
AN URBANIST'S PERSPECTIVE ON THE LINKS BETWEEN HISTORIC PRESERVATION AND SUSTAINABILITY

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Abstract:

This paper covers four major topics: (1) the definition of sustainability and the substantive content of that concept; (2) factors

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demonstrating the unsustainability of the current nature and level of human activities on earth; (3) the links between sustainability and the conservation of urban settlements and monuments; and (4) the broad strategies for making metropolitan development in the United States more sustainable.

This analysis focuses on the challenges presented to human society by reason of the fact that it has embarked on a course that will bring it into collision with the limits of the capacity of our natural systems to sustain human culture. It explores ways in which those involved in historical preservation and cultural conservation can work to address some of the contributing causes to the unsustainability of metropolitan areas across the world.

I. Sustainability: Definition and Substantive Content

In the United States, the roots of our concern about the impacts that human civilization is having on the natural environment extend far back into American history. The Progressive Movement of the late 19th and early 20th centuries, the muckrakers (crusading writers who sought to expose corporate and governmental malfeasance), the Regional Planning Association of America, the planners and lawyers who began the city planning movement in the U.S. in the first decade of the last century, the Garden City Movement, the Tennessee Valley Authority and the other environmental initiatives of the New Deal - all stand as antecedents to the environmental movement that burst on the American scene in the first few months of 1970 - with the signing of the National Environmental Policy Act on January 1, and the first Earth Day on April 22. (Scott, 1969)

But the recognