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Summary

Planning structure – Building structure

Basis for the planning of the Swiss Federal Institute of Technology, Lausanne

J. Zweifel + H. Strickler, Zurich
Metron planning system, Brugg
Engineers: F. Minikus + E. Witta, Zurich, H. Meier + W. Wirz, Zurich, E. Brauchli + Amstein, Zurich

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An analogy can be established between the planning – building process and the well known supply – demand relationship operates also once only. In the case of the perpetually expanding university, it is the time factor which becomes an essential component in the planning – building process. However, on the other hand, we know that this process does have the tendency to promote rigidity. The aim of Open End Planning consists precisely in searching for an optimum balance between variability and rigidity. The planning process ought to be subjected to a temporal order; a reference point Tx is fixed and two basic concepts: The planning structure and the building structure. The planning structure has to do with and defines a certain number of long-term elements: Planning grid, different traffic and service zones, centres, green belts, etc.
The building structure has to do with structural elements of indeterminate character with a wide range of adaptability. We speak of architectural behaviours I, II, III, e. g., structural span, union element, spatial skin.
The study is terminated with chronological sections for demonstration purposes, which are, as it were, practical applications of the system based on a growth hypothesis.

For example:

Section TI: Extension of the EPFL until 1975 2000 students
Section TI: Extension of the UNI until 1975 1500 students
Departments: physics, chemistry, civil engineering, agricultural science, mechanical engineering, mathematics.

Hans Werner Liebert, Hermann Reichenecker with Laszlo Holtzer, associate

Development of an open planning system for the University of Stuttgart

Department of University Building of the City of Stuttgart

Director: Adalbert Sack
Planning team: Hans Bührlen, Pograc Pastyik, Fritz Pfeiffer
Models: Helmut Gann

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The region of Vaihingen when completed will be a concentrated university complex serving the entire central valley of the Neckar (2.7 million inhabitants in 1970). The planning of the university is being conducted in such a way that in the long run there will remain open a broad field for independent decision-making. To this end the plan of the whole complex provides only for the disposition of the chief zones following an organic scheme. Around a principal axis there are two compact zones for around 10,000 students, a park for recreation and a communications network. The same spirit infuses the actual buildings. A minimum of basic structural elements leave, long-term decision-making completely open. To keep construction costs within reasonable limits, an attempt has also been made to preserve a wide freedom of choice with regard to the extension phases. Only one single planning grid coordinates the whole complex. The system is marked by constant dimensions: construction grid (7.20 × 7.20) as well as its multiples (36 and 72 m), variable dimensions: The zones and the nature of their utilization, the possible forms of construction and obligatory conditions: linear extension, pedestrian routes, peripheral traffic arteries and parking sites.
The types of building selected vary in accordance with the main interaxial dimensions, in their depth and in terms of such criteria as: coefficient of ground utilization, number of floors, appearance of faces, distribution of support points, etc.

Wiso Faculty. University of Erlangen/ Nuremberg

Development and evaluation of partial solutions at preliminiary project stage

Horst Höfler, Lutz Kandel, Gunter Kohlsdorf, Stuttgart, in association with Hermann Rühl and L. Meyer of the Department of University Building of Erlangen

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The competition project and a register of defects drawn up by the client constitute the point of departure of the present study. In view of the scope of the problem, an attempt has been made to develop a systematic method from the very beginning of the project, particularly:

- by improving contacts among the different organizations taking part in the study (architects and university authorities).
- by delegating the resolution of partial problems to the different participants.
- by breaking down the global decision into a large number of partial decisions that are easier to cope with.

In the present example attention is focused on a part of the competition project that was badly resolved. This has to do with the union between the classrooms and the libraries.
To draw up projects always consists in ordering complexes of elements so as to be able to select the best solution. If for a group of elements there happen to exist several possible dispositions, we speak of "latitude of decision". In the present case, the following latitudes of decision had been defined:

A Distribution of classrooms
B Unions among these units
C Unions between classrooms and the libraries
D Organization in the ground-floor zone
E Organization within the libraries
F Unions among ground floor and upper and lower levels.

As in the Zerkos method, there is also defined the interdependence among the factors. Then a study is made of the network of interpendence obtaining among the latitudes of decision. The outcome of this analysis is a certain number of partial solutions which, once diagrammatically represented in plan and in section, are to be compared and evaluated. It must be shown what contradictions can arise among them, etc. A matrix is employed in proceeding to this stage of the work.

