

# On the Career of Durability –Biographies of Valued Urban Residential Buildings from 1900 up to the Present

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**Abstract:** The objective of the project is to obtain a more profound insight into the scope, characteristics, conditions of success and criteria for the appraisal of anonymous residential buildings related to everyday architecture. For this purpose, five in-depth analyses of individual cases relating to history of use of the interior rooms and neighbourhood of the residential buildings in urban locations will be discussed and compared. Buildings belonging to different construction eras in the city of Zurich will be selected for the study and treated as specific settings of quality. The objects in focus are still currently in use, originate from between 1900 and approx. 1990 and were built either by municipal, cooperative property developers or by private property developers. Starting from the premise of demands pertaining to the sustained development of urban areas, the study concentrates in particular on the criteria of cultural and day-to-day dimensions which have up to now received little attention in the research of housing construction, and these contribute significantly to the long-term appreciation and longevity of the used buildings. By expanding the previous, rather technically oriented, research perspectives in housing construction research by adding a cultural historical perspective, the project succeeds in focussing on the uses as well as evaluations of a house in the course of its life cycle through its residents, owners and the public over the course of generations. It is imperative to make a connection between the material sustainability of the building and the ever-increasing changing momentum in demands in use. In doing so, the development of permanent solutions for housing construction cannot be achieved merely by analysing current situations. By including the perspective of a historical analysis, we are able to provide valuable insight into the central characteristics of existing permanently valued buildings.

**Keywords:** social and cultural sustainability, settings of quality, durability, user-perspective, housing estates, history of residential housing, cultural studies in architecture, lived space & built environment.

Many cities function true to the motto: What we build today will be dismantled tomorrow. Buildings in Switzerland are meanwhile being written off after 30 years. Therefore, what is the use of studying sustainability in architecture today? If Konstanty Gutschow had complained in the 1930s – from the architect’s point of view – that existing buildings were “too old, too valuable, too sturdy to allow major new construction work”, then current existing buildings “too young, too bad, too large, too expensive to maintain” (Hassler 2003, S.50). The surface of land that is covered with buildings has doubled since 1945. The large

existing buildings from the boom years of the post-war period are in the first phase of renewal and are yearning for new activity. The demolition waste can no longer be disposed of without difficulty. The durability of buildings has declined, the worrying amounts of refuse is increasing and the costs of maintenance are a financial burden (Hassler 2003, S.50 and Mörsch 2001, S.2). The problem cannot be solved by a policy of replacing objects with new buildings, even if ecological construction methods are aimed at when doing so. Construction work still consumes the lion's share of resources worldwide: 60% of the total energy requirement is used for erecting buildings. The number of new buildings cannot be kept at such a high level (Wang 2001, S.5). A clever resource use for the building industry should include the existing buildings in the long-term.

At the same time, social development also determines the development in housing construction. Advancing social change is accompanied by an increasing differentiation in lifestyles and social environment and also changes the shape of social living (Hradil 1987, Vester 2001).

Needs and demands are changing in the field of housing (Spellerberg / Schneider 2002). After three decades of a decline in the population, most Swiss towns are once again recording demographic growth. Urban housing has gained in attractiveness to middle and high income groups. Towns offer them housing with a high degree of comfort, proximity to their workplace and to the municipal infrastructure as well as a wide range of cultural activities. This presents a great challenge for well-thought-out and future-oriented housing construction in towns. In order to ensure long-term housing quality, the central task of housing construction in the 21<sup>st</sup> century will be to find permanent construction solutions which do justice to future individually and socially varying housing demands (Eberle 2004).

This is only possible if the basic principles of durability are fulfilled, which means striving for compatibility in the ecological, economic, cultural and social dimension, as the long-term aim. The maintenance and passing on of resources, basic principles as well as accomplishments to the subsequent generations is a significant guiding principle in this approach. Fundamentally, a study on sustainability in the context of durability assumes that reflection on sustainability is important, irrespective of society's current psychograms and not only against the backdrop of the quickening society (Mörsch 2001, S.44). Consequently, it is important to acquire new knowledge about the aspects of sustainability in architecture.

