

SUSTAINABILITY & HISTORIC PRESERVATION

Toward a Holistic View



edited by RICHARD LONGSTRETH

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PREFACE

Richard Longstreth

This book is the outgrowth of the Sixth National Forum on Historic Preservation Practice, “A Critical Look at Sustainability and Historic Preservation,” held at Goucher College in Towson, Maryland, on March 19-21, 2009. The basic objective of these conferences is to provide an all-too-rare opportunity for people working in the preservation field to hear and discuss current issues that are complex and often the source of disagreement or misunderstanding.¹ The exchanges are conducted on “neutral ground,” as it were, in the halls of the academy rather than under the aegis of a preservation organization so that all participants may feel unencumbered in expressing their views.

A number of academic institutions offering graduate instruction in the historic preservation field serve as co-sponsors, including Boston University, Columbia University, George Washington University, Goucher College, the University of Cincinnati, the University of Delaware, the University of Florida, the University of Kentucky, the University of Maryland, the University of Minnesota, the University of Oregon, and the University of Southern California. Equally important for the sixth forum was co-sponsorship by the American Institute of Architects Historic Resources Committee and the National Institute of Building Sciences. National Park Service personnel from the Hampton National Historic Site made special contributions to the conference. Goucher College provided an ideal setting and admirable support through the offices of Megan Cornett, Noreen Mack, and Craig Henderson.

The papers presented were chosen from a large number of abstracts sent in response to a widely distributed call. The review committee consisted of David Ames, Kenneth Breisch, Claire Dempsey, Robert Mack, Hugh Miller, de Teel Patterson Tiller, Jeffrey Tilman, Richard Wagner, and myself. The selection process was based solely on the merits of the proposals received rather than being shaped in part by a concern for comprehensiveness or for attaining a balanced program in terms of subject matter, viewpoint, speaker background, or geographic areas covered. The committee also reviewed an initial draft of the papers. The proceedings were printed as David Ames, ed., "A Critical Look at Sustainability and Historic Preservation," 2009. Out of the twelve papers presented, seven were developed further for this anthology. My concluding remarks at the conference have likewise been recast as the final chapter. Richard Wagner has prepared an introductory chapter expressly for this volume.

I am grateful to David Ames and Richard Wagner for their overall coordination of this project, which has made my job easier in innumerable ways. Special thanks go to the authors for producing insightful work and for responding to my editorial queries and comments. Each chapter has been prepared so that it may stand on its own, but I have sought to minimize redundancies and otherwise structure the material so that it contributes to a larger, coherent whole.

This book makes no attempt at being comprehensive in scope. Quite to the contrary, its contents are but a small sampling of what could be many more contributions to a vast and diverse subject. But the chapters do suggest the wide spectrum of topics that relate historic preservation and sustainability. The authors' range of professional expertise, concerns, outlooks, and opinions all indicate how rich the exploration of this relationship has become. Collectively, their work makes clear that while concerns of sustainability are changing and will continue to change the nature of preservation, the opposite is also true. The perspective no less than the practices of historic preservation can contribute much to enhance the pursuit of sustainability. The dynamic is one of mutual enhancement. An equally important conclusion that can be drawn from these chapters is the key role played by people – not just those working in a professional capacity, but those in the communities involved. Neither sustainable nor preserved environments can materialize on a substantial scale without broad-based public participation.

The book is organized to present its varied subject matter in a logical sequence. Richard Wagner provides a concise overview of the rise of concern over sustainability within the larger context of the environmental movement, concluding that some preservation practices may have to change if these two spheres are to be effectively integrated. Thomas King explores an equally broad field, drawing from a spectrum of his international projects to underscore not only some of the fundamental differences that exist between Western and non-Western cultural outlooks, but also a conceptual framework that can effectively bridge that divide.

