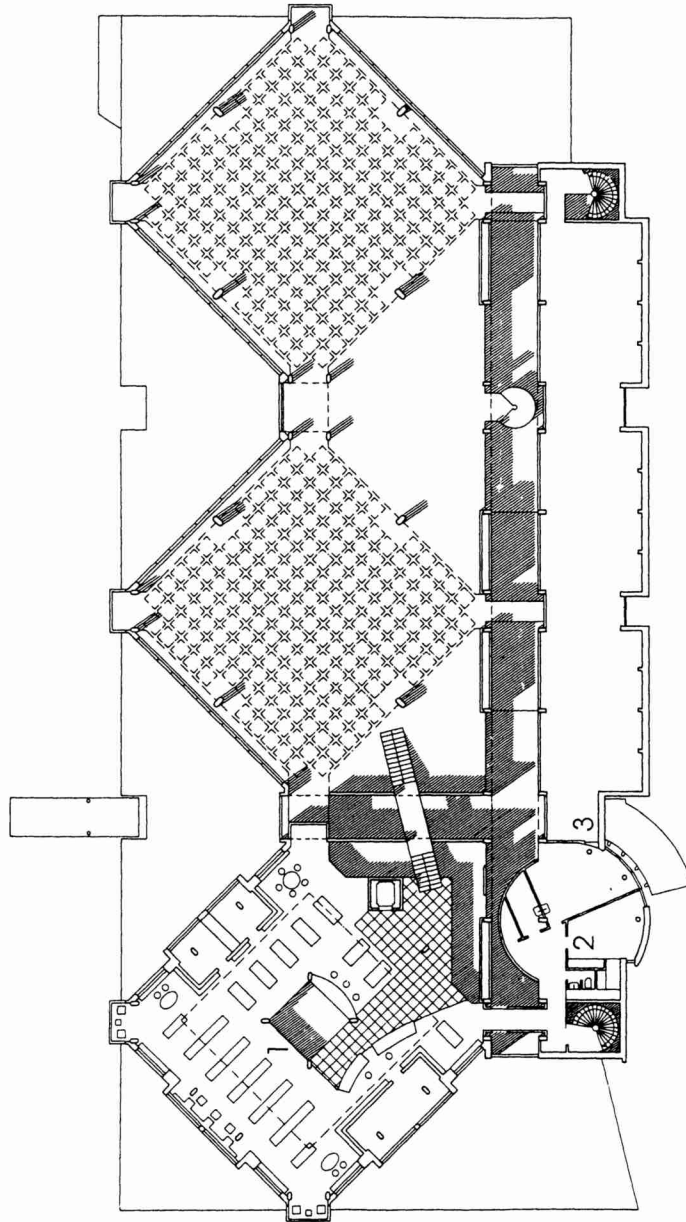


Illustration 4: Third floor

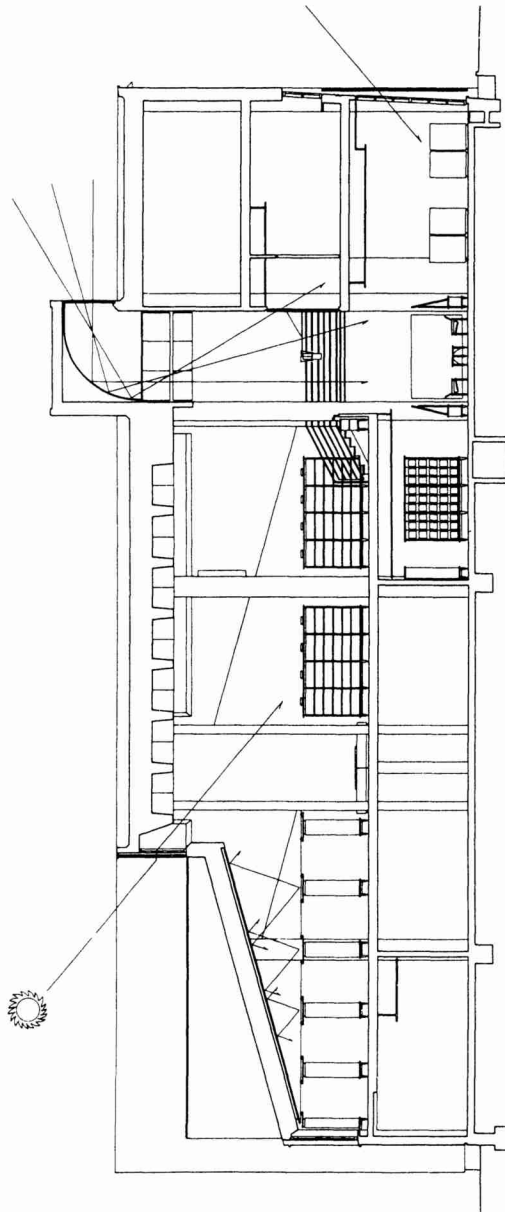


Illustration 5: Section

