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3. Le patrimoine, enjeu du développement durable

Towards a new typology

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Résumé

L'environnement bâti est en perpétuelle évolution et de tels changements sont particulièrement importants lors de la rénovation de bâtiments. Ces changements ajoutent quelque chose aux bâtiments existants et permettent de nouveaux programmes. Les bâtiments existants, l'histoire déterminent la continuité et forment une couche temporelle supplémentaire bien déterminée. Passé, présent et futur sont d'importance majeure aux bâtiments que j'ai analysés jusqu'à présent et ceux que j'analyserai dans le futur. J'utilise 3 niveaux d'analyse pour étudier ces phases. Lors de l'analyse de bâtiments on doit observer la création, l'existence et la préservation/vétusté, délabrement par l'analyse de la construction des bâtiments dans le temps. Ce type d'analyse mènera à de nouvelles typologies de constructions basés sur les qualités spatiales et non sur la fonction.

Mots-clés

Abstract

The built environment is continuously changing and such changes are particularly important when regenerating buildings. These changes add something to existing buildings and make new programmes possible. The existing buildings - history - determine continuity and form a clear additional, time-dependent layer. Past, present and future are all relevant to the buildings I have investigated so far and those which I will be investigating in future. I use three levels of analysis to cover these phases. Where buildings are concerned, we have to look at creation, existence and preservation/decay by Analysing Building Construction in Time. This way of investigation will lead to a new way of typology of buildings not based on function but based on spatial qualities.

Keywords

continuity, changeability, durability, regeneration, typology, space.

1. Introduction

In 2006 I finished my dissertation named: Building Construction in the Netherlands 1940-1970, Continuity + Changeability = Durability. This resulted in the research method: Analysing Building Construction in Time. This method was guided by the following themes: Observation - with an engineer's eye, Research analysis and Regenerative conclusions. It is a method to analyse the existing before changing it. That is the only way to regenerated buildings, parts of cities and urban landscapes with conscience. The main result of my research was this new research method. Also one of the conclusions of this research maintains that a new building typology will be needed to develop a sustainable environment including our heritage.

2. Towards a new research method

Architecture is about more than just constructing buildings. Architecture adds meaning to buildings created by technology. In principle, buildings should be durable (in terms of time as well as finance) objects and therefore changeable, flexible. The lifespan of buildings, i.e. architectural objects, is inextricably linked with their ability to accommodate change. Being aware of this, learning from this, considering this when working on completely new design commissions or commissions concerning existing buildings (where technology will always be needed to implement the design) are all challenges associated with modern building practices which take a long-term view.

2.1. Observation - with an engineer's eye

I considered engineering and technology and the views of both architectural critics and practising architects about technology by studying the relevant literature and sources. Technology evolved after the Second World War as a result of the use of new materials, changes in legislation and standards, and the industrialisation of the construction process. Comments about the contribution, or lack thereof, of technical progress to a higher architectural quality were always personal visions primarily shaped by personal taste and habits. Architects developed from supervisors to architect-managers of the entire construction process. Time schedules became an important instrument and working together with structural engineering and building services consultants became steadily more important. The best results were developed on the basis of synergy between the different disciplines.

2.2. Research analysis

When designing either completely new objects or objects to be incorporated into an existing structure it is important to learn from the past. Not to copy it, but to analyse it and apply the lessons learned while respecting the present context. We have to evaluate knowledge and methods and develop our own design method. This learning aspect is emphasised when a design commission concerns an existing building, but even a new build project always has a context. When dealing with an existing building that building provides the primary context and immediately becomes an element of the key points of the architect's brief. In my view, studying criticism, experiences and interviews, and thoroughly analysing the work of others is not adequately included in the education and training of architects as designers yet.