Shary Page Berg addresses the crucial need to preserve landscapes in a holistic way that encompasses both environmental and cultural spheres. Her chapter further emphasizes the vital part community values play in identifying significant places on a local level, just as King does on a global level. While Rebecca Crew's focus is on the natural environment, she demonstrates how closely components of that environment are tied to our cultural and regional perspectives and how telling the interface can be in urban as well as in rural environments. Valencia Libby's case study reveals the enduring value of a private park that has become an urban oasis and how its impact has been extended to the lives of the underprivileged people who now live in the vicinity.

Karana Hattersley-Drayton continues with the theme of relationships between nature and culture by analyzing the significance of the extensive irrigation system that has served both Fresno and surrounding agricultural areas of California's San Joaquin Valley for well over a century. Meisha Hunter also focuses on water as infrastructure, but in an entirely urban framework, suggesting that such systems may serve useful purposes for far longer periods than generally occurs with common practices.

Liz Robinson focuses on an innovative program of retrofitting modest Philadelphia row houses that is both more energy efficient and hospitable for their ongoing use by low-income residents, demonstrating in the process how conserving these habitations can be accomplished on a cost-effective basis. My remarks are intended to reiterate some of the issues raised by the other authors, but also to raise additional ones, underscoring the great array of landscapes than can and should benefit from a holistic integration of sustainability and historic preservation objectives. The ominous threat of global warming can yield surprisingly beneficial results if we address the myriad challenges it presents with respect for the past no less than with concern for the future. ☉

Note

- 1 Issues examined in the five previous meetings were historical significance, integrity, design, cultural landscapes, and authenticity. A refined version of the first conference was published as Michael Tomlan, ed., *Preservation of What, for Whom? A Critical Look at Historical Significance* (Ithaca, N.Y.: National Council for Preservation Education, 1999). Publications developed from the third and fourth conferences are: David Ames and Richard Wagner, eds., *Design & Historic Preservation: The Challenge of Compatibility* (Newark: University of Delaware Press, 2009); and Richard Longstreth, ed., *Cultural Landscapes: Balancing Nature and Heritage in Preservation Practice* (Minneapolis: University of Minnesota Press, 2008). Several of the papers presented at the fifth conference were published in *CRM: The Journal of Heritage Stewardship*: David Lowenthal, "Authenticities Past and Present" and Robert Garland Thomson, "Authenticity and the Post-Conflict Reconstruction of Historic Sites," *CRM* 5 (winter 2009): 6–17 and 64–80, respectively; David G. DeLong, "Changeable Degrees of Authenticity" and Frederic L. Quivik, "Authenticity and the Preservation of Technological Systems," *CRM* 5 (summer 2008): 28–38, respectively; and David N. Fixler, "Material, Idea, and Authenticity in Treatment of the Architecture of the Modern Movement," *CRM* 6 (winter 2009): 8–22.

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FINDING A SEAT AT THE TABLE: PRESERVATION AND SUSTAINABILITY

Richard Wagner

It is extremely difficult to read anything today on the environment, culture, or economics without encountering some discussion of sustainability. The subject pervades advertisements, entertainment, and popular culture, as well as boardrooms of corporations, centers of higher education, and think tanks. To be sustainable is to be in step with society's desire to co-exist with nature. Not to be sustainable is considered old-fashioned and out-of-step. To many, sustainability is the issue of the twenty-first century. It suggests that we have finally realized that we can no longer continue to consume resources at an ever-expanding pace without causing irreparable damage to our planet.

Coinciding with the worldwide economic slowdown of the last two years, the push for sustainable living has intensified manyfold, including the practice of historic preservation. National preservation organizations and federal agencies place sustainability at the top of their agendas at meetings and conferences. Preservation architects have become concerned with making historic buildings sustainable, attempting to marry the Secretary of the Interior's Standards for Rehabilitation with the various green building-rating systems to garner tax credits for their clients. State and local preservation offices are concerned with meeting new standards of energy consumption and the rehabilitation of historic properties developed for their own jurisdictions.