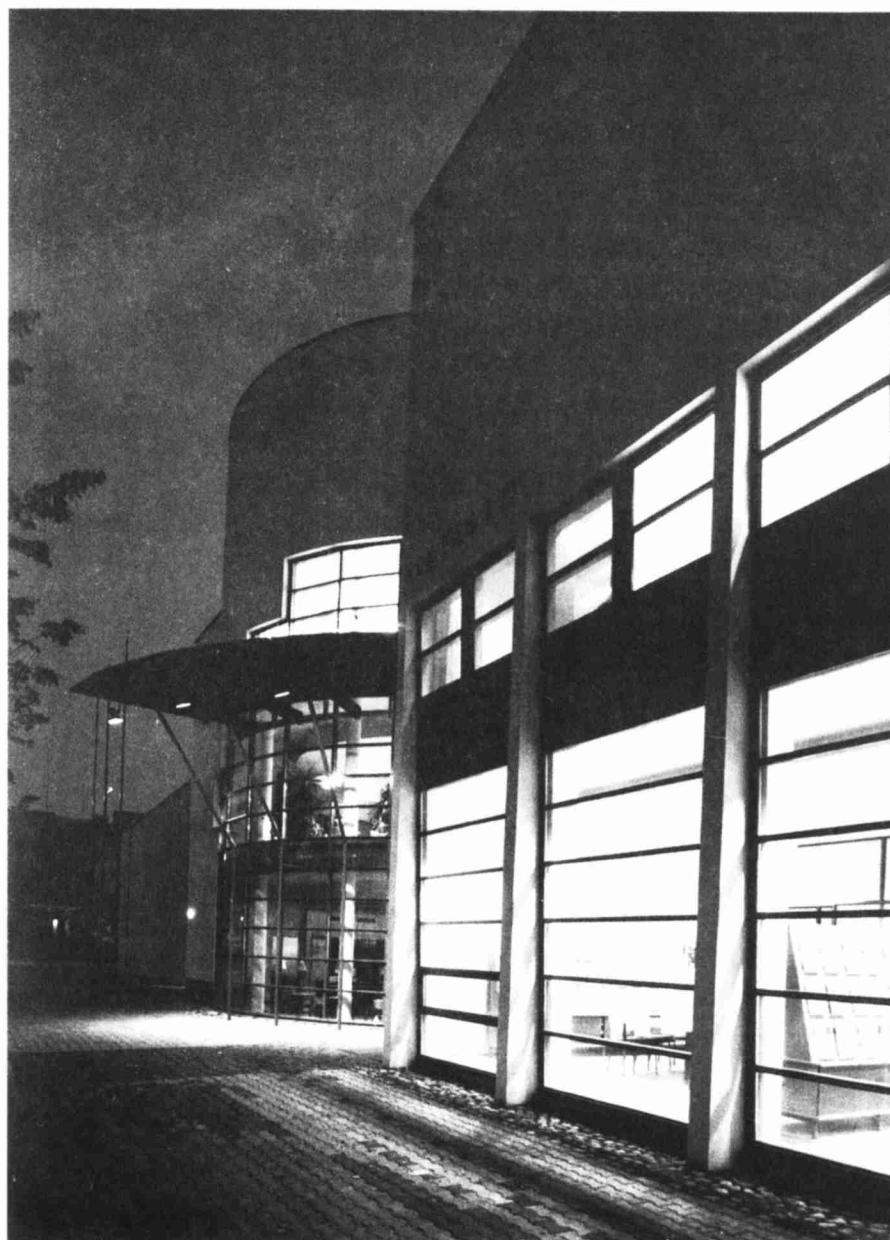


Illustration 6: Main entrance from Koskikata street  
f. Helin and Siitonen architects



