

Crisis & adapptation

CRISIS & ADAPTATION

SYSTEMIC EFFECTS OF CRISIS RESPONSES
IN ENVIRONMENTALLY CONSCIOUS ARCHITECTURE

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MASTERWORK: THREE HOUSES IN ÓHEGY

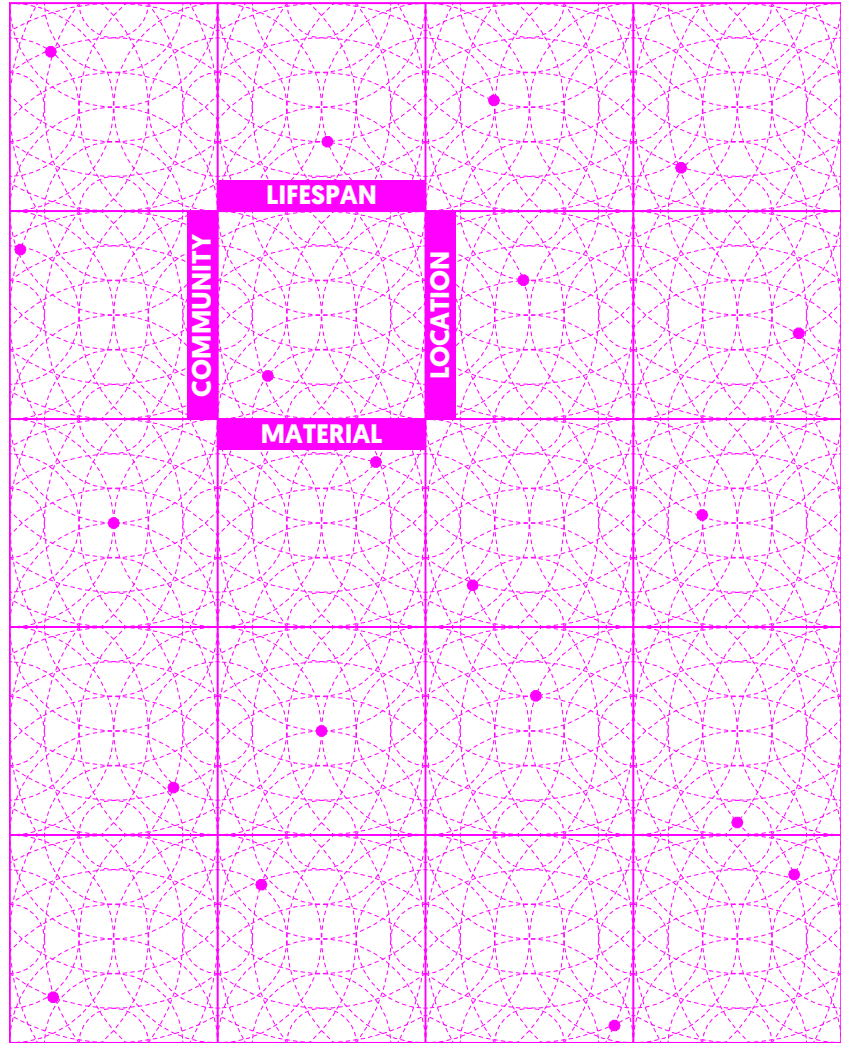
CONTENT

5	ABSTRACT
7	THESES
14	SUMMARY

ABSTRACT

The current and future impacts of the climate crisis are upon us, and making our global systems sustainable has become one of the greatest challenges we face. Based on the events of the past few years, a polycrisis composed of intensifying crises is emerging in an increasingly frightening form, and in its paralyzing shadow, it is difficult to identify architectural tools that promote change. However, this dissertation views the crisis as a transitional state that offers the possibility of positive change. With a cautious optimism (and idealism), it introduces the concept of deep adaptation into architectural discourse, analyzes and systematizes the experimental architectural responses to the crises of the past 50 years, seeking strategies and methods that can be incorporated into the architectural design routine. The adaptation of such strategies and methods may have been pushed into the background, but they can still be useful in changing circumstances. As the conclusion of the thesis, the pioneering projects examined come together as a “patchwork,” outlining a strategy of deep adaptation in architecture based on value exploration and context interpretation. The result is an open-ended, iterative design method in which the architect’s competence is much closer to that of a traditional master builder than to the typical „draftsman” or technocratic role of today.

THESES



THESIS 01

THE KEY TO ADAPTATION: RESOURCEFULNESS

The shock of a crisis breaks trust in previously familiar systems, allowing space for their reconsideration. The alternative solutions that arise after the abandonment of customs are catalysts in the creation of a new, more sustainable system. The synthesis of these singular reactions frames the new resilient architecture.

THESIS 02

LOCALNESS

Accepting that global problems have local solutions it is clear that the most adequate solution needs a deep, layered and structured understanding of the place of intervention. This knowledge base includes the understanding of the geophysical properties (climate, orientation, available resources), the natural and built environments (flora, fauna, infrastructure and building stock), mapping the human resources (building culture, available craftsmanship), and creating a connection with the local community.

THESIS 03

PERMANENCE AND TEMPORALITY

The view on the lifespan of buildings is to be reconsidered. On the long run, it is necessary to incorporate spatial and material surplus in our buildings that facilitate the change of functions, adaptation. Furthermore, developers should venture into temporary projects of 10-15 years as these are ideal experimental opportunities for sustainable design. Freed from the pressure of permanence, the testing of unorthodox methods becomes possible, increasing the innovation potential.

