



## Creating built environments: bridging knowledge and practice divides

by Roderick J. Lawrence. 2021. Published by Routledge: New York and Oxon. 266 pp., 64 figures, 12 tables. £34.99 GBP (Paperback), ISBN 9780815385394

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## BOOK REVIEW

**Creating built environments: bridging knowledge and practice divides**, by Roderick

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'Creating Built Environments' is published by Routledge and, as recounted in its postface, is the outcome of the author's experiences in research, pedagogy and practice in the built environment across diverse cultural and geographical contexts. Roderick J. Lawrence is an Honorary Professor at the Geneva School of Social Sciences and a member of the scientific advisory board of the Swiss Academies of Arts and Sciences' 'Network for transdisciplinary research'. He has served as a consultant to the OECD and the ECE, as well as a scientific advisor to the WHO. He was the founding Director of the Certificate of Advanced Studies in Sustainable Development at the University of Geneva from 2003 to 2015.

The book applies a relational, systems thinking approach to the analysis of built environments as a framework to deal with their complexity when attempting to understand them and create them. It argues that a fundamental rethinking of the interrelationships between professionals and laypeople, between people and their habitat, and between human and natural ecosystems is needed if professionals, academics, public authorities and civil society are to respond successfully to the complex social and environmental challenges faced in urban environments. Transdisciplinarity is seen as the means through which collaboration takes place to create built environments that are healthy, socially just and sustainable. The book is divided into 2 parts following an introduction, which summarises the key messages. The first part is thematic and dedicated to five interrelated strategic domains, each presented in a discrete chapter: nature, health and well-being, food, housing, and creating change. The second part presents conceptual frameworks and methodologies for interdisciplinary and transdisciplinary contributions in the final two chapters of the book. These conceptual foundations and methods underpin the book's analysis of people-environment relations and its approach to bridging research and professional practice through the co-creation, co-production and co-management of built environments.

Chapter 1 (Constructing with Nature in Mind) summarises previous ideas and propositions to interpret the relationships between built environment and nature, and proposes instead a different approach based on the principles of human ecology, which emphasise the interrelations between abiotic, biotic and anthropo-logic of ecosystems. It discusses the use of *Analogies*, such as the organic ones formulated by Louis Sullivan, Patrick

Geddes, Lewis Mumford or Jane Jacobs, and Arthur Dahl's *Eco Principle* as applicable to either natural or human-made functional systems, as well as the role of fundamental values in defining people-environment relations and the co-benefits of *Ecosystem Services*. The role of relational thinking in supporting the application and achievement of the SDGs is promoted as a means to ensure understanding and evaluation of the synergies and trade-offs among the goals and their targets. Three innovative projects (from Seoul, Taiwan and Singapore) are presented as constructive and successful examples of interventions considering the symbiotic interrelations between built and natural elements of urban ecosystems.

In Chapter 2 (Planning for Health and Well-Being), the author interprets health as a holistic concept to be embedded in built environment projects. Five models of people-health-environment relations are summarised: the sanitary-environment model, the socio-behavioural model, the bio-medical model, the techno-economic model and the ecological public health model. The author discusses how systems thinking is aligned with the principles of human ecology in understanding causation of health outcomes as a complex interaction among diverse factors rather than a linear cause-effect mechanism. The chapter also presents the concepts of *Niche* and *Planetary Health* to return to *Ecosystem Services*, focusing here on health co-benefits, and the SDGs, specifically SDG3 (Good Health and Well-being) and its interrelations with other goals. 'New York Fit City' and the 'WHO Euro Healthy Cities Project' are presented as effective cross-sectoral programmes supporting active living, health promotion and sustainable development at different scales. The chapter concludes by addressing the importance of the residential context for health, in particular housing as it faces the dual challenge of its own ageing while hosting ageing populations.

Chapter 3 (Food for Thought) highlights the pressing societal challenges relating to food production and consumption in the urbanizing world. The author argues that achieving the SDGs requires bold rethinking of the interrelations between food supply, land-use planning and urbanisation, and proposes that the concept of food security should be replaced by that of food sovereignty, discussing how the relocation of agricultural production near and within cities may promote this by providing availability and affordability of healthy foods. The chapter discusses the concepts and practices of food culture, gardening, food security, food sovereignty and urban farming, and presents some recent and older contributions to the understanding of the relations between food and cities. Again, the author returns to focus on the SDGs (in this case specifically SDG2: Zero Hunger), offering evidence on the failure of the agro-industrial sector to provide a sustainable supply of affordable healthy food. Alternatives are suggested and argued for in the spirit of transdisciplinarity: agroecology and permaculture, and

food cooperatives. The related case studies presented at the end of the chapter provide successful examples of their application: Incredible Edible Todmorden, civic farming in a variety of initiatives across Detroit and vertical urban farming in Singapore.