2.3. Regenerative conclusions

Regeneration concerns changes which add a new period, a new generation, to the lifecycle of a building. Life means change and the past means that we progress in a spirit of tradition and memory. Furthermore, change cannot happen without continuity. Changes to buildings are affected by both financial and technical considerations. The existing adds a layer of history which can ne-

3. Le patrimoine, enjeu du développement durable // Towards a new typology

ver be created in a true new build project. During the design and construction of the Trade Union Museum in Amsterdam, housed in the building of the former Dutch Diamond Workers' Union (ANDB), I was introduced to issues related to National Monuments and making changes to such buildings. The examples by architects such as Piano, Foster and Herzog and de Meuron demonstrate that leading architects can produce excellent results when regenerating buildings.¹ See figures 1 and 2.



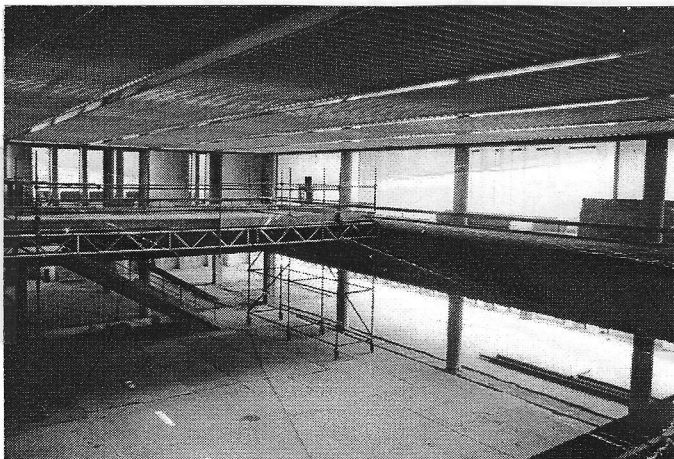
Figure 1. Placing an elevator in the existing Union Workers building of Berlage to become a museum.
Figure 2. Tate Modern in London, a Power station re-generated by Herzog and de Meron in a museum.

The opinions aired by the original architects whose buildings are being changed make it eminently clear that some of them object to any changes to their buildings. Views about changes also changed themselves. In some cases the original architects are engaged to regenerate their own work. This requires them to take enough distance from "their building" to be able to accept it as a new commission and also functions of buildings will be changed as part of this commission. *'Refurbishment is the hard-headed business of making use of what is usable in the ageing building stock; the skilful adaptation of a building shell (which is valuable in its own right and not due to any historic mystique) to a new, or an updated, version of its existing use. The existing building, once refurbished, should be equally as efficient in its new role as a purpose-designed building would be, given the usual number of restraints which always impede the designer realising the ideal in new or refurbished merit and will, by its preservation, improve the amenity of the environment, so much the better.'*²

3. Analysing building construction in time

Past, present and future are all relevant to buildings. Three levels of analysis have been used to cover these phases. Where buildings are concerned, we have to look at creation, existence and preservation/decay. The objective of my research was to identify the qualities of a building which are relevant when trying to shift from decay to preservation. Main issues for redevelopment are: space and structure. The influence of construction engineering, the way we can learn from it now, and the way in which a building is able to accommodate change determine the chances of a building's long term survival – the outcome of the interaction of continuity and change. Research can provide data for careful and imaginative observation and analysis. The conclusions which can be drawn in this way may help us make discoveries to understand a building when either designing or redesigning it.

My research didn't only result in relevant conclusions, but also in a research method which will be applied to the subjects covered by the Faculty of Architecture of Delft University of Technology and could be used on international scale. It is a method to analyse the existing before changing it. That is the only way to regenerated buildings, parts of cities and urban landscapes with conscience. Analysing Building Construction in Time aims to discover the qualities of a building, rather than its value. Observation, the first stage of the research, aims to obtain information from the literature, the building itself, archives and interviews with stakeholders. The second stage, analysis, includes structuring, analysing and interpreting the information. In the third stage, conclusions can then be drawn on the basis of the research themes discussed above. The information is structured in accordance with the research brief. In the long term, it will be possible to identify connections (concerning both buildings and building construction) between the results of Analysing Building Construction in Time, using the research themes defined by me. The information obtained in the observation stage is reduced to the contextual information which affected the design, creation, existence and preservation/decay of the building. Context is the title of the first section in which the contextual aspects are discussed: commission; location; architect; typology and design process. The later sections, which consider the building itself in greater detail, are initially ordered by time: arising, continuing and expiring. Within these, the elements of the building are analysed at three levels: space (interior and exterior); structure (load-bearing elements and elements which determine the structure); material (shaping the space through materials which affect light, colour, texture, surface, sound, impression, smell, size and weight); building services (climate control, comfort, maintenance and communications). In this way the actual research matrix is created. See figure 3.

