RDT Regenerative Design Thinking

Tervezés a lineáris, vörös vagy degeneratív gazdaságtól
a fenntartható és körforgásos gazdaságon keresztül
a tartósan regeneratív kultúra felé.

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Abstract

The aim of this doctoral research is to examine how regenerative thinking can be interpreted and applied within contemporary design processes, with particular attention to the limitations of Design Thinking and its possible further development. The research is based on the recognition that the ecological, social, and economic challenges of the 21st century require a reconsideration of the designer's role, responsibility, and value creation.

The theoretical framework of the dissertation draws on the historical development of Design Thinking, the international discourse on regenerative design, systems thinking, ecological economics, and approaches related to learning systems. In this study, the concept of regeneration is used in an expanded sense: beyond ecological restoration, it also refers to strengthening social and economic resilience.

The applied methodology is grounded in practice-based research, combining research by design, learning by doing, reflective creative practice, and case study analysis.

The central outcome of the dissertation is the development of an integrated interpretive framework that comparatively examines linear, sustainable, circular, and regenerative design paradigms, and synthesizes them into the Regenerative Design Thinking approach.

The presented case studies demonstrate that design is capable not only of reducing negative impacts, but also of creating value-generating, adaptive, and regenerative processes.

The dissertation contributes to Hungarian design theory discourse and to the advancement of design pedagogy.

Main theses

T1. Classical Design Thinking models are only partially suited to addressing complex ecological challenges

The human-centred and innovation-oriented approach of Design Thinking has generated significant results in product development, service design, and business innovation. However, in its classical form, it addresses long time horizons, ecological boundaries, and the complex interactions of socio-natural systems only to a limited extent. The challenges of the twenty-first century therefore require the further development of existing design models.

T2. The regenerative paradigm represents a design logic that goes beyond sustainability

While sustainable approaches primarily aim to reduce harm, the regenerative perspective seeks to restore living systems, enhance their adaptive capacity, and support their long-term flourishing. Regenerative design therefore does not merely strive for fewer negative impacts, but for the creation of measurable positive ecological, social, and economic value.

T3. Sustainable, circular, and regenerative models are cumulative rather than mutually exclusive paradigms

The research demonstrates that sustainable design, the circular economy, and regenerative design are not competing models, but approaches representing different levels of maturity and focus. Harm reduction, material circularity, and restorative functioning are layered logics whose integrated application can enable genuine systemic transition.

T4. Regenerative Design Thinking (RDT) is an advanced systemic evolution of Design Thinking

The Regenerative Design Thinking framework developed through this research expands the classical iterative Design Thinking process by incorporating ecological intelligence, life-cycle thinking, ethical responsibility, and the assessment of long-term systemic impacts. RDT can serve as a practical methodological framework for innovation, education, and strategic design processes.

T5. The operating principles of living systems provide a scientific foundation for regenerative design

Principles such as autopoiesis, structural coupling, recursive learning, diversity, and circular material flows represent natural patterns of organisation that can also be applied in design practice. According to the research, future design models can become viable only if they are compatible with the organising logic of living systems.

T6. The economic dimension of regenerative design extends beyond growth-oriented models

The research indicates that models based solely on technological efficiency or recycling are insufficient in themselves. A regenerative approach requires an economic logic that takes ecological limits, local resilience, equity, and long-term wellbeing into account. In this respect, degrowth theory and ecological economics offer important corrective perspectives.

T7. The presented case studies confirm the practical feasibility of regenerative design

The analysed international and self-initiated projects demonstrate that the regenerative approach is not merely a theoretical construct, but a design practice applicable in real-world contexts. Positive systemic impacts can be identified across architecture, agroecology, material innovation, climate action, and community development.

T8. Design pedagogy can become a key driver of the regenerative transition

The research concludes that design education must move beyond a narrow focus on form and market-oriented outcomes, and integrate systems thinking, ecological literacy, ethical decision-making, and reflective learning models. In this way, design pedagogy may become one of the strategic instruments of socio-ecological transition.

Noli nocere. Sana!

Ne árts. Gyógyíts!

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