

RESEARCH IN LANDSCAPE AND ENVIRONMENTAL DESIGN



IAN McHARG AND THE SEARCH FOR IDEAL ORDER

KATHLEEN JOHN-ALDER

ROUTLEDGE

Ian McHarg and the Search for Ideal Order

Ian McHarg and the Search for Ideal Order looks at the well-known and studied landscape architect, Ian McHarg, in a new light. The author explores McHarg's formative years and investigates how his ideas developed in both their complexity and scale. As a precursor to McHarg's approach in his influential book *Design with Nature*, this book offers new interpretations into his search for environmental order and outlines how his struggle to understand humanity's relationship to the environment in an era of rapid social and technological change reflects an ongoing challenge that landscape design has yet to fully resolve. This book will be of great interest to academics and researchers in landscape architectural history.

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Ian McHarg and the Search for Ideal Order

Kathleen John-Alder

First published 2020
by Routledge
2 Park Square, Milton Park, Abingdon, Oxon OX14 4RN

and by Routledge
52 Vanderbilt Avenue, New York, NY 10017

Routledge is an imprint of the Taylor & Francis Group, an informa business

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British Library Cataloguing-in-Publication Data

A catalogue record for this book is available from the British Library

Library of Congress Cataloging-in-Publication Data

Names: John-Alder, Kathleen, author.

Title: Ian McHarg and the search for ideal order /

Kathleen John-Alder.

Description: Milton Park, Abingdon, Oxon;

New York, NY: Routledge, 2020. |

Series: Routledge research in landscape and environmental design |

Includes bibliographical references and index.

Identifiers: LCCN 2019018453 | ISBN 9781138681729

(hbk: alk. paper) | ISBN 9781315545639 (ebook)

Subjects: LCSH: McHarg, Ian L., 1920–2001. | Landscape architects—United States—Biography. | Landscape architecture.

Classification: LCC SB470.M33 J64 2020 |

DDC 712.092 [B]—dc23

LC record available at <https://lcn.loc.gov/2019018453>

ISBN: 978-1-138-68172-9 (hbk)

ISBN: 978-1-315-54563-9 (ebk)

Typeset in Sabon
by codeMantra

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Acknowledgements

I thank the following individuals for their support and encouragement. William Whitaker, Nancy Thorne, and Isabel Schumacker of The Architectural Archives of the University of Pennsylvania provided patient guidance. Eeva Liisa Pelkonen instilled discipline and helped me find my voice. Peter Morin explained the intricacies of food webs and energy. Janike Kampevoll Larsen, Anatole Tchikine, John Beardsley, Fritz Steiner, and Laura Lawson supplied kind, but critical suggestions. Robert Geddes, William Roberts, Laurie Olin, Dennis McGlade, Carol Franklin, and Leslie Sauer graciously provided insight into McHarg's early career. Jahangir Sedaghatfar, Nader Ardalan, Robinson Fisher, Brian Spooner, Victoria Steiger, Jon Coe, Neal Belanger, Grant Jones, and Dennis Paulson unraveled the history of Pardisan. But my greatest debt is to my husband Henry John-Alder, who accepted the disruption to our lives and the extended loss of our dining room table (and living room couch) to accommodate the piles of material I accumulated as I wrote this book.

Introduction

Ian McHarg (1920–2001) was a skilled designer, prolific writer, and influential teacher. He served as chair of the Department of Landscape Architecture at the University of Pennsylvania for over thirty years and was a founding partner of the firm Wallace, McHarg, Roberts and Todd (WMRT). Throughout his career, he positioned landscape architects as accomplished artist-technicians equipped with the imagination, skill, and force of mind to craft naturally beautiful and environmentally superior blueprints for others to follow. To advance this agenda, he developed a meticulous method of investigation that required designers to deconstruct and map the landscape's physical and cultural patterns prior to formulating a response. The procedure was synthetic, systematic, experimental, and all about order. As a scholarly enterprise, it provided a basic understanding of the biophysical history of the land, which linked design to science, facts, and empirical observation. As an applied, problem-solving practice, it forced designers to select, organize, evaluate, and compare, which made the procedure malleable and somewhat ambiguous in objective.¹ McHarg argued that his design method was a tool of discovery and a platform for action that honored the landscape and shunned preconceived notions of form.² To justify these claims, he wove allegorical tales of the world as an animate being whose health and welfare paralleled human existence. When people mistreated the land, the stories illustrated how they also harmed themselves. His talent for analytic thinking, combined with his flair for storytelling made him uniquely positioned to advance the critical role of landscape and landscape architecture in design discourse.³ He pursued both passions with edifying fervor and in the process became perhaps the most famous landscape architect of the 20th century (Figure I.1).