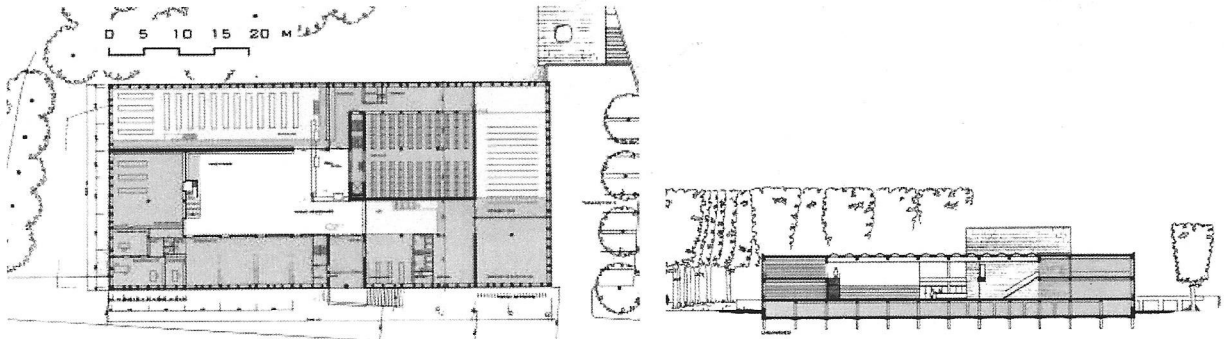


¹ Powell, K., "Architecture Reborn", New York, Rizzoli, 1999, pp. 24-31, pp. 182-187 and pp. 224-227.
² Marsh, P., *The Refurbishment of Commercial and Industrial Buildings*, London 1983, p. 3.

3. Le patrimoine, enjeu du développement durable // Towards a new typology

4. Towards a new building typology

Learning from existing buildings by investigating them should be a regular element in architects' education. A course on Restoration and Renewing, my working field at the university, should not be limited to preservation, but especially address new designs in existing contexts, where internal changes will always be necessary. Such changes can provide the impetus to ensure the survival of the building. To get a better perspective on the future possibilities of buildings it is necessary to develop a new building typology based on spatial elements and characteristics rather than functions. As far as the typology is concerned, we should not only consider the functional or chronological classification of buildings based on building type. Instead, we should analyse the buildings on the basis of a spatial typology, as the spatial conditions will either remain the same or change when the function of the building changes. For instance the question if the New Tate Modern in London should be placed in a typology of Museums or Energy Power Stations can't be answered in this old typology based on functions. So it is necessary to analyse the building substance from the qualities of space when we are talking about redeveloping buildings and areas to reach sustainable cities. See figures 4 and 5.



Figures 4 and 5. Library building in Leeuwarden (Netherlands) analysed as spatial type as a rectangular box with a covered courtyard in the middle.

References

- Latham, D. *Creative Re-use of Buildings*, Shaftesbury, Donhead, 2000.
- Macdonald, S., *Modern Matters*, Shaftesbury 1996.
- Marsh, P., *The Refurbishment of Commercial and Industrial Buildings*, London 1983.
- Powell, K., *Architecture Reborn*, New York, Rizzoli, 1999.