Historic preservation, particularly in the United States, is a relative newcomer to sustainability. On the other hand, the conservation movement in this country and abroad has a long tradition of concern for the effect of human activity on the environment. Demographers, environmental scientists, and even economists have examined the effects of growth on natural resources for well over three hundred years. In the eighteenth century, the Reverend Thomas Malthus was concerned that the population growth fueled by the beginnings of the Industrial Revolution would outstrip humanity's ability to feed itself. In fact as long ago as ancient Rome, writers speculated on the ability of the planet to support the growing population: "We have become a burden to our planet. Resources are scarce and soon nature will no longer be able to satisfy our needs."¹

Origins of the Modern Sustainability Movement

Many trace the birth of the sustainability movement to 2004 when Al Gore presented his slide show on global warming at the premier of Roland Emmerich's film, *The Day After Tomorrow*, which depicted a new ice age caused by the effects of global warming. Gore, a former senator and vice president, had long been interested in environmental issues. Emmerich's film, which grossed over one-half billion dollars worldwide, gave popular voice to that concern. Within two years, Gore had produced his own, more serious film, *An Inconvenient Truth*, which engendered enormous interest throughout the world in climate change and its effects on our environment.

While these two films can be seen as raising the awareness of the general population on global environmental issues, scholars and diplomats often trace the current interest in sustainability to the Kyoto Protocols. Named for the 1997 host city of the United Nations Framework Convention on Climate Change, the objectives of the Protocols was to develop binding agreements to reduce greenhouse gases by industrialized countries, while allowing non-industrial countries to increase emissions, and thus be able to grow economically. Thus the Protocols explicitly recognized the link between economic growth and increased consumption of energy resources. To balance global growth between the industrialized and emerging countries, the Protocols popularized the concept of carbon cap-and-trade, which attempts to establish an economic value for a "carbon credit."² The goal is to use market forces to eventually drive commercial enterprises toward sustainable practices.

In effect, a carbon credit market attempts to create a framework to equate emissions to a monetary value that is subject to supply-and-demand,

potentially creating a market far larger than the world's stock exchanges or futures markets. As William Nordhaus has pointed out, the carbon credit market will become effective when the price of a carbon credit is high enough to alter economic behavior.³ He suggested that if the price of carbon credits was high enough to attract significant trading, it would achieve a number of goals. First, it would provide consumers with knowledge about what goods and services are high in carbon content, which would cost more than those with low carbon footprints. Second, a high carbon cost for goods and services would provide producers with incentives to move from sources of energy high in carbon, such as coal or oil, to less expensive ones, such as wind or nuclear power. Third, the higher the price of a carbon credit, the more economic stimulus this would provide to create lower carbon products and processes. Finally, Nordhaus suggests that a carbon price of \$30 per metric ton would be necessary to jump-start the carbon credit markets, which in turn would fuel new technological and economic expansion.

An alternative to trading in carbon credits, with its reliance on market forces and its susceptibility to fluctuations in price (favored by the Kyoto Protocols) is a tax on the consumption of carbon.⁴ A carbon tax is one on a transaction that is considered by society to have a negative externality; that is, a transaction that produces a negative indirect effect.⁵ Thus, a tax on releasing carbon dioxide into the atmosphere is similar to "sin tax" on tobacco and alcohol imposed in part to deter consumption of these products by citizens. Arthur Pigou, an early twentieth-century British economist, suggested that taxing goods associated with a negative externality is the best method of determining their true cost to society.⁶ He even lent his name to a tax that attempts to include negative externalities in the price of goods—a Pegovian tax. Many economists, including Paul Volker, who recently emerged from retirement to advise the Obama administration on the economy, agree that imposing a Pegovian tax on large carbon producers such as oil and coal companies might be better than waiting for the free market to drive up prices as Nordhaus advocates. To date, a number of Scandinavian countries have implemented carbon taxation with mixed results on the effect on carbon footprints. In 1993, Bill Clinton proposed a national BTU tax be implemented in the United States.⁷ Backed by Vice President Al Gore, this proposal was thought to contribute to the Democrats losing seats in both the House and Senate during the following year's by-election.