University restaurant

Michael Scott and Associates, Dublin
Project director: Robin Walker
Belfield University College restaurant, Dublin

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The building is situated on the grounds of Belfield University, south of Dublin. The guide plan, which is the outcome of an international competition, is signed by André Wejchert, who was awarded 1st Prize.
The building, which can be finished in two stages, can as of now accommodate 1280 students, and the kitchen is equipped to serve three times this number of meals in 3 20-minute servings. The building is located at the end of the main access roadway and close to the residences. The entrance is on the mezzanine level. The kitchen is sited on the upper level with the main dining-hall. On the ground floor there is a fast-service snack bar.
The architects wanted to separate the exterior structure (roof structure and carrying pillars) and freely organize the interior levels. This exterior structure is of prefabricated concrete, while the interior elements are poured in situ.

Student Centre

Building Design Partnership, London

Bradford Foundation and University Foundation, University of Bradford

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The site intended for the extension of the university is situated in the immediate vicinity of the existing campus. A communications axis for pedestrians crosses it from north to south, and the new buildings are sited on both sides of it. The present program provides for premises for 2500 students. After total completion, the complex will be able to accommodate 5000 students.
The architects have endeavoured to blend classroom buildings and residences. The first buildings realized are student residences: University Foundation and Bradford Foundation. The bedrooms are small units, with up to a maximum of 4 beds, with all installations. Several of these units constitute a group with its own kitchen. Two combined groups possess a common living-room. Nevertheless, the character of the complex remains very intimate.

Pyramidal office block on the Lake of Zurich

Justus Dahinden, Zurich
Associate: Ludwig Varnagy
Contractor: Herbert Kuhn
Ferro building, Zurich

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Within the scope of a re-allotment of real estate, the firm of Ferrolegeringar SA was obliged to give up part of its property. The problem was to retain the same coefficient of ground utilization and to build higher within the limits of the building code. The recessing of floors which results is the basis of the pyramidal form of the building. The horizontal breaks are provided by smoke vents, manually operated, required by the fire regulations. The rest of the face is fixed owing to the air-conditioning system. The inclined "Stop-ray" windows are combined with individually adjustable radiators. The upper floors accommodate flats as well as the technical installations. The restriction of the regulation building height meant that the edifice had to be lowered relatively to the level of the surrounding park. This limitation has led to a sculptural and functional effect. The offices are concentrated around a vertical, fireproof core. On the ground floor there is an officescape with zoned air-conditioning. The building rests on a chamber floating on the water table. The inclined elevation supports are of metal, and carry the curtain-wall composed of Cor-Ten steel and Stop-Ray glass. The use of Cor-Ten raised a large number of technical problems, especially that of the drainage of rainwater loaded with rust. On the other hand, the chromatic harmony obtained by the juxtaposition of the two materials is highly convincing.

A leisure city

Justus Dahinden, Zurich and Munich
Associate: Hermann Grub
Model: Antolkovic, Munich
Schwabylon Project, Munich

(pages 322–324)

The society of the future will be a leisure society. In a few decades half the time at mankind's disposal will be leisure time. However, what to do with this leisure is already a problem now, especially in the metropolitan centres, where the conditions necessary for the development of leisure activities are totally lacking. The urban spaces corresponding to the new rhythm of life are still to be created in a world where the environment is unfavourable. The solution would be to organize, in the midst of our present-day cities, cities of leisure which would permit man to use his time in a creative manner. This concerns the individual, the family, the group and all spontaneous associations. The city of leisure is a new urban form; it ought to possess the ostentation of the variable and the changing like a permanent fair.
It is necessary to conceive of this city from the interior as an air-conditioned container, where the environment would be controllable and in which the minimum of fixed installations would leave people free to realize a condition of permanent and total mobility.
This is the case with the town of Schwabylon. Two axes of movement intersect at the marketplace and connect Leopoldstrasse with the residential district and that of the hotels and restaurants. Near the entrance an agora permits the holding of daytime and nighttime shows. This volume is animated by audio-visual effects. A system of mobile galleries permits other happenings, such as: fashion shows, commercial demonstrations, but also jazz concerts, experimental theatre and religious services. The centre of the city or marketplace is the place where one looks and is looked at. Art galleries, spiral ramps, fountains and sidewalk cafés fill this area. This leads into the restaurant district with its beer tent, suitable for popular open-air festivities. A sports zone with indoor swimming-pool flanked by illuminated winter gardens heightens the illusion. Beneath the swimming-pool are the physical culture installations (sauna, Turkish baths, massage, etc.). The skating-rink is simultaneously a polyvalent hall capable of multiple functions. The roof structure of the city is at the same time a park, a children's playground, an exhibition area for works of art and, finally, a place for periodic flea markets.