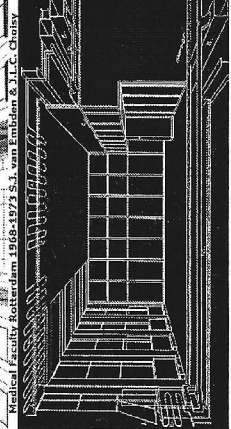
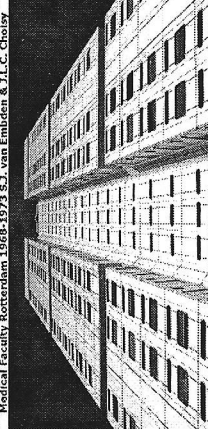
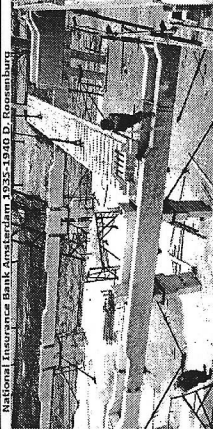
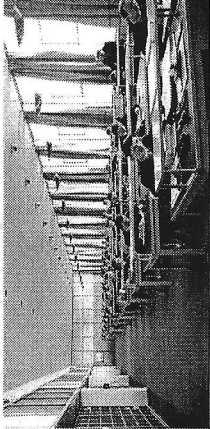
Space

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Material

Services

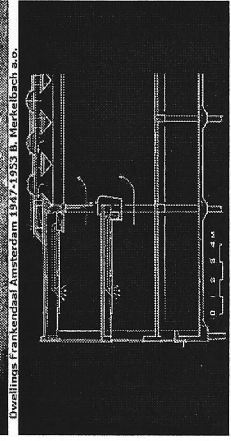
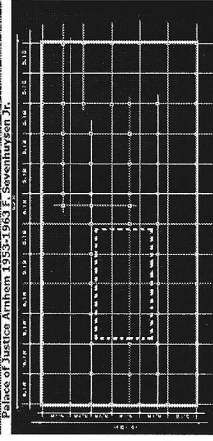
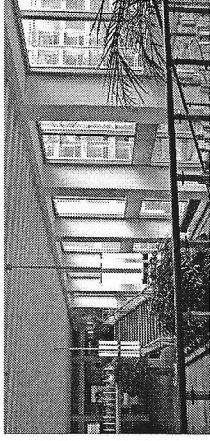
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National Insurance Bank, Amsterdam 1935-1940 D. Roosenburg
Medical Faculty Rotterdam 1968-1973 S.J. van Embden & J.L.C. Chelsoy

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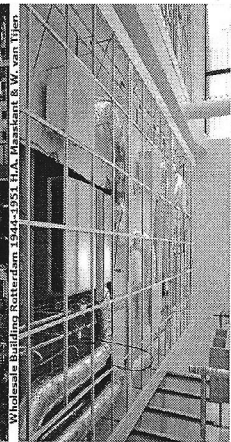
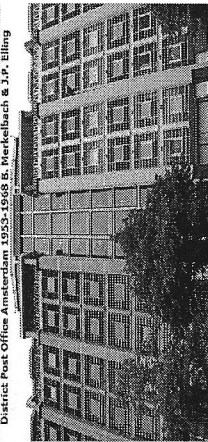
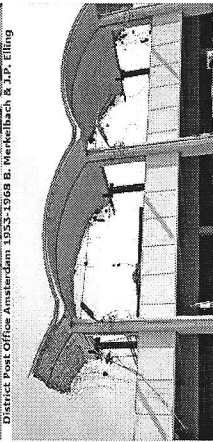
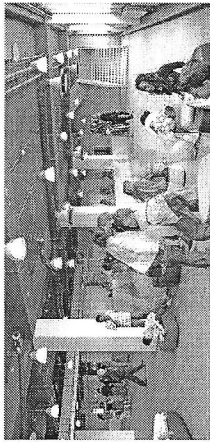
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Palace of Justice Arnhem 1952-1953 F. Steenhuysen Jr.
Provincial Library of Friesland Leeuwarden 1958-1968 P.H. Tauber

Dwellings Frankendal Amsterdam 1947-1953 B. Mikkelborch s.o.
Provincial Library of Friesland Leeuwarden 1958-1968 P.H. Tauber

Expire



District Post Office Amsterdam 1953-1968 B. Merkelbach & J.P. Elling

District Post Office Amsterdam 1953-1968 B. Merkelbach & J.P. Elling

Wholesale Building Rotterdam 1946-1951 H.A. Masskamt & W. van Tijen
Wholesale Building Rotterdam 1946-1951 H.A. Masskamt & W. van Tijen