Illustration 7: Library from the west



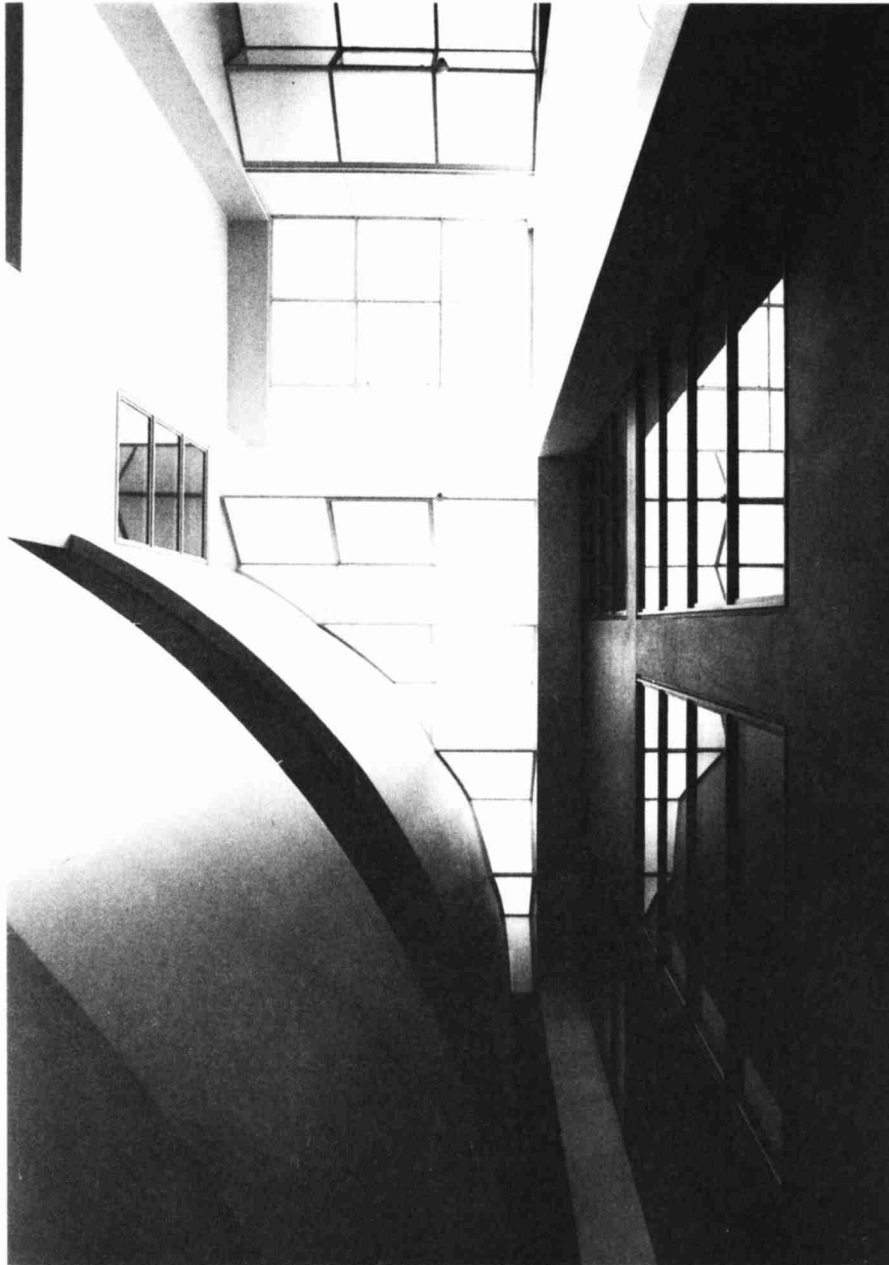


Illustration 8: Glass