The birth of the sustainability movement also has its roots in the so-called oil crisis of the 1970s. In early October 1973, Egypt and Syria launched coordinated attacks on Israel on Yom Kippur, the holiest day of

the Jewish year. In mid-October, in response to aid provided Israel by the United States and Western Europe, the Organization of Petroleum Exporting Countries (OPEC) voted to cut production, triggering oil and gas shortages in many countries. That measure, in turn, gave rise to a number of ideas and programs to cut energy consumption, including the Emergency Highway Energy Conservation Act (1974), which reduced maximum speeds on federal or federally funded highways to 55 mph (1974), Corporate Average Fuel Economy (CAFE) Standards for automobiles (1975), and the Energy Policy and Conservation Act (1975), which set the first energy consumption standards for appliances and led to formation of the U.S. Department of Energy (1977).

In the same year as the Yom Kippur War, a well respected but little known British economist published *Small Is Beautiful: Economics As If People Mattered*. In it, Ernst Fredrich (E. F.) Schumacher, the recently retired chief economic advisor to the U.K. National Coal Board, argued that modern economic growth was ultimately unsustainable since it treated natural resources as income rather than capital.⁸ He made economic arguments supporting a number of popular movements of the time, including the back-to-the-earth movement of the late 1960s, and transferring technologies from the first to the third world, as the industrial west and undeveloped countries were then known. He also attacked the notion that big was better, substituting the concept that cottage industries were the best way to ensure our long-term future.

The year before *Small Is Beautiful* and the Yom Kippur War, the Club of Rome published *The Limits to Growth*, which warned of the effects of unrestrained growth on the earth's resources.⁹ Using a relatively simply model to examine the interaction between world population growth, increased industrialization and pollution, food production, and resource depletion, the book echoed the predictions of Malthus almost 200 years previously.¹⁰ The authors of *The Limits to Growth* admitted that the inputs to the model, particularly the nature and extent of global natural resources, were only estimates. Nonetheless, the outcomes were presented as a mathematical model of the effects of the world's growing populations on natural resources. However, because of the inexact nature of the inputs, a number of thoughtful criticisms of the model were published in scholarly journals and the popular press. Most of the critiques complained that the model included exponential growth in world population and pollution, but did not account for technological innovation and the discovery of new resources to accommodate that growth.

Prior to the 1970s, one can cite a number of key organizations and publications from the post-World War II period that contributed to the foundation of today's sustainable movement, including the Friends of the Earth (1970), the Environmental Law Institute (1969), *Silent Spring* (1962), and the Nature Conservancy (1951). Friends of the Earth, founded at the height of the hippie era, is a grassroots organization operating in over seventy-five countries "defending the environment and championing a healthier and just world, which pulls no punches, and speak sometimes uncomfortable truths to power."¹¹ Over the years, the Friends have been an effective, if sometimes strident, voice for environmental policies. In contrast, the Environmental Law Institute, founded just a year earlier, is a scholarly research and educational organization devoted to improving environmental laws and policies worldwide. Known primarily for its flagship publication, *Environmental Law Reporter*, the Institute publishes a wide range of papers, books, and articles on environmental policy and sustainability.