The particular aim of the interdisciplinary study at hand is to investigate sustainability in housing construction under the perspective of cultural studies in architecture. Different concepts of quality are examined on the basis of the longevity and/or history of increases and decreases in value of residential buildings of different construction periods in Zurich. What has proven itself? Where is continuity to be found, where is discontinuity? In contrast to other architectures, a high degree of persistence prevails in housing construction. The anchoring in a regional tradition of building that has been passed on, as well as in the dependence on the users' acceptance, which, on the other hand, is defined by conventions and values, is high (Waechter-Böhm 2000, S.8). Focussing on housing construction makes sense because the multiplicity of newly acquired knowledge regarding the social, financing, architectural and urbanistic characteristics is of particularly far-reaching consequence (Elser/ Rieper 2009). It is generally assumed that the good and subsequent can only be expensive: high building costs are involved and the costs which are incurred by the selection of material and by e.g. use of technical quality, can only be borne by financially strong investors in good locations. Examples of these kinds of buildings can be found in every town, mostly originating from the period of promoterism and are found in excellent locations, such as the so-called "Red Castle" in Zurich. We want to question this. It is not so much spectacular buildings that are the focus of our interest. We assume that valued residential buildings which were built at their respective time with differing amounts of funds for different social groups could generally shed new light on the sustainability and the quality of architecture that it constitutes. For this reason, the focus of the study is to be directed particularly at permanently existing "everyday architecture" in housing construction. The anonymously recognised municipal supply of housing shall be understood as everyday architecture here (Bräm 2001, S.2). Everyday architecture in housing construction, which is at the centre of this study, is marked by the demands of usability in the course of many years, somewhat in the sense of what Michael Alder mentions, when he speaks about differing users: "if someone builds a house, the contractor is the first inhabitant; after maybe 20 years other people will live in it. If I design a house, I start from the premise of rooms which I do not determine more exactly; they can be used in different ways and what they are is decided by what the inhabitants do with them" (archithese 1, 1984, S.8).

Although everyday architecture has always been used by great architects as a source of inspiration and in spite of the fact that way over half the funds in the European building sector

is meanwhile being invested in renovation work, topics like maintenance, renovation and renewal of everyday architecture are considered boring, costly and time-consuming by most architects when compared to new construction and monuments (Wang 2001, S.5; Bräm 2001, S.2). Also in the case of the preservation of monuments and historic buildings, the attempts at protecting everyday architecture have not been in progress for a long time (Hassler 2003). Fundamental knowledge about the longevity of material constructive components in construction is already available (SIA recommendation 112, 2004; Bacchini 2001; Albers 1988). There are, however, no well-grounded studies on the way the built space is dealt with socially and individually. Which criteria are responsible for residential buildings standing the test of time over a long period? Which ones are suitable for daily use? There is little knowledge about how a house's inhabitants use and assess a house during the course of its life cycle and how the owners deal with long-standing properties, although it is known that the way in which buildings are maintained contributes decisively to their longevity. It is mostly difficult for architects to visualise this for themselves (Hugentobler/Henz/ Gysi 1997). They leave the completed, still unused building before the first people move in and do not usually return. In order to gain knowledge about whether residential buildings function on a lasting basis, one would have to get a picture of it on location without repeating any preconceived architectural or historical opinions. And one would have to talk to the residents. It is they who know best whether a house is suitable for living on a long-term basis – or not. Likewise, the administration and caretakers also possess important knowledge relating to the potential sustainability and adaptability of a dwelling. They are experts on a building's maintenance and care. They all form the history and/or career of the long-lasting residential building. Their different expertise knowledges are enfolded, in a Deleuzian manner, in the house and form its specific history of quality and durability.

In order to acquire new knowledge about the quality and solutions of long-standing residential buildings, the present research extends the technically oriented research perspective on sustainability in housing construction by adding a cultural historical perspective. At the same time the material dimension is not neglected as it is the case in most cultural and socio-economic studies on the subject of housing (e.g. Wiesmann-Baquero 2005). In order to guarantee a well-founded synopsis, the study is carried out by representatives of architecture, cultural studies and history. An interdisciplinary research project of this nature makes it possible to describe the numerous characteristics and conditions of different quality concepts which are involved in the appreciation of everyday architecture that has spanned generations.

