Downtown, Paul F: Ecopolis: architecture and cities for a changing climate

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Merve Bedir

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The eruption of the volcano in Iceland has proven once again that while we have increasing control over the environment, we are becoming more dependent and painfully aware that we are at its mercy. In fact, we have been making major efforts to address this issue for almost four decades, ever since sustainability was introduced as an environmental concept. Researchers have been constructing the context for urgent action. Meanwhile, activists have been working from the bottom up, not only to raise public awareness but also to push politicians to take steps for the sake of Nature, for Mother Earth.

The term ‘ecopolis’ joins two words that together capture the essence of the book. One component is ‘eco[logy]’, embracing the relationships between the air, land, water, animals, plants, etc., and the scientific study of them. The other component is ‘polis’, the ancient Greek city-state. Yet the reader should not conclude that the city-state stands for a breakthrough in ecological thinking. The thesis of the book may be summarized in terms of its stated purposes: (1) to formulate a theory for the design, development, and maintenance of ecological cities; and (2) to define a new field of action to help citizens gain power over the states and to sustain social justice. The author does not propose a new theory for the salvation of the city. Rather, he seeks to bring together and re-define what we think we already know about improving it, both ecologically and socially.

Underlying these two purposes are the contours of the intended readership, namely architects, urban designers, urban planners, activists, and sociologists. But these purposes also determine the organization of the book. It is composed of two parts: the first about the design aspects of ecopolis; the second about its social structure. Chapter 1 describes the elements of ecological cities and introduces the idea of ecopolis. Chapter 2 focuses on the epistemology of urban ecology. There, the author presents a *cybernetic* approach, which establishes a network of relationships between architecture, urban design and planning, and ecology. Chapter 3 discusses part of the history that led to ideas and concepts about sustainable architecture and urbanism. The author treats ecology as a medium by which to combine different approaches of environmental sustainability and the built environment.

M. Bedir (✉)
OTB Research Institute for the Built Environment, Delft University of Technology, Delft,
The Netherlands
e-mail: m.bedir@tudelft.nl

Chapter 4 evaluates urban ecologists and/or ecology theorists. Expanding on this evaluation, Chapter 5 analyzes the perception and aesthetics of ecology and the built environment. Wrapping up the first part, the author goes over some case studies of sustainable planning and urban design projects. Thereby, the reader is familiarized with the overall scope of the projects but also gains detailed information about each one.

The second part focuses on the roots of the ecological city. Chapter 8 describes the biogeophysical aspects of urban ecology and their relationship with human culture and society through the built environment. Chapter 8 discusses aspects of the development processes that may bring ecopolis into existence. These include encouraging community, emphasizing democracy and the idea of citizenship, promoting social justice and equity, contributing to the economy, enriching history and culture, and fitting the bioregion. Chapter 10 deals with social aspects such as education, advocacy, and activism. The focus there is on *cultural agency*, on ways of communicating ideas that influence the cultural, social, and individual areas of human life. Chapter 11 introduces a tool that the author defines as Sustainable Human Ecological Development [SHED], which he then uses as the framework for his theory. This framework consists of four key elements: the mission statement [*Charter of Calcutta*]; the performance measure [*Frogstick*]; the set of principles [*Ecopolis Development Principles*]; and the process [*Seven Steps*]. In the final chapter the author proposes treating cities as extensions of human physiology. He adds that this approach would allow us to evolve culturally so that we can orient ourselves with respect to the changing climate and disrupting ecosystems.

The book has a very strong theoretical basis, relying on theories related not only to sustainability and urbanism but also to sociology. This variety keeps the reader alert. But it is especially the way the author communicates that keeps the reader interested, speaking to activists and academics alike. Importantly, the case studies are up to date, so, although the book is actually geared to professionals, it will draw the interest of the general public. The author endeavors to combine two crucial dimensions of sustainability: the social and the technological. Assuming we as readers are still suffering from the separation of social and technical research, this book seeks to bring these fields back together and thereby accelerate the ecological implementation of their outcomes for the environment. However, the structure of the book does not seem to reflect this lofty intention. The book draws attention to the scale of the issue, to the city as the battlefield of the professionals, but does not discuss recent developments in urban design approaches to ecology and cities.

Ecopolis is a comprehensive book. It covers multiple dimensions of sustainability, offering new perspectives rather than giving prescriptions.

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