Rachel Carson, who is often recognized as the godmother of the environmental-sustainability movement, was born in 1907 and grew up on a farm outside of Pittsburgh. In 1935, having earned an undergraduate degree in English from the Pennsylvania College for Women and a graduate degree in zoology from Johns Hopkins University, Carson went to work for the U.S. Bureau of Fisheries, where she stayed until after the publication of her second book in 1950, *The Sea Around Us*. Its popular and critical success allowed Carson to support herself as an author.¹² Twelve years later, her seminal work, *Silent Spring*, was published, quickly reaching the top of the *New York Times* best-seller list as well as becoming a Book-of-the-Month Club selection. In it, Carson documented the detrimental effects of pesticides on the environment, particularly birds. She demonstrated that concentrations of DDT, then widely used to control mosquitoes, caused bird eggshells to thin, thus breaking easily before chicks could be hatched. As one might suspect, Carson and her book were widely attacked by companies with vested interest in pesticides, but within a few years, the evidence presented by her caused many of these companies to rethink their products, developing new ones that were effective as well as neutral to the environment.

Between the beginning of the twentieth century and the end of World War II, the world's attention was largely consumed with national and economic survival, leaving little time for concern with sustainability or the environment. During the last decade of the nineteenth century, however, two key organizations were founded that may be considered the foundation of the modern sustainability movement—the National Trust for Places of

Historic Interest and Natural Beauty in Great Britain, and the Sierra Club in the United States. The British National Trust was founded in 1895 by Octavia Hill, Robert Hunter, and Canon Hardwicke Rawnsley to preserve “for the benefit of the Nation of lands and tenements [including buildings] of beauty or historic interest and, as regards lands, for the preservation of their natural aspect, features and animal and plant life”.¹³ Hill, a protégé of John Ruskin, was a social reformer who was concerned with improving tenement housing in English cities as well as the preservation of the countryside. Hunter was an attorney who became interested in the mid-nineteenth century in saving common lands from enclosures.¹⁴ Hardwicke was a clergyman from the Lake District concerned with its rapid development at the end of the nineteenth century for vacation houses by the newly affluent middle class, who could rapidly travel to a residential retreat on the country’s ever-expanding railroad system. Unlike its much younger American counterpart, the British National Trust has always been interested in the preservation and conservation of the countryside as well as buildings.¹⁵ Today, it owes over 1.5 percent of the land area of England, Wales, and Northern Ireland, has 3.5 million members, and an operating budget of nearly \$450 million.¹⁶ In common with most organizations concerned with conservation and preservation, the British National Trust joined the sustainability movement more than a decade ago with a broad range of initiatives ranging from sustainable historic buildings and towns, rural sustainability, sustainable food production, and education on sustainability in grade schools, to name but a few programs.

The Sierra Club was founded in San Francisco by John Muir, then at the height of his authority as America’s first great conservationist. Its mission is “To explore, enjoy, and protect the wild places of the earth; To practice and promote the responsible use of the earth’s ecosystems and resources; To educate and enlist humanity to protect and restore the quality of the natural and human environment; and to use all lawful means to carry out these objectives.”¹⁷ Originally focused on bringing western wilderness under the protection of the United States government, the Sierra Club slowly grew from a few hundred members to 15,000 in 1950. As the nation’s awareness of environmental issues developed in the 1960s, the Sierra Club published *The Population Bomb* by Paul Ehrlich, another in a growing number of publications warning of the planet’s limited resources to support its ever-expanding population. By the 1990s, the organization had become deeply involved in environmental issues such as controlling greenhouse emissions, developing green energy sources, and green transportation, as well as moving into new areas such as in safeguarding centers of human habitation from the coming effects of climate change.¹⁸

Defining Sustainability: The Brundtland Commission and Smart Growth

Sustainability means different things to different people. Some see it as a back-to-the-earth movement with cottage industries replacing multinational corporations. Others see it as an effort to produce green buildings and cities, cutting energy consumption to achieve the holy grail of a zero carbon footprint. Still others see sustainability as preserving rapidly vanishing cultural diversity of the world, stemming the tide of globalization on societies. While sustainability may entail these spheres and others as well, many authorities define sustainability using the United Nations *Report of the World Commission on Environment and Development: Our Common Future* (1987), generally referred to as the Brundtland Report after its chair Gro Harlem Brundtland. The commission was formed in 1983 to address growing global concerns about the effects of deterioration of the environment and consumption of natural resources on economic and social activities. The report examined a broad range of topics, from population growth and sustainable development to energy consumption, food production, and international economic relationships. Unlike many previous U.N. commissions, which tended to work *in camera*, the Brundtland Commission held a series of public hearings around the world to gather expert testimony from a broad spectrum of economists, scientists, politicians, and environmentalists.