## **What does “sustainable” mean? Discourse regarding sustainability**

In the same way that the Vitruvian categories of beauty, appropriateness and solidarity and consequently the long, slow process of the development, usage and disappearance of buildings were present in the 19<sup>th</sup> century, the demand for the artefacts’ sustainability was replaced in the 20<sup>th</sup> century by the idea of timeless aesthetics, which was part of the hope for reform in all areas of life through good design. Quick replacements were demanded for buildings. In the words of futurist Sant Elias this meant: “every generation its house”(Hassler 2003, S.47). The ideals of the Modernists of the 1920s and 1930s of the car-friendly, relaxed town with a separation of functions and the industrialised construction productions were continued in the post-war period. One concept was, however, thoroughly banned from discussion: the claim to eternity. Objects which nevertheless outlived the others became monuments with the new function as a “fixed point of memory in the sea of the transient”. For the architect Aldo Rossi, an important theorist who shaped the discourse of the 1960s (Rossi 1966), the community at large finds its “permanent expression in a town’s monuments. As primary elements of municipal architecture, they are signs of collective will and represent as such fixed points in urbanistic dynamics" (Rossi 2006, S.497).

Rossi ascertains that a town’s dynamics “has a greater tendency to further development than to preservation; that monuments during the course of this development [...] remain preserved and even have a stimulating influence on development." (Rossi 2006, S.509)

Rossi develops a theory of permanence, the theme of which is monuments: for example, the Palazzo della Ragione in Padua, which has "a visible shape from the past ", but changed its function and has “in doing so, remained alive”. Or the Alhambra in Granada which has “no relation to life in Granada today” but which is nevertheless of decisive significance to the cityscape. Permanence is a characteristic of surviving monuments, “which is based on its urbanistic reminder-value from a historical perspective of art and architecture”. Rossi describes permanence as a lasting form of the past in a positive sense because it makes it possible for us to still experience this past today. It makes a distinction between the “isolated and the displaced ”.

As a contrast, Rossi describes residential buildings as constantly-changing signs of everyday life and the expression of urbanistic dynamics. He took residential building out of his “theory of permanence” and determined that the “conservation” of residential areas somehow contradicts a town’s dynamic development process. Nevertheless, some of Rossis thoughts on sustainability (of monuments) are topical: firstly, urbanistic phenomena are characterised

according to the characteristics of individuality, location, design and memory. Secondly, Rossi is particularly interested in qualities that have been retained since the time of construction. A desideratum which remains with Rossi is the attention to the perspective of usage, which is only rarely mentioned (Rossi 2006, S.498).

A broad new discussion about qualities of the sustainable started in the 1970s when criticism of the ecologically irresponsible mass consumption of the post-war period's society in the report of the *Club of Rome* became "impossible to overhear" (Meadows/Meadows/Zahn 1972; Tanner 1999, S. 101-131). Against this backdrop, discussions also began in architecture (belatedly) as of the 1980s about the longevity of buildings and sustainability. In the periodical *The Architect* (1988) arguments were made that people within the dominant "mass consumer society" should think about sustainability and erect durable buildings "contrary to the transient spirit of the time" (Von Altenstadt 1988, S. 171).

Vittorio Lampugnani, architect and professor of History of Urban Planning at the ETH Zurich, advised the world of architecture in his essay *Modernity of the Durable* to analyse traditions and existing practices in building in order to create lasting solutions in the future for housing construction: "It is only from tradition that objects, buildings and towns that possess the quality of sustainability can develop", according to him (Lampugnani 1993, S. 33). In his discussion about the sustainability of buildings, he emphasises the characteristics of simplicity and comprehensibility as timeless qualities. By "simplicity" Lampugnani means neither the form reduction of the "radical modernists" – where towns mutate into geometric schemes – nor the abstraction on which the avant-garde had focussed. Simplicity is based on the tradition of usage and not on preconceived ideas about form. It is a condensate of the answers to countless requirements and desires (Lampugnani 1995, S. 37). Because the sustainable exists for several generations, its form can never be fashionable or avant-garde. "Things are permanent when they are neutral and simple enough to leave space for our changing, multi-faceted lives" (Herzog 1988, S.196). What remains are things that proved themselves as a value, not things which stand out or experiment. It is rather the unagitated, inconspicuous house that possesses the qualities of simplicity and comprehensibility of structure.

Lampugnani uses the term "intelligent banality", respectively "sublime banality".

They are "the result of careful reclaiming and utilisation of tradition – not as a stylistic category, but rather as an handed down, tried and tested method of converting requirements into designs ..." (Lampugnani 1995, S.34).

Instead of a handy catalogue containing prewritten answers that have been optimised once and for all, Lampugnani demands “uniqueness”, not “universality” in building (Lampugnani 1995, S.41), “exemplary and general” instead of “tailor-made” (Lampugnani 1995, S. 73; Bächer 1988, S. 202). Hassler criticises that Lampugnani only deals with the “surface”, an “aesthetic of sustainability” and thinks too little about “building itself”, about structural engineering and construction and how material is used (Hassler 2003, S. 49).