ceiling and the wheel chair ramp

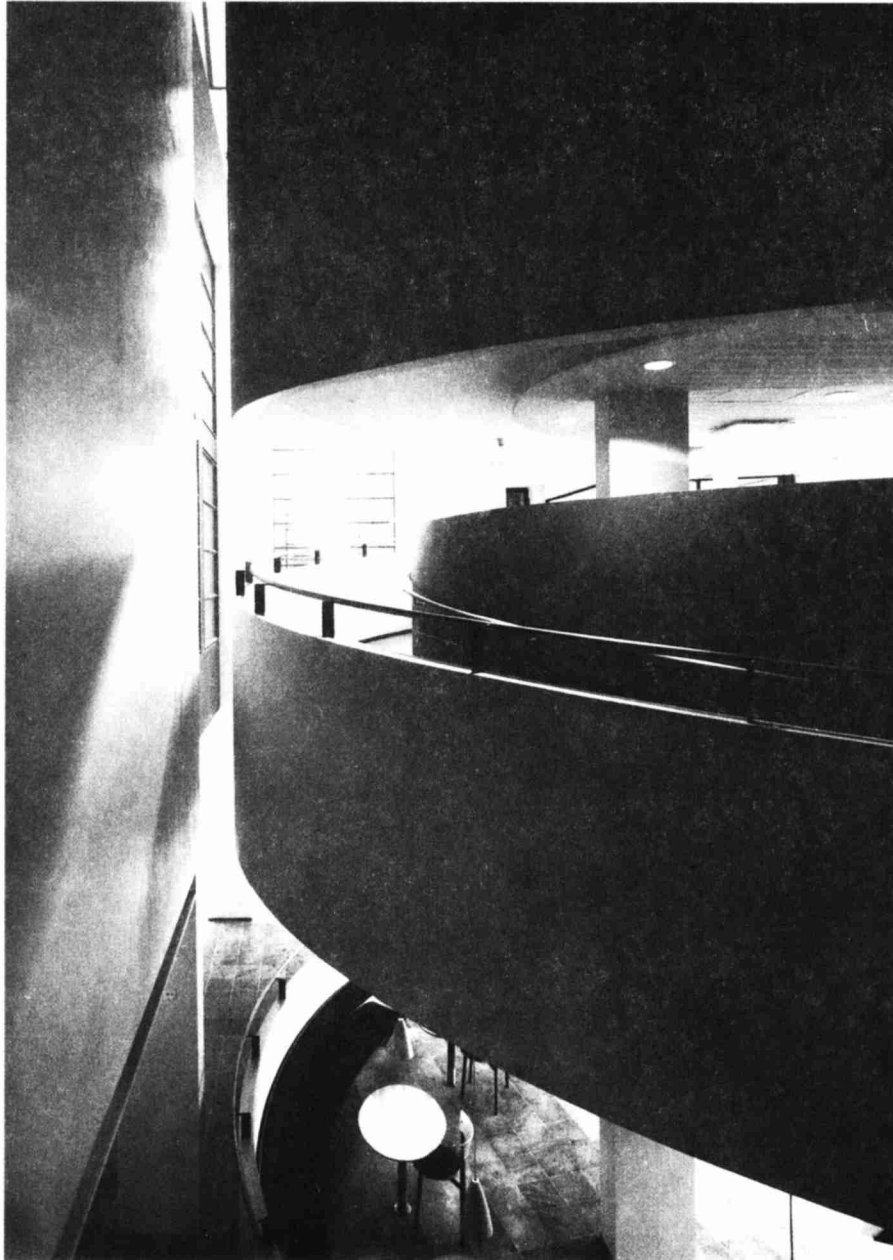


Illustration 9: The wheel chair ramp