LANDSCAPE ARCHITECTURE THEORY

AN ECOLOGICAL APPROACH

MICHAEL D. MURPHY

Island Press' mission is to provide the best ideas and information to those seeking to understand and protect the environment and create solutions to its complex problems. Join our newsletter to get the latest news on authors, events, and free book giveaways. [Click here to join now!](#)

LANDSCAPE
ARCHITECTURE
THEORY

LANDSCAPE ARCHITECTURE THEORY

An Ecological Approach

Michael D. Murphy

Washington | Covelo | London

Copyright © 2016 Michael D. Murphy

All rights reserved under International and Pan-American Copyright Conventions. No part of this book may be reproduced in any form or by any means without permission in writing from the publisher: Island Press, 2000 M St. NW, Suite 650, Washington, DC 20036

Island Press is a trademark of The Center for Resource Economics.

Portions of this book first appeared in *Landscape Architecture Theory: An Evolving Body of Thought* by Michael D. Murphy. Long Grove, IL: Waveland Press, 2005.

Keywords: architecture, behavioral theory, climate, cognitive needs, collaboration, commodity, conative needs, construction, creative thinking, critical thinking, cultural diversity, design, design programming process, ecology, ecosystem management, Fibonacci, geology, golden mean, health, horticulture, landscape architecture, maintenance, pedestrians, planning, problem solving, procedural theory, resilience, substantive theory, sustainability, system performance, utility, urban development, values, visualization

Library of Congress Control Number: 2016941252

Printed on recycled, acid-free paper

Manufactured in the United States of America

10 9 8 7 6 5 4 3 2 1

Contents

Preface ix

Acknowledgments xiii

Part I

Introduction

Chapter One Introduction 3

Part II

Substantive Theory

Chapter Two Substantive Theory 25

Chapter Three The Biophysical Landscape 55

Chapter Four The Human Landscape 97

Chapter Five Design Purpose 133

Chapter Six Design Form 149

Part III

Procedural Theory

Chapter Seven Design Process 185

Chapter Eight Problem Definition 217

Chapter Nine Design Collaboration 243

Chapter Ten Design Thinking 263

Chapter Eleven Conclusion 279

Bibliography 289

Index 315

Preface

*The art of progress is to preserve order amid change, and to
preserve change amid order.*

—Alfred North Whitehead

During the early part of the twentieth century, it was commonplace to hear farmers, as an expression of their industry and energy, boast of having “worn out” several farms during their lifetime. Although such comments are no longer heard today, the essence of this notion lingers as a shadowy background in our collective consciousness, a legacy of our historical experience.

When we consider that, each year, productive agricultural soil continues to be lost from the United States at a rate ten times faster than natural regeneration, or that each of us sends a ton of waste to the landfill, it is apparent that we have not completely abandoned the idea that critical landscape resources, as well as the space to dispose of them at the end of their (presumed) useful life, remain abundant. Our attitudes—and, as a consequence, our understanding—lag behind what science tells us about the relationships between society and the landscape.

Conceptually, the landscape is complicated: it may be described as a natural scene, as a designed setting, or as an ecological system for organizing energy and matter. Although we think of the landscape as a place, it is better understood as a process of physical and biological evolution.

Through design, we act to manage the continuing process of landscape evolution—sometimes by accelerating the process, sometimes by slowing it down, and sometimes by changing its course—to improve the conditions of the environment in ways that enhance our own quality of life and create meaningful and compelling places as the setting for human activity. Today, as we gain increasing power to change the landscape, we also increase our responsibility to do so wisely, to protect the landscape as

an invaluable resource, and to invest the human-built environment with enhanced purpose, meaning, and experience.

Often, it is the visual clues that provide insight into the conditions requiring design attention. But to ensure that designs lead to durable improvement in the human-landscape condition, rather than mere temporary shifts in form or style, we need to consider all the salient factors of the landscape, human interactions, and the activities to be accommodated before reaching decisions about what a transformed landscape will become.

Through their creative efforts, landscape architects are asked to respond to a series of questions concerning the issues their clients must resolve when changing the landscape: What is the nature of the conflict to be resolved? What is its cause? What conditions must be created to resolve it? What form are they to take? How are unintended consequences to be avoided?

The underlying purpose of the design theory explored here is to provide the understanding required to resolve these questions and to ensure that the answers reached lead to successful change in the landscape. In essence, the process of design may be compared to the art of painting as described by Edgar Degas: “easy when you don’t know how, but very difficult when you do.”

Theory serves to make design less difficult and more predictable in the creation of imaginative and effective design results. The successful transformation of dynamic and complex environments requires insights from many disciplines in order to reveal all the implications of the changes to be imposed.

As a discipline, landscape architecture is situated at the interface of the arts, the sciences, and the humanities. This unique position provides many perspectives from which to assess design success or failure. It also provides access to many opportunities for design innovation.

This investigation of a theory of landscape architecture takes an ecological approach, examining the people to be designed for in relation to the environments they inhabit and how designs might be crafted to facilitate a mutually sustaining relationship between people and land. The book focuses primarily on three areas of knowledge:

Figure 0-1. Landscape devastated by drought near Dallas, South Dakota, during the Dust Bowl era of the 1930s, when cultivation was introduced in an area with insufficient rainfall to sustain farming. (Source: United States Department of Agriculture via Wikimedia Commons.)

1. The nature and processes of the landscape as a biophysical setting;
2. The nature of people, their interactions with one another and with the landscape regarding the conflicts to be resolved in improving the relationships among them;
3. The thinking and design processes needed to apply that knowledge to improve the human-landscape condition.

The chapters that follow are intended to provoke a dialogue about the outlines of the intellectual landscape to be encompassed by design theory. Theory, like the landscape itself, continues to evolve. What is presented here is an introduction to some of the seminal ideas that have informed the practice of landscape architecture over the last half-century with a view toward pointing a way to its future. Some of the authors cited here are landscape architects, but many more are designers and researchers,

from a variety of fields, whose ideas have illuminated the search for a theory of landscape architecture.

To supplement the text, ancillary materials are available at <http://islandpress.org>. The online appendix presents an array of practical information that draws upon extensive research and design experience.

Acknowledgments

In addition to the authors whose works are cited, I am indebted to many colleagues for their unselfish contributions in bringing this book about. I thank Chris Mulder for his efforts, through planning and design practice, to develop and document the interdisciplinary processes described here; Dennis Jerke for his insightful suggestions on design collaboration; Per Hedfors for his contributions regarding the knowledge requirements of practitioners and for his thoroughness in reading the draft text; Urs Kreuter for his review and guidance with the ecological material; Robert Laurie for his suggestions on the discussion of geologic processes; Rodney Hill for his contributions on creativity and innovation; Forster Ndubisi for many fruitful discussions of ecological design and planning; John Motloch for years of inspiring conversations about theory; and Eric Bardenhagen, who provided feedback and suggestions based on his experiences teaching the material, and who shared the equally valuable feedback of his students. I thank my colleagues at Texas A&M University and the University of Pretoria, and the students who, over forty years, had the patience and endurance to teach me what is important in the learning of landscape architecture. I am particularly grateful that the manuscript found its way into the capable hands of Courtney Lix and Michael Fleming, editors at Island Press, who had the skill to transform the manuscript into a readable text. Although I gratefully acknowledge the wise counsel from designers and scholars in many fields, any mistakes or misrepresentations in the text are exclusively mine. Finally, I thank my wife, Doreen, for her love and support during the book's lengthy gestation.