Plurality by acknowledging and providing for the different needs of varied population groups is the core idea of Chapter 4 (Housing Matters for All). Here, the author argues against long-standing generalisations of housing for universal design and its commodification. Instead, housing should be designed to accommodate different domestic cultures and lifestyles; something which both the private and public sectors have often failed to do. The chapter starts by highlighting the impact and the ethical implications of the commodification of housing and presents two cases of cooperative and collective housing (in Zurich and Stockholm) which have achieved affordability, availability, accessibility and adaptability to accommodate a variety of residential requirements across the lifecycle. The concepts of *Adaptable Housing* and *Lifespan Housing* are presented, leading to a discussion on the need to rethink housing construction processes, recalling the contribution of Bernard Rudofsky and later scholars to highlight the know-how that laypeople may bring to housing design. The chapter concludes by focusing on housing for sustainable development with particular reference to the informal sector and provides an in-depth overview and variety of perspectives on the upgrading of the Enkanini informal settlement in South Africa.

Chapter 5 (Creating Incremental and Radical Change) discusses how built environments support responses to demographic, ecologic and societal challenges. It presents a framework that clarifies the distinction between adaptive and radical responses to the challenges, as well as five scenarios for land-use planning in the European region (Great Escape, Evolved Society, Clustered Networks, Lettuce Surprise U and Big Crisis). The author argues for the fundamental role of land-use planning in implementing adaptive responses to a variety of risks, supporting the inclusion of collaborative approaches and community-led changes as a core principle of sustainable urban governance. He describes the concepts of *Tinkering* and *Radical Change*, giving the example of collaborative transport planning in Antwerp as a successful large-scale community-led initiative. Addressing extant chronic problems, as in the case of many large housing estates constructed after 1945, requires community involvement, political buy-in and a redefinition of the role and contribution in society of built environment practitioners. The case of the Bijlmermeer housing estate in Amsterdam, and its long process of redevelopment, is used to draw a summary of conditions that support the transformation of built environments. The co-creation of scenarios for change is presented as a tool to enable people to think about alternative futures along with *Living Labs* as experiments to transition to sustainability. Finally, the author presents *Theory U* as complementary to the *Eco Principle*,

highlighting how transition to sustainable development depends on many variables, including and especially human values.

In Chapter 6 (Conceptual Frameworks), relational thinking is presented as enabling a reinterpretation of the multiple relations between politicians, practitioners, researchers and laypeople in planning and development. It therefore presents a variety of relevant concepts and conceptual frameworks: Elinor Ostrom's *Polycentric Systems*, a variety of humanistic contributions, *Human Ecology*, *Knowledge Cultures* and *Convergence*, arguing for the need to rethink 'agency' and recognising persistent problems with the awareness that construction and renovation can be catalysts for adaptation and radical change. The author uses the concept of *Convergence* to construct a framework for transdisciplinary contributions, which would enable concerted action to address societal challenges and extant situations through co-design, co-creation and co-production, promoting incremental or radical change. The final Chapter 7 (Methods and Methodology) advocates for built environments to become arenas for change towards a different future: 'knowledge is produced by both research and practice', the author states discussing the synergies between design and transdisciplinary methods and their application as a prerequisite for change. The latest advances in research on design methods are presented and the use of *Case Study Research* reviewed along with innovative education programmes, inclusive participatory methods, the concept of 'scaffolding', simulations, anticipative approaches, creative thinking and the concept of 'metabolisms'. The author concludes reiterating the role of relational thinking in implementing the SDGs and the fundamental contribution of human habitats to a sustainable and socially just future.

'Creating Built Environments' provides a coherent framework to apply systems thinking to the construction and renovation of human habitats. It enlightens and clarifies the complexity of urban environments as outcomes and mediators of the relationship between human and natural ecosystems, and it resolves the tensions around the production of knowledge needed to create a more sustainable, healthier and equitable future. The book makes a compelling argument for bridging research and practice through transdisciplinarity by presenting a wealth of knowledge and appropriate case studies, which are successfully representative of its application. The clarity of the narrative interlinking a variety of complex concepts, frameworks, methods and approaches, and their application in practice, makes the book enjoyable to read for both academics and practitioners, as well as decision makers and civil society. The structure of the book makes it possible for the reader to 'pick and choose' chapters of specific interest to read, but it is particularly interesting as a whole to fully understand how the different domains, concepts and methods are interlinked. 'Creating Built Environments' is a truly inspiring book in its bold call to rethinking the relationships that define both our urban environments and the means we use to create them and improve them: it proposes some

extremely innovative approaches to the production of built environments while retaining the theoretical and scientific integrity needed to ensure the right way forward.

### Notes on contributor

**Ilaria Geddes** is a Special Scientist at the Department of Architecture at University of Cyprus. She is the Research Coordinator of the Erasmus+ project *Knowledge Alliance for Evidence-Based Urban Practices* (KAEBUP) and contributes to teaching courses on Mediterranean Cities and Research Methodologies. Her research focuses on diachronic analysis of city development, urban theory, urban planning and the

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