

theses

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Liberating the User
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Doctoral School of Architecture
Theses 2024

summary

The fundamental aim of this doctoral dissertation is to acquire, organize, and restructure theoretical knowledge about the use (and the user) that can be of direct help in design practice. Accordingly, the dissertation is divided into two parts: the first part presents theoretical approaches from the architect's point of view, and the final chapter presents buildings that have been (or are being) implemented in the architect's own design practice. The theoretical part is further divided into two sections: the *user* and the *architect*. The first chapter describes the changing image of the user in (architectural) theory from the second half of the 20th century to the present day. The second chapter deals with the efforts to extend the use of living space through time in design practice over the last hundred years. The third and concluding chapter builds on the theories presented and explores the methodology of designing sustainable residential buildings in terms of use by presenting three single-family houses (*form*).

This dissertation examines the quality of interaction between the user and the designer. This interaction takes place, in general, indirectly between the two actors through the environment designed by the architect, since in the vast majority of cases the designer ,only' has influence on it. Accordingly, in the first chapter I described three types of users (*standard*, *active* and *creative*) that are imprints of the designer's attitude, abstract ,contributors' who take possession of their environment in the way assumed by the model, and thus reflect the way the designer ,expects' the user to behave. In each case, I examine the *standard*, *active* and *creative* user in two time-frames: the middle of the last century, at the time of the emergence of the concept of user, and contemporary theoretical writings available today. The three different types of users, existing in parallel, draw an arc from the *standard* user model of total design control to the *creative* user, who—apparently—no longer ,needs' an architect, since the shaping of his environment essentially depends on his creativity. In contrast to the two extremes, the *active* type is characterized by a more balanced relationship between designer and user, in which both parties take responsibility for shaping the built environment. As this chapter will show, models have an impact on architecture and thus on the form that is created. In the case of *standardized* type, the form is predictable, as is the assumed user, since standardization goes hand in hand with the emptying out of the plan. If the designer uses open-ended (or even physically) unfinished solutions, the *active* user can add to his environment. Meanwhile, in the case of a *creative* model, the formal appearance of the final result may become irrelevant within certain limits, given the autonomy of the user.

The second chapter is about the architect, in which I attempt to systematize and present concepts that consciously seek to describe use (and thus human behavior) as precisely as possible, and through this to develop a specific design methodology. The way in which use is extended over time can be examined in different cases, depending on whether we are talking about the creation of an object, furniture or space, the (re)design of a new or existing building, a residential or public function. However, I will therefore only deal with issues arising in the design of new residential spaces. At the same time, I do not distinguish between single-family houses, low-intensity developments, multi-family housing or other types of residential space. The main reason for this decision is that the theories are sufficiently general and flexible to be adapted to the design task at hand. Along these criteria, I have identified a total of three broad groups of design methodology concepts: *rearrangeable*, *rebuildable*, and *reinterpretable*. Additionally, I have described the evolution of the concepts in three key periods. The first period, after the turn of the century, is driven by new principles in modernist architecture. Later, a critical attitude towards functionalist practice, which emerged in the 1960s, spurred the development of residential buildings. Lastly, I will present recent architectural practices that attempt to synthesize the achievements of modernism and the new approach that emerged in the middle of the century.

The third chapter aims to evaluate a practical approach based on theoretical foundations: three detached houses designed by our office. In this last part of the dissertation, I present each of the three buildings in four subsections. In each case, the first section describes the design task and the circumstances (problem statement), while the second section explores in detail our proposed solution (result). The third and fourth units reflect on the two major theoretical chapters of the dissertation; in the former I evaluate the designs from the *user's* point of view, while in the latter I evaluate them from the *architect's* perspective. Two of the single-family houses (Brennbergbánya and Tinnye) can be converted to meet changing needs, while the third building (Pilisszentlászló) can be considered an adaptable solution. Accordingly, I focused on the *rebuildable* methodological concept in the case of the Brennbergbánya building, the *rearrangeable* one in the case of the Tinnye house, and the *reinterpretable* one in the case of the latest example in Pilisszentlászló. On the basis of the knowledge acquired from the theoretical chapters, I evaluated these three concepts in terms of freedom of use and design tools. This in turn led me to draw conclusions about the relationship between the degree of the user's freedom and the grade of reconfiguration, as well as the impact of design choices on form.

theses

i thesis – about the user (the impact of the user-designer relationship)

The user model, i.e. the future user of the designed building—intentionally or unintentionally—defined by the architect, reflects the architect's approach to the architectural task. In this way, the definition of the user, its unique and individual image, is essentially about the design process itself, and therefore necessarily influences the appearance of the final result. In general, user models can be said to make the architectural form more predictable as design control is increased, while if control is relinquished, the final appearance may become irrelevant.

ii thesis – about the architect (the use of over-determined architectural tools)

By using solutions that are over-determined in form and meaning, the architect accepts the change of use over time, but does not face the unpredictability of change. Accordingly, the application of these specialized, pre-defined tools is an effective solution in cases where the use changes only in the way assumed at the time of design. In such a design practice, the extension of use over time is the ,task' of the building itself.

iii thesis – about the architect (the use of indeterminate architectural tools)

By providing the user with the opportunity to physically intervene as an architect, we can prepare for unpredictable changes in use. To facilitate intervention, the resulting form and the meaning it conveys are also sufficiently neutral, i.e. indeterminate. This suggests that universal solutions that are the least restrictive for the user are appropriate when only a small amount of information is available at the time of design to predict changes in use. Since the architect is essentially in the background, the extension of use over time in these cases depends on the creativity of the user.

iiii thesis – about the architect (the use of adaptable architectural tools)

Adaptable architectural devices can also ensure unpredictable changes in use. In this case, the framework created by the architect is formally constrained, but allows the user a great deal of freedom in interpretation. As we ,expect' the user to be active, we as architects should strive to ensure that the system we create generates (re)interpretation of form when using adaptable solutions. In this situation, the user and the building are jointly responsible for the extension of use over time.

v thesis – about the form (relation between the user freedom and the intervention)

There is a link between the range of environmental characteristics that users can influence and the degree (and quality) of intervention required to meet changing user needs. In fact, experience has shown that increasing user control over the physical parameters of a building is directly proportional to the degree of change required. Thus, the more control the user has over the definition of physically describable features (e.g. location, size, interconnection of rooms, etc.), the more challenging any modification will be for the occupant in the future.

vi thesis – about the form (the impact of design decisions on form)

As the degree of freedom for the user decreases, the architect is inevitably forced to give a direct formal answer to more and more design problems, which has an impact on the appearance. However, these decisions, which create a physical constraint for the user, increase the potential of the building to produce a more characteristic (unique to the building) end result, both in terms of spatial organization and external appearance.