THESIS 04

MATERIAL APPROACH

In order to achieve environmentally conscious architecture, it is essential to override our approach to materials. The goal must be following the patterns of nature, the minimization of waste regarding materials and resources. The global toolkit of today must be replaced with the approach of the local craftsman, rooted in vernacular architecture, but relying on contemporary knowledge on materials, always keeping availability in mind.

THESIS 05

INCLUSIVITY AND INTERACTION

Conveying an environmentally conscious approach and overcoming scepticism is the task of the architects both on the market and in education. The skills needed to resolve uncertainties can be acquired through continuous experimentation, in which testing and feedback play a major role in addition to structured knowledge transfer. Even small-scale, temporary, or only partially successful projects can make environmentally conscious ideas and tools tangible and relatable, which helps acceptance and understanding and can trigger the process of „social contagion.”

THESIS 06

QUIET ARCHITECTURE

Environmentally conscious architecture does not have a specific style, but its goal is always to understand the relationship between the environment, the community, and the building, to maintain or restore synergies, and its foundation is a strong and layered value system that can be derived from the context of the building to be designed. The context can be explored most comprehensively through four factors: location, materials, community, and lifespan, which can be used to develop an integrated environmentally conscious design strategy based on a comprehensive analysis. The method of incorporating and preserving the identified values depends on the strategy formulated and the creative habitus.

SUMMARY

The increasingly tangible climate crisis and the effects of the polycrisis emerging from the intensifying economic and societal crises of recent years pose major challenges for architects as well. We are on the threshold of a paradigm shift in the profession, yet the shadow of uncertainty makes identifying the architectural tools to foster change difficult. Still, this dissertation approaches the crisis as a transitional state that embodies the possibility of positive change. By introducing the concept of deep adaptation into architectural discourse, it analyzes and systematizes the experimental architectural responses to the crises of the past 50 years. As a conclusion, it outlines a deep adaptation architectural framework [patchwork method], which supports creative freedom, and in which the solution with the least environmental impact can be elaborated for a design project based on value exploration and context interpretation.

The dissertation consists of three parts. The first chapter focuses on the question of „why,“ introducing the crisis narrative and acknowledging its emotional impact, whilst also highlighting the potential for change inherent in crises, which gives cause for optimism. Building on this idea, I present the concept of degrowth as an ideal vision for the future: the principles of degrowth are an inspiration for the formulation and practice of an adaptable, “just enough” architecture. Therefore, although the central theme of this chapter is crisis, the emphasis is on active hope, from which creative ingenuity can emerge to help us through the crisis.

Expanding on this, the second chapter is a collection of experimental architectural solutions and tools that emerged in the wake of the crises of the past 50 years. I present environmentally conscious architectural endeavors as the dynamics of crises-induced ruptures and attempts at adaptation. I zoom in on individual phenomena to illuminate their background and effects. I emphasize the key role of local solutions based on a layered understanding of the location, while addressing the importance of unlocking the value stored in existing buildings and the practice of adaptive reuse. I touch on the issues of permanence and temporality, highlighting the innovation potential inherent in designing consciously for short-term periods. I also address the issue of revisiting and reframing the material approach rooted in vernacular

architecture, underlining the importance of using materials available in the immediate environment. In each topic, I highlight and present examples with the intention of encouraging others to take action. Based on the models and synergies identified during the research, a design method emerges that stems from locality and interprets restoration in a broad spectrum. The application of this method significantly reduces the environmental impact of construction, strengthens proactive coping, and enhances resilience.

The third chapter of the dissertation focuses on the national situation, particularly on my experiences as an architectural educator. Regarding university activities as a living laboratory, I draw on the results of two courses with different concepts: in the theoretical (human ecology) approach courses Other/how and Other/way, I emphasize the approach-forming and sensitizing effect of speculative design tasks, while in the course Architecture of Workplaces 2, I outline the possibilities of integrating a material approach into design and teaching methodology.

Finally, I present the patchwork method, developed based on a critical evaluation of theoretical research, design practice, and educational experience as a realistically applicable, environmentally conscious design framework. I define the patchwork method in a matrix of four factors: accessibility, location, community, and lifespan. The method outlines an iterative design process based on a contextual approach, i.e., taking into account the available options [accessible technologies and expertise], resources [accessible materials], and the fundamental rules of integration [layered local knowledge]. I argue that environmentally conscious design requires extensive preparation, a more involved presence, and a craft-based approach, which changes the architect’s role compared to that of a traditional designer. When using the patchwork method, the architect is a materials researcher, moderator, craftsperson, and designer; a truly holistic player in the entire process of creation. Although the method does not offer universal solutions, by setting out a framework to be consistently respected, it provides a new kind of creative freedom in which each designer can individually shape their own toolkit. Ultimately, this dissertation aims to provide designers with guidance on how they can contribute to maintaining pleasant and liveable environmental conditions.

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The systemic effects of crisis responses in environmentally conscious architecture

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DLA dissertation | Thesis booklet

Masterwork:
Three houses in Óhegy
_HFZS house
_FJ house
_Harmat community center

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