with the cafeteria below

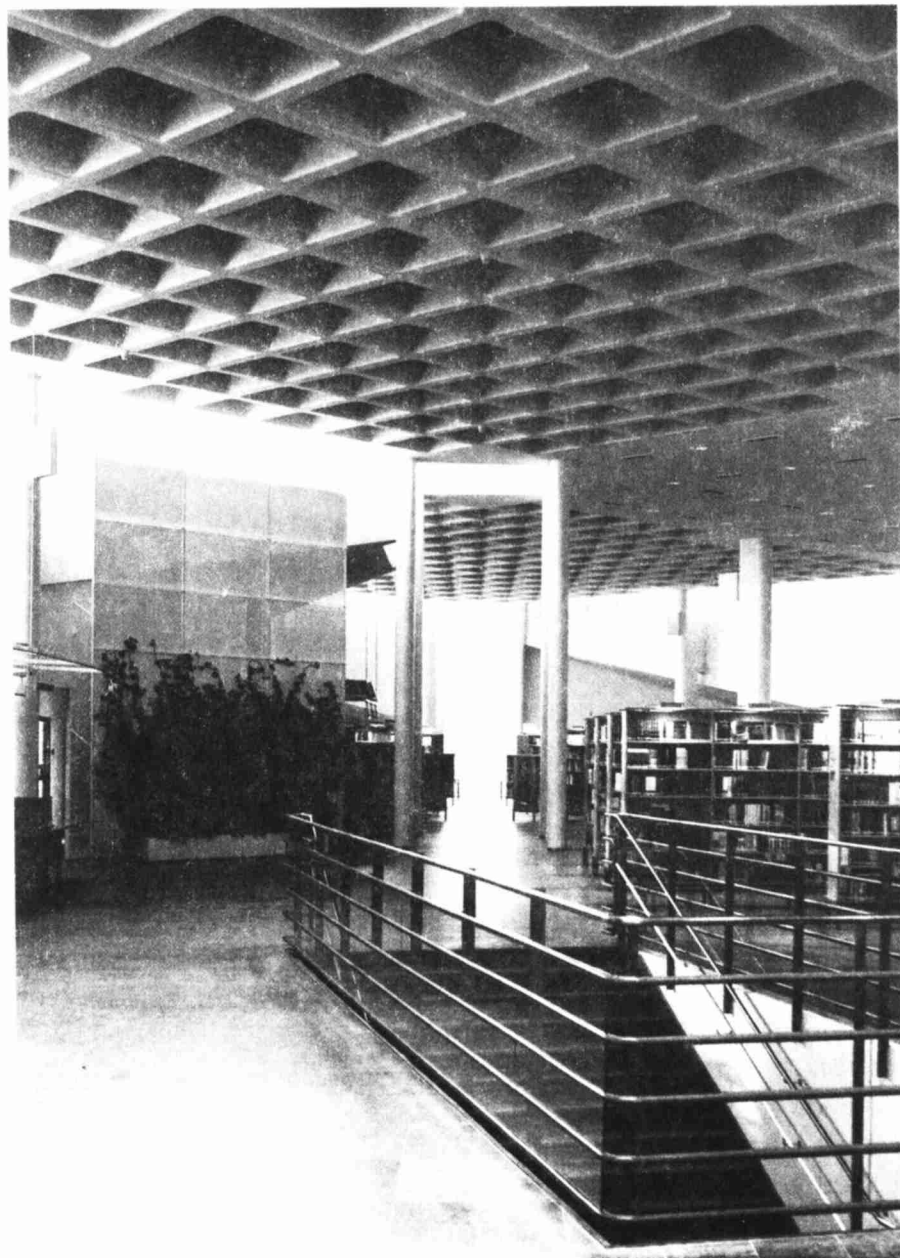


Illustration 10: Adults' lending section