Also, in the course of the global climate crisis which has been strongly dealt with by the media in recent years as well as the discussion about durability and careful use of resources, the principle of durability becomes more important against the backdrop of calculating flow patterns for materials and budgeting in the field of construction. The challenge is “less new construction, intelligent up-dating of existing objects.” Questions about the careful use of resources in the field of construction are picked out as a central theme, although the concepts are still limited to saving energy by means of structural methods. Neither is a risk analysis of current structural engineering customary, nor is the possibility of clever further use being considered. It is precisely these perspectives of sustainability that could be advantageous to investors with long-term aims. If a building is loved, it will be cared for, or in other words: “the construction sector is one of the very few areas of industrial society in which future-oriented economic activity still has a strong sense of tradition. The principles of sustainability and maintenance of value are still alive here because edifices have always had an aspect that spans generations as well as the corresponding value and significance due to their ideally very long life expectancy” (Kohler und Hassler 1999, S.18).

A combination of Rossi’s, Hassler’s and Lampugnani’s ideas, as we have developed, has to examine the material and immaterial characteristics and qualities of sustainability and put them together – joining the dimensions of built and lived space together. This means asking about not only the constructive conditions but also about cultural context, ideals, concepts and how the building is dealt with practically (the residents, owner/administrator and the public). In this way, a new more comprehensive view of sustainability emerges for the first time, which is neither purely technically oriented nor is it greatly bound to aesthetics. In order to make use of the term of durability, which threatens to become enigmatic and meanwhile also empty due to omnipresent use, for this study, we are taking comprehensive comprehension on five levels as a basis for it and refer particularly to the level of the social and/or cultural dimension (Hugentobler/ Henz/ Gysi 1997, S.22). Furthermore, in the framework of this examination we use “durable” and “sustainable” as synonyms. Sustainability is used in the

sense of lasting, i.e. something which continues, something which is maintained over a long period of time, ideally spanning generations. Sustainability also possesses an additional cultural dimension, in which it refers to social values, norms and ideas (Hugentobler/Gysi 1999, S. 306-320). A house is sustainable when it is appreciated and loved for a long period of time by the respective tenants, or when it is bequeathed to subsequent generations until it enters the cultural memory of a society.

A house is sustainable if it supports existing values and ideals and can at the same time be integrated into the following generations' ideals.

## **Indicators for sustainability**

The following characteristics distinguish residential buildings not only on the level of the built space but also on that of the lived space, and thus, as the hypothesis goes, using the analysis of the specific arrangement of sustainability in a building and its qualities.

### **AREA OF BUILT SPACE**

#### **Solidity**

The sustainability of the built space can be seen in the materials, techniques, shapes and structures that are used for it. The structure is solid. It has no tendency to wear and tear and is weather-resistant. The equipment can be repaired and/or can be exchanged without any problems. It can and may be adapted to contemporary tastes (Hassler 2003, S.50). Care and repair work do not have to be delegated to highly specialised maintenance companies, but can be carried out without large investments being necessary (Mörsch 2005, S.175). The basic structure of a building allows tenants to carry out minor structural and creative alterations, without them being irreparable.

#### **Ageing**

A prerequisite is that the material and structure of a house allow sedimentation and therefore possess the characteristic of "ageing", otherwise the house remains dumb and communicates neither with the residents nor with the surroundings and/or the area.

On account of tenants staying for a long time, some (beautiful) lasting fossils have formed within the rooms (Bachelard 1987, S.35).



"A new ideal of long-term perspectives for continuance demands an altered theory for building. The classical themes of modernity, ease, efficiency, precision, minimalising, modularising, dematerialising, separation of functions, timelessness and aesthetics will no longer be sufficient. The following factors would be necessary and, if possible, conceivable: long-running nature, complexity, good-nature, resilience to errors, repair-friendliness, simplicity, elegance, solidarity (weight)" (Hassler 2003, S.51).

## **AREA OF LIVED SPACE**

### **History of use**

Viewed on the macro level, municipal and village structures are the result of a very long-term collective process and are therefore „unrepeatable“, just as the existing value together with its qualities and historical density generally cannot be reproduced (Kohler und Hassler 1999, S.18). Long use is combined with conventions, the ideal is a feedback system.