McHarg's notoriety was due in large part to his environmental manifesto *Design with Nature*.⁴ He published the book in 1969, but the groundwork for the argument occurred earlier in his career. In tone, the writing captured the confidence of the era – its material prosperity, technological marvels, and optimism – and the attendant realization that the unanticipated by-products of this brash sense of power – rampant consumerism, industrial pollution, and loss of contact with the natural world –



Figure I.1 Photograph of Ian McHarg (n.d.). The Ian and Carol McHarg Collection, The Architectural Archives of the University of Pennsylvania.

jeopardized the future. Similar to the argument presented by Rachel Carson in *Silent Spring*, McHarg wrote *Design with Nature* to bear witness to the importance of natural rhythms and processes in daily life, and to explain the consequences when they were destroyed.⁵ And like Carson, he called upon values deeply ingrained in the American consciousness to illustrate what was at stake before the country thoughtlessly edged into environmental catastrophe. Charles Eames, one of McHarg's professional collaborators, described the situation as follows:

The scary fact is that many of our dreams have come true. We wanted a more efficient technology and we got pesticides in the soil. We wanted cars and television sets and appliances and each of us thought he was the only one wanting that . . . That doesn't mean the dreams were all wrong. It means that there was an error somewhere in the wish list and we have to fix it.⁶

McHarg skillfully deployed contrasting images – a tenement courtyard versus a country village, children in a playground versus a child crawling on a dirty row house stoop, aerial views of farmland versus aerial views of the city, a cluttered commercial street versus a forested hillside, a picturesque river valley versus a polluted industrial waterway – to highlight problems and suggest possible solutions. The dramatic images of the sun and the earth that grace the front and back cover of the first edition of *Design with Nature* set the stage for this visual argument. In addition to signaling the vast scale of his design project, they illustrate his deep reverence of the natural and his desire to connect to something larger and lasting. As physical and spiritual embodiments of the unity of science, art, and religion – the trinity of subjects that comprised McHarg's vision of design with nature – they speak to objective truth, imaginative unfolding, and spiritual redemption. The photograph of the sun, which came from the Hayden Planetarium at the American Museum of Natural History, represents immanence, reason, and the immutable power of natural laws that eclipsed time and history (Figure I.2). The photograph of the earth, which came from an orbiting

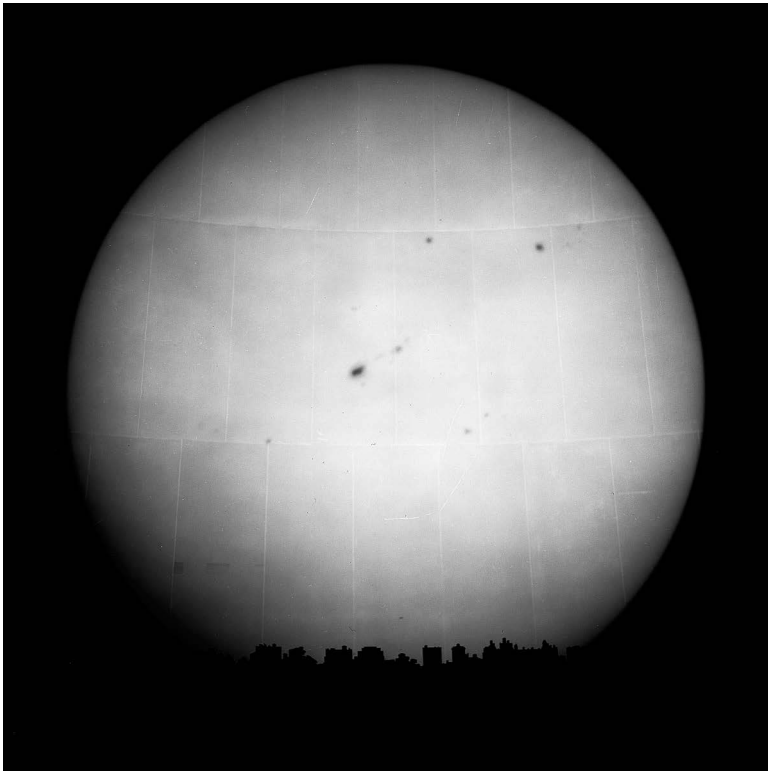


Figure I.2 Hayden Planetarium. Image # 320599, American Museum of Natural History. Reprinted by Permission.

4 Introduction

weather satellite and also appeared on the cover of the *Whole Earth Catalogue*, represents biophysical processes, measurement and quantification, and the understanding that even though it was impossible to fully know the natural world, the things that were known could enrich life⁷ (Figure I.3). Together, they embody his hope that people would see the land and their actions towards it truthfully, and condemn the evils tacitly promoted by their inattention. The city skyline that shadows the lower edge of the sun expressed his fear that perhaps they may not.

Stories of McHarg's childhood in Glasgow, Scotland, which appear in the first chapter of *Design with Nature*, provide further insight into his hopes and fears and what he sought to achieve. At the beginning of this brief biography he stated: "I spent my childhood and adolescence squarely between two diametrically different environments, the poles of man and nature." The city offered the excitement of the railroad station, circus, theater, dances, concerts, art galleries, bagpipe parades, soccer matches, and the christening of the Queen Mary. Yet, as recounted by McHarg, these places and events were rare interludes in a city memorable for industrial



Figure I.3 November 10, 1967 satellite image of the earth from space. Courtesy of NASA.

production and soot-encrusted buildings. Emphasizing the worst, he called the city “a sandstone excrement cemented with smoke and grime. Each night its pall on the eastern horizon was lit by the flares of blast furnaces, a Turner fantasy made real.”⁸

In contrast to his urban excursions, McHarg’s unsupervised escapes to the countryside and the Black Woods were intimate, full of light, and teaming with life. A flashy American convertible and tales of war added exotic excitement and hints of his future:

. . . the other path was always exhilarating and joy could be found in small events, the certainty of a trout seen in the shadow of a bridge, the salmon jumping or a stag glimpsed fleetingly, the lambing, climbing through the clouds to the sunlight above, a cap full of strawberries or blackberries, men back from the Spanish Civil War at the firepot or a lift from an American in a Packard convertible.⁹

The simple delights that he found in the countryside were both domestic and transcendent, and this, too, he wanted to share:

The burn had familiar steppingstones, overhangs where small trout and red-breasted minnows lived, shaded by reeds, osiers and willows. Whitewashed stone farmhouses sat squarely with their outbuildings and old trees marked the ridges . . . Its gem was Peel Glen, for most of the year an unremarkable woodland, mainly beech, deep shadowed and silent, but in the Spring it was transformed. As you entered its shade there was no quick surprise – only slowly did the radiance of light from the carpet of bluebells enter and suffuse the consciousness.¹⁰

At the conclusion of this narrative, McHarg returned to the Black Woods and Peel Glen after facing and overcoming the challenges of war, Harvard, and tuberculosis. He expected time and experience would diminish the pleasure of his memories, but he instead discovered the woodland glade no longer existed. The ephemeral beauty of its bluebells had been replaced by much needed but uninspiring post-war housing surrounded by “sodden laundry” drying on “drunken chestnut poles.”¹¹ What was once mysterious and magical was now mundane and ugly, and he elegiacally mourned the loss.¹²

As a coming of age tale, these stories deny a paradisiacal return to the garden. As a parable of nature and nurture, they suggest the innocent pleasures and adventurous freedoms of the countryside could counteract the enervating complexities of the city. As a form of political resistance, they call attention to the economic and social injustices he sought to reform. The recognition that the land shapes thinking and feeling is central to each of these messages. McHarg purposefully contrasted two ways of inhabiting the world – of being lost in an alienating terrain and being at home in

well-known territory – to emphasize how the landscape of daily life impacts perception, thought, and action. Mirroring ideas expressed by Edith Cobb in “The Ecology of Imagination in Childhood,” his adventures in the city and countryside outlined ways of seeing and knowing that oscillate between feelings of estrangement and discontinuity (what is in need of redemption and renewal) and feelings of connection and continuity (what is decent and good). Cobb claimed that the term “ecology” captured this give and take because it considered environmental interactions “not only in terms of human relations, but also in terms of man’s total relations with otherness, with nature itself.” She also wrote that an ecological perspective, particularly when viewed with childlike wonder, evokes playful associations that give further meaning to the phrases “the spirit of place” and “the genius loci.”¹³ The world offered joy and amazing possibilities, and the opening of one’s life to the unexpected delights that come from its natural sights and sounds clearly inspired McHarg to write *Design with Nature*.

The decided preference for the countryside in his arguments has prompted the criticism that McHarg was anti-urban. While there is truth to this claim, it is also true, as his childhood stories indicate, that he sought an environmental synthesis – a city suffused with the light and life of the natural world and a countryside enriched by cultural and social opportunities. He would state in *Design with Nature*: “It is not a choice of either the city or countryside: both are essential, but today it is nature, beleaguered in the country, too scarce in the city which has become precious.”¹⁴ His professional projects adhered to this objective by illustrating how these landscapes and their contrasting ways of life, in consonance with his childhood memories, were inseparable. The title of the working draft of *Design with Nature*, which was *A Place for Nature in Man’s World, or Man, Nature, Land and City*, signaled his allegiance to this claim.¹⁵

But perhaps most important, these childhood stories draw the reader into the text, and into McHarg’s mind. As readers, we know very well that we are being compelled to see the world through his eyes, and through a form of clichéd storytelling. Nevertheless, the engaging way he recounts these adventures, particularly the joyous freedom of the countryside, makes it easy to suspend disbelief and willingly follow.

In 1971, *The Wall Street Journal* published a short article on McHarg that captured the essence of his personality.¹⁶ The article reported that he loved dry martinis, good jazz, and lived in a stunning contemporary house adjacent to Fairmont Park with a backyard designed to look “exactly as nature itself might, given a century or two.” It also captured the impulsive nature of his thoughts and how he raced through interviews, “his voice a blur, his hands gesturing, throwing off ideas like sparks,” as he discussed how to create “a more humane, creative synthesis of man’s work and nature’s.” Somewhat skeptically, the article noted his repeated insistence that his design method was scientific even though he had yet to prove it would “always give the same answer regardless of the planner using it.”

A statement by former Secretary of the Interior Stuart Udall, who worked with McHarg during the administration of President Lyndon Johnson, testified to the importance of his work and to his tenacious efforts to ensure the natural characteristics of the land – “its network of streams, its underlying geology, its intricate life chains, its beauty” – received the consideration customarily granted to economics in development scenarios. In the same admiring spirit, the article noted that Lewis Mumford, McHarg’s mentor and friend, had glowingly stated that *Design with Nature* revived “hope for the future.”¹⁷

It is also telling that the by-line of the article asked: “Is Ian Just a Glib Showman?” In answer to this question, it was noted that his desire to put nature first had caught people’s attention and he was respected for his accomplishments, but not always admired. A student interviewed for the article stated: “My first impression was that he was absolutely out of his mind,” but I came to realize that “he had a much broader vision of scope than I did.” Another student noted that he had “very strong ideas that he won’t let go of,” and a third stated, he could “talk on and on, overwhelming you with the verbal, and you don’t realize that he hasn’t thought it out.” David Wallace, McHarg’s partner at WMRT, reiterated these thoughts when he observed that Ian invited criticism by “overselling ecological determinism with his enthusiasm.” Wallace did, however, observe that when he stepped away from the lecture podium he understood the necessity of compromise. The article ended on a positive note, entranced by its subject’s heartfelt expression of passion for the land: “I found myself more moved by nature than anything else. My whole purpose became continuing this love affair and still making a living out of it.”¹⁸

Design with Nature was considered a classic, and its author a minor celebrity, when *The Wall Street Journal* article was written. McHarg garnered profiles in *Life*, *Time*, *Readers Digest*, and *Smithsonian* magazines; served as host of the television program *The House We Live In*; appeared on the Mike Douglass Show; and starred in the documentary movie *Multiply and Subdue the Earth*.¹⁹ In light of this high-profile publicity, he soon became a legend in his field, automatically referenced in discussions of environmental design and planning.

There are numerous essays and several important books on McHarg. Chief among these efforts is the work of Frederick Steiner, who assisted McHarg in the writing of his 1996 autobiography *A Quest for Life*, and the 1998 collation of papers titled *To Heal the Earth: The Selected Writings of Ian McHarg*. After McHarg’s death in 2001, Steiner edited the text *The Essential Ian McHarg: Writings on Design and Nature*. In 2007, Lynn Margulis, James Corner, and Brian Hawthorne edited *Ian McHarg Conversations with Students: Dwelling in Nature*. This work consists of testimonials that explore the intellectual legacy of his work. *The Lost Tapes of Ian McHarg*, a CD that accompanies the text, allows readers to hear McHarg discuss his ideas. *Reconsidering Ian McHarg: The Future of Urban Ecology*, written in 2014 by his former student Ignacio Bunster-Ossa, examines the continuing relevance of his ideas.²⁰

Building upon this rich legacy of scholarship, *Ian McHarg and the Search for Ideal Order* examines McHarg's formative years and follows his thinking as his ideas increase in scale and complexity and his design agenda moves from housing, to the city, region, and ultimately the world. The book's primary concern is McHarg's desire to understand and organize the objects, and events that comprise everyday life – his search for ideal order – and how this quest evolved in parallel with his spatial explorations and became an all-encompassing design theory that embraced natural history, social science, religion, ethics, and aesthetics. Despite his repeated claims of objectivity, this search was far from objective. He desperately wanted people to see the world as he did and to join with him to make this vision a reality.

Within this general context, *Ian McHarg and the Search for Ideal Order* foregrounds the argument presented in *Design with Nature*, and situates it within the political, social, and cultural discourse of the 1950s and 1960s. Of particular interest is the tension between McHarg's desire, as a dedicated modernist, to define and systematize a unified theory of design, and his equally strong desire, as a committed regionalist, to reveal and honor local character. To understand these related but conflicting ambitions, this book explores McHarg's broad and provocative reading of ecology and how he deployed this term to create what he claimed to be a forward-thinking and truly avant-garde unification of art, science, and society.²¹ At his most visionary and optimistic moments, he even proclaimed that ecological seeing and thinking would change the world.

McHarg developed his environmental agenda when, as notably argued by the feminist theorist Donna Haraway, the traditional norms of society were beginning to fray under the onslaught of those seeking to resist patriarchy, colonialism, humanism, positivism, and essentialism.²² As a key design figure in this transition period, McHarg actively positioned himself as a critic of the old order, but on more than one occasion opportunistically used its authoritative powers to his advantage. Moreover, following what was then common practice, he couched his ideas in terms that are not easy to accept today, including the dominance of the male voice, the condescending presumption of a design elite, and the tendency to express ideas through moral pronouncements that contain more than a smidgeon of sanctimony. Consequently, his work reflects both the strengths and the weaknesses of a watershed moment in landscape architecture. A deeper understanding of his message not only provides greater insight into his particular (and decidedly patriarchal, colonial, humanist, positivist, and essentialist) brand of ecological design, it also provides greater insight into the impact of his thinking on the theory and practice of landscape architecture and its current dominating discourses. Indeed, his insistence that natural processes and human action must co-exist in some type of cooperative transaction continues to be a critical topic in design theory and practice. The politics and language of this debate have changed in the past 50 years, but it remains as contested as it was in the mid-20th century.

Design with Nature is not a perfect book, but it asks great questions: Where should we build? How should we construct our cities? Is it possible to utilize natural resources and preserve natural processes? Can a networked system geared toward holistic resolution still honor regional differences? Is there a way past the naiveté of operative dualities? The answers that McHarg provided inform, provoke, inspire, and irritate.

What follows is my attempt to trace McHarg's vision of order, understand its structure, and assess its influence. Similar to the narrative of *Design with Nature*, the story that I weave contains intersecting histories and overlapping themes and it gains authority through the accumulation of evidence and repetition. In my years of research on McHarg, I discovered that any attempt to reduce his thoughts to a singular meaning denies the complexities, contradictions, nuances, and ironies that enrich and bedevil his thinking. Instead, I follow his lead and present his search for order on his terms – as an intellectual inquiry in which the same ideas and questions are repeated to different people and explored in different physical and social contexts. In addition to highlighting what McHarg deemed important, my intent is to illustrate how he puzzled through issues, isolated concerns, and zealously assembled and reassembled the components of his environmental manifesto until they fit his expectations and became the master narrative of *Design with Nature*.

The first section of the text discusses formative influences in McHarg's life and design training and it lays the groundwork for subsequent discussions. The second section explores the development of his theory of design and its relationship to ecology, religion, and land stewardship. This section of the text, in keeping with the kaleidoscopic patterns of McHarg's thoughts, moves between in-depth descriptions of the ideas he accumulated to create his ecological manifesto and short essays that explain how he assembled these ideas into a synthetic theory of design. The third section examines how he attempted, with varying degrees of persistence and success, to refine his theories and advance his career through teaching, scholarship, and practice. The fourth section, the coda to this exploration of McHarg, examines Pardisan Park, in Tehran, Iran and positions his vision of ecological design in terms of post-colonial modernization.

The discussion of Housing and the Humane City that appears in this text is adapted from a paper published in The Journal of Planning History.

The discussion of The House We Live In that appears in this text expands an argument presented in Manifest: A Journal of American Art and Architecture, Issue No. 2- Kingdoms of God, Anthony Acciavatti, Justin Fowler, and Dan Handel eds. (New York: Manifest Journal).

The discussion of Pardisan Park that appears in this text is adapted from a paper published in Contemporary Landscapes of the Middle East, Mohammad Gharipour ed. (New York: Routledge Press).

Notes

- 1 For more information on the overlay method see Carl Steinitz, Paul Parker, and Lawrie Jordan, "Hand-Drawn Overlays: Their History and Prospective Uses," *Landscape Architecture* 66 (September 1976): 444–445; and Forster Ndubisi, *Ecological Planning: A Historical Approach* (Baltimore, MD: John Hopkins University Press, 2002).
- 2 To understand McHarg's use of Nature see Raymond Williams, *Keywords: A Vocabulary of Culture and Society* (New York: Oxford University Press, 1983), 219–224. Williams's definition incorporates the following:
 - 1 An inherent force, or deity, that commands natural forces and directs human beings. This definition links Nature to original innocence, a fall from grace, redemption, and rebirth.
 - 2 The material world, reason, observation, and the laws that govern an ideal society. This usage emphasizes reason and social development. Here Nature functions as an index, or sign, that measures progress.
 - 3 A concept of aesthetics in modern Western traditions where natural beauty and behavior are synonymous with the plants and creatures of the countryside, as opposed to the evils of the city.
 - 4 The transformation of "Nature" to "nature" that arose in conjunction with the theory of evolution. This definition links nature to the science of ecology and the study of relations between organisms, and between organisms and their environments, whether this is exemplified by inherent competition or inherent cooperation. In this definition nature, and natural laws, are considered in terms of survival and extinction rather than innocence and goodness.
- 3 For the purposes of this study, design is a process of production that relates an object to its purpose – function and utility – and to its ability to please independent of function – aesthetics and beauty. McHarg attempted to dissolve this distinction by arguing that form and function were complementary processes of physical and social production. See Michel Kelly, ed. *Encyclopedia of Aesthetics* 2 (New York: Oxford University Press, 1998), 17–20.
- 4 Ian L. McHarg, *Design with Nature* (Garden City, NY: The Natural History Press, 1969). The first edition of the text was published under the auspices of The American Museum of Natural History in New York.
- 5 Rachel Carson, *Silent Spring* (Boston, MA: Houghton Mifflin Company, 1962).
- 6 Daniel Ostroff, *An Eames Anthology* (New Haven, CT: Yale University Press, 2015), xv. Eames made this statement on October 10, 1952 in a speech to the American Institute of Architects. See Manuscript Division, Library of Congress, Washington, D.C, Charles and Ray Eames Papers, "Part II: Speeches and Writings series."
- 7 The image of the sun is one of several from the collection of the Museum of Natural History in New York that appear in *Design with Nature*. The image of the earth is the first full-Earth picture from space and it was taken in November 1967 by a NASA (ATS) weather satellite as part of a daylong, high-resolution film shot. In addition to appearing on the cover of *The Whole Earth Catalogue*, this image of the earth appeared in ecology textbooks of the era. See Stewart Band, *The Whole Earth Catalogue* (Menlo Park, CA: Nowels Publications, Fall 1968); and Paul A. Colinvaux, *Introduction to Ecology* (New York: John Wiley & Sons, Inc., 1973), 41.
- 8 McHarg, *Design with Nature*, 1–2.
- 9 Ibid.
- 10 Ibid., 3.

- 11 McHarg revised the description of his return to Scotland in 1950 in the drafts of *Design with Nature*. Initially, he referred to the regularly spaced, four-story apartments as a “grotesque caricature of L’Unite d’Habitation.” All of the descriptions emphasize the monotonous and disheveled appearance of the landscape. See The Architectural Archives of the University of Pennsylvania, Ian L. McHarg Collection, “Design with Nature Chapter Drafts and Related Research Materials,” 109.II.B.1.2.1 and 109.II.B.1.3.
- 12 The bluebells reference McHarg’s mother, who “loved the beauty of nature” and “bluebells in beechwood shadow.” See Ian L. McHarg, *A Quest for Life: An Autobiography* (New York: John Wiley & Sons, Inc., 1966), 11.
- 13 Edith Cobb, “The Ecology of Imagination in Childhood” in *The Subversive Science: Essays Toward an Ecology of Man*, eds. Paul Shepard and Daniel McKinley (Boston, MA: Houghton Mifflin Company, 1969), 122–132. The essay originally appeared in *Daedalus* 88, no. 3 (Summer 1959): 537–548. Cobb linked imaginative play to self-knowledge and genius.
- 14 McHarg, *Design with Nature*, 5.
- 15 The Architectural Archives of the University of Pennsylvania, Ian L. McHarg Collection, “A Place for Nature in Man’s World, or Man, Nature, and the City,” 109.II.B.1.6. The title of this draft of *Design with Nature* is almost identical to that of an essay written by Paul Shepard and titled “The Place of Nature in Man’s World.” In this essay, Shepard argued that “one of the most important uses of nature in the world we [humans] dominate is simply nature being itself,” and he called for the preservation of wilderness areas where people learned from nature, rather than extracted resources or heaped waste upon it. See Paul Shepard, “The Place of Nature in Man’s World” *Atlantic Naturalist* (April 1958): 85–89. This particular draft of *Design with Nature* is also noteworthy because McHarg sent it to Lewis Mumford for comment. McHarg would revise the title of the *Design with Nature* several times. These revisions included *Design with Nature: A Plan for Nature in Man’s World*, and *Design with Nature: A Plan for Man*. See also: The Architectural Archives of the University of Pennsylvania, Ian L. McHarg Collection, “Design with Nature: A Plan for Nature in Man’s World,” 109.II.B.1.9, and “Design with Nature: A Plan for Man,” 109.II.B.1.10.
- 16 Dennis Farney, “Father Nature: How an Exuberant Scot, A Landscape Architect, Hopes to Shape the World,” *The Wall Street Journal* (Monday, August 30, 1971). McHarg kept a copy of this article in his personal files. See The Architectural Archives of the University of Pennsylvania, Ian L. McHarg Collection, “Design with Nature Reviews,” 109.II.B.1.14.1.
- 17 Ibid.
- 18 Ibid.
- 19 McHarg’s autobiography contains a comprehensive list of media appearances, publications, and articles on his work and accomplishments. See McHarg, *A Quest for Life*, 400–402.
- 20 See Ian L. McHarg and Frederick R. Steiner, *To Heal the Earth: Selected Writings of Ian L. McHarg* (Washington, DC: Island Press, 1998); Ian L. McHarg, *The Essential Writing of Ian McHarg: Writings on Design and Nature*, ed. Frederick R. Steiner (Washington, DC: Island Press, 2006); Lynn Margulis, James Corner and Brian Hawthorne, *Ian McHarg Conversations with Students: Dwelling in Nature* (New York: Princeton Architectural Press, 2007); Lynn Margulis, Adam MacConnell and James MacAllister, *The Lost Tapes of Ian McHarg: Collaboration with Nature* (White River Junction, VT: Chelsea Green Publishing, 2006); Ignacio F. Bunster-Ossa, *Reconsidering Ian McHarg: The Future of Urban Ecology* (Chicago, IL: American Planning Association Planners Press, 2014).

12 Introduction

- 21 To explain McHarg's use of the terms ecology and environment see F. Fraser Darling, "The Unity of Ecology" in *Environmental Essays on the Planet as a Home*, eds. Paul Shepard and Daniel McKinley (Boston, MA: Houghton Mifflin Company, 1963), 207–221. The following passage, which describes both terms, appears in the Darling essay:

Ecology deals with income and expenditures in terms of energy cycles in communities of plants and animals, deriving from sunlight, water, carbon dioxide and the phenomena of photosynthesis by which organic compounds are built. This raw definition is made more interesting by what I would emphasize as the observational study of communities of plants and animals. Here comes the possibility of a more general definition of ecology as the science of organisms in relation to their total environment, and the interrelations of organisms interspecifically and between themselves. The total environment includes all manner of physical factors such as climate, physiography, and soil, the stillness or movement of water and the salts borne in solution. The interrelations of organisms and environment are in some measure reciprocal in influence. . . But there is one outstanding difference between man and the rest of creation ecologically. He is a political animal and in our day and age it is quite unreal to ignore the political nature of man as an ecological factor.

McHarg and Darling were acquainted. A paper by McHarg appeared in a volume edited by Darling. Darling appeared in McHarg's seminar course "Man and Environment." See Ian L. McHarg, "Ecological Determinism" in *Future Environments of North America*, eds. F. Frazer Darling and John P. Milton (Garden City, NY: The Natural History Press), 526–538. See also, The Architectural Archives the University of Pennsylvania, Ian L. McHarg Collection, "Dr. F. Fraser Darling, Ecologist," 109.II.E.2.16.

- 22 See Donna Haraway, "A Manifesto for Cyborgs: Science, Technology and Social Feminism in the 1980s" in *Simians, Cyborgs and Women: The Reinvention of Nature*, ed. E. Donna Haraway (New York: Routledge, 1991), 74, 149–181.

Part 1

Early affinities



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1 Experience and education

Whether the wish is father to the thought, or whether sentiment and idea have a common genesis, there equally arises the question – Whence comes the sentiment?

Herbert Spencer, *First Principles*¹

Glasgow

Ian Lennox McHarg was born in 1920 and spent his childhood in Radnor Park, a suburban town fourteen miles from the center of Glasgow, Scotland in a house that overlooked the shipyards of the River Clyde. Behind his home, past the Great Western Highway, the hills of the Scottish Highlands loomed.² He was the eldest of four children in a family that aspired to bourgeois gentility. His father, John Lennox McHarg, contemplated a career in the Presbyterian ministry but due to the Great Depression instead weathered a number of unanticipated economic setbacks. To support his family, he worked variously as a manager for the Diesel and Edison Lamp Company, a part-time reporter for the Associated Scottish Newspapers, and a traveling salesman for a business machine and equipment company. McHarg would credit his own exuberant (and by some accounts manic) energy and interest in religion to him. His mother, Edith Bain McHarg, was a talented dress-designer and seamstress. McHarg would credit his artistic ability and love of the outdoors and gardening to her.³

In the 1920s and 1930s, the decades of McHarg's youth, the economy of the industrial port city of Glasgow centered on steel manufacturing, ship-building, and transatlantic trade. In *Design with Nature*, a photograph of a bleak courtyard surrounded by tenement housing represented the character of the city. A corresponding photograph of picturesque stone buildings surrounded by mountains represented the character of the countryside. As mentioned previously, he adventurously explored both terrains (Figure 1.1).

By his own admission, McHarg was a talented student. He scored in the top percentiles of the high school qualifying exam, entered the "A stream" curriculum, studied two foreign languages (one old and one new), and began to prepare for university and a career in the ministry, law, medicine, or civil

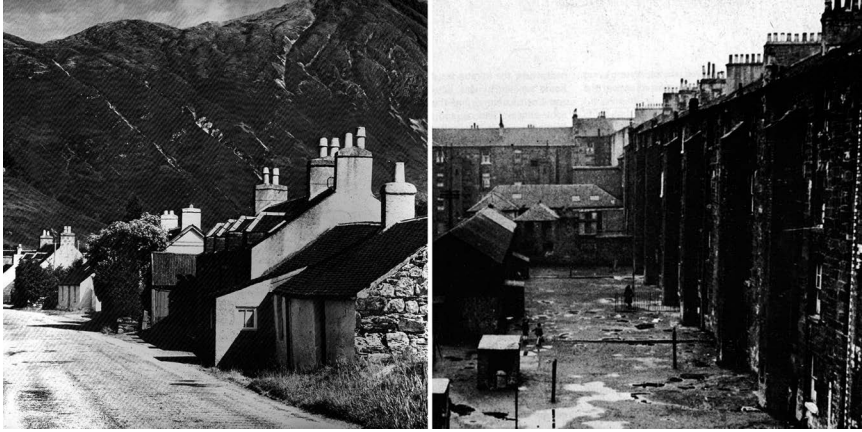


Figure 1.1 Photographs of Glasgow and the Highlands from *Design with Nature*.
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service. He spent Saturday mornings drawing and painting at the Glasgow Art Gallery and won many awards for his efforts. He visited the library on the way to the gallery. His path in life seemed obvious, and yet he was restless and felt confined by the conventions of middle-class life. He longed for adventure.

At age sixteen, he resolved to quit school, become a cadet officer for the Cunard Line, traverse the globe, and experience the excitement of faraway places. His father discovered his intent and soon put a stop to his plan.

Following this aborted attempt at independence, the young rebel acquiesced to his father's demand that he complete his education. A careers counsellor noted his artistic talent and love of the outdoors and suggested a five-year apprenticeship in landscape architecture that he could complete under the auspices of Donald A. Wintersgill, a Beaux Arts trained architect who specialized in the design of country estates and rock gardens. When they first met, Wintersgill impressed his protégé with a climate-sensitive reading of the landscape that included a grand scheme for a forest, lake, and small village nestled in the bracken-covered mountains of the Scottish Highlands. Wintersgill's dramatic style of dress – an Inverness cape, deer-stalker hat, bow tie, and spats – and dramatic style of presentation – a 180-degree sweep of his walking stick as he described his ideas – provided additional enticement. McHarg soon learned to draft design plans, produce watercolor renderings, calculate cost estimates, coordinate the dispatch of plants from nurseries, and supervise construction. This experienced culminated in the landscape design of the Empire Exhibition held in Glasgow, Scotland in 1938.⁴ To appease his father, he attended night courses at the West of Scotland Agricultural College and the Glasgow College of Art. Perhaps best of all, Wintersgill taught his apprentice how to drive a car.