

# Contents

---

Foreword | 8

Acknowledgements | 11

## JAPANESE GARDEN AESTHETICS | 13

The Garden as a Spatial Paradigm | 13

Early Chinese Models | 15

Influences of Zen | 20

Later Developments | 25

## JOHN CAGE'S RYOANJI | 32

Cage's Aesthetics | 32

Cage and the Garden at Ryōan-ji | 34

Further Thoughts | 43

## FORMAL METHODOLOGIES FOR ANALYZING THE JAPANESE GARDEN | 47

Two Gardens as Test Cases | 47

Acoustic Ecology | 49

The Soundscape of Koishikawa Korakuen | 55

The Spatial Auditory Experience | 60

Auditory Semiotics | 66

The Technique of *Shakkei* | 66

The Garden of Kyu Furukawa Teien | 70

Diagramming Auditory and Landscape Elements | 74

Reflections | 80

The Aural Architecture of Kyu Furukawa Teien | 81

Formal Concept Analysis | 85

Generating an Ontology | 85

Design Praxis and Ecology | 92

Towards a Design Theory | 97

Landscape-Soundscape Synthesis | 99

AFTER CAGE | 106

Introduction | 106

Beyond Ryōan-ji | 108

*Re-Ryoanji*: Towards a New Spatial Model | 110

The Nature of Musical Equivalents | 115

Eco-structural Sound-Space Design | 116

Acoustic Intersections | 119

Software Design | 121

Spatial Meaning | 124

Sesshutei as a Spatial Model | 128

Methodologies for Transmediation | 132

Implementation | 138

新龍安時 (Shin-Ryōan-ji) | 142

A Digital Sound Ecology | 144

On Gardening with Sounds | 150

Architectonic Form Finding | 152

NURBS Map I / II | 156

Kyu Furukawa Teien Shūsaku | 163

    Data-Structures | 164

    Form Generation | 169

«No-Stop Garden» | 173

    Kyu Furukawa Teien Lattice as Piecewise Function | 176

    Conway's Rule 2,3/3 as Evolutionary Guide | 182

    The Inheritance from Neighborhood Gardens | 185

On Design Space Exploration | 192

## REFLECTIVE PRACTICE | 197

On Spatial Thinking | 197

Bibliography | 206