On the micro level, the day-to-day dimensions contribute significantly to the longevity of buildings (Hugentobler/ Henz/Gysi 1999; Mörsch 2005, S.173). Without large-scale alterations being necessary, it is possible for one or the same tenants or several generations of users to live in a house for many years (Christiaanse 2004; Hofer 2004). They have found room for all functions of dwelling and can use them according to their requirements. The owner allows personal alterations to be carried out (Mörsch 2005, S.175). For their part, they operate an adequate administration strategy, care for and maintain the built space constantly and can achieve a positive (financial) balance with mild maintenance and/or renovation strategies.

### **Valuation**

The sustainability of the lived space can be found in the duration of its use and in the fact that it is continually appreciated by tenants, owners and the public alike. These appreciate being able to reside in the building. (In opting to stay in a place for a long period of time, they have formed trade-off relationships with the house, neighbours and the surroundings.) The tenants and owners value the use, functioning, aesthetics and atmosphere predominantly positively and have a positive emotional tie to their housing situation (Hubeli, 1995; Van Wezemaal u. Huber, 2004).

## **The house as a setting of sustainability: a built and a lived space**

The purpose of the study is neither to be a “pure construction history” or a sociocritical background study. It is to demonstrate what happens *in between*, between the structures and the people who are involved with them in the most diverse ways. The focus is on the “blind spot”, as Latour names it, “the blind spot, in which society and material exchange their characteristics” (Latour 2000, S.232). The following explanations of our understanding of space make it clear to what extent this choice of perspectives can be valuable for the study of long-lasting residential buildings.

In recent years, the theme of “space” has been dealt with intensively in the most diverse sciences (far from geography and architecture). Within numerous developed theories and conceptions of space, the preoccupation with “built space” has tended to move into the background in favour of “social space” (Maresch/ Weber 2002, S.12). One of the most respected publications, which shifts the focus to the “social developments” of spaces is the book by Martina Löw (2001). Löw’s debate about the configuration process of spaces is fruitful for our approach and the most important aspects should therefore briefly be defined and explained. Löw believes that two processes are involved in the configuration of spaces: space originates, firstly, by placing different structures and putting them in relation to each other (Löw 2001, 155-158). All sorts of objects can be involved in this process: tables, chairs, houses and people “social goods”, as Löw refers to them. Space is created by building houses out of different bodies, international borders are measured or computers are linked to networks. Secondly, spaces are also generated by processes of perception, viewing or remembering with which people joins bodies together to create rooms (Löw 2008, S.159). A certain façade that we pass by, a tower, a clock face are constituted into a space by a perceiving and/or an analytical synthesis with each other, for example the space “church”. Both aspects are part of spatial generation. According to Löw, spaces are structured relationally. In her thoughts on Henri Lefebvre, Löw sees space not as a rigid structure but as a “relational arrangement” of bodies, which changes again and again during the course of time. Bodies can be repositioned and perceptions alter. Consequently, a space is not a static condition, not an unalterable fixed object. It is relational and processual. Löw’s spatial concept can be applied well to the examination of residential buildings that have existed for many years. The concept helps to direct ones view to the relations and processes, the changes and constants of a space over time and to understand the space as a conglomerate of various

structures/bodies and processes of perception and memory. As far as residential buildings are concerned, it makes sense not to use the general term “space” but instead to talk concretely of the “house” as a relational and processual space.

“House” defines the “small unit [...] in the middle between the large space: street, borough, town, countryside and the smaller unit: flat, room, interior” (Schlögel 2003, S.314). House refers not only to the “built space”, the material and construction of the structure, but also to the “lived space”. The latter includes the way that people treat the built space: use, appropriation, relocation, modification, the tactile and optical perception, the appreciation and emotions, the conceptual and planning-related discussions. The spatial term “house” does not just comprise the incidents within the property lines where a residential building has been erected. The residential environment with its infrastructure and its social and spatial aspects, with which the residential building and its residents are in a relationship, is part of this. Dealing with the sustainability of residential buildings consequently means researching the lived and built spaces of houses with their changes and constants during the course of time.

### **Intermediate conclusion (before the end of the project)**

In order to find new lasting solutions for housing construction, it is necessary to analyse traditions and existing practices in construction. In doing so, it is important that research is not restricted to one review of a situation, but also includes an evaluation of it. Which solutions are still valid today? What deserves to be maintained? What has stood the test of time? Otherwise, the result is either uncritical maintenance or uncritical destruction (Lampugnani 1995, S.87). Thinking about sustainability therefore means reviewing from the present, without remaining stuck in the past.

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