In its second chapter, the report defined sustainable development as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”¹⁹ The report went on to state that “contained within [this definition] are two key concepts: 1) The concept of ‘needs’, in particular the needs of the world’s poor to which overriding priority should be given; and 2) The idea that limitations imposed by state and technology on the environment’s ability to meet present and future needs.” Implicit in this definition is the concept of limiting growth, and thus consumption, today so that future generations will have raw materials and energy sources to utilize for development. In turn, limiting growth requires that expanding economic activity, which has been the foundation of development since Adam Smith first inquired into the *Wealth of Nations*, be slowed or even halted.²⁰

The Brundtland Commission’s chapter on sustainability broadly discussed the need to balance population growth with technological innovation, reorienting technology to be more energy efficient, as well as not produce negative externalities. It called for the development of environmental risk analysis for all present and future technologies to determine their effect on

natural resources and human activity, as well as merging of environmental and economic concerns in public and private decision-making. The chapter concluded with a yet unattainable notion of worldwide cooperation in economic and social matters for the benefit of all, particularly underdeveloped nations, and the environment. The Brundtland Commission also gave the sustainability movement its own version of the trinity, the Diagram of Sustainability (fig 1.1).²¹

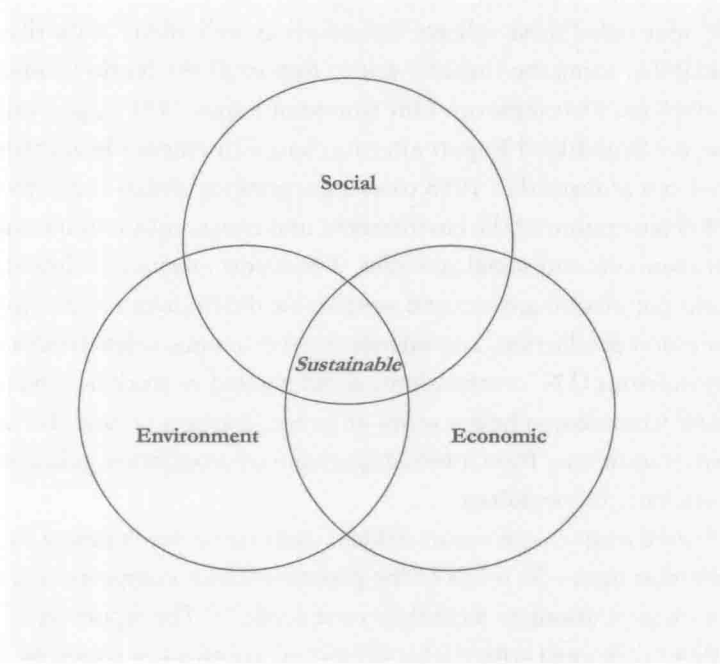


FIGURE 1.1 Diagram of Sustainability, drawn by Lea Stedt, 2010.

Not much official notice was taken of the Brundtland Report in the United States at the time of its release, perhaps because of its emphasis on transfer of wealth from richer to poorer nations. However, the seeds of a more balanced approach to development in America were planted in the 1990s with the Smart Growth movement. Embraced by many local and regional governments, the concept of concentrating population growth in existing metropolitan area has been incorporated into many state-mandated comprehensive plans. Smart Growth is based in the various conservation and environmental movements developed in America and abroad during the post-World War II period. With the rise of New Urbanism in the 1990s, with its emphasis on compact centers of human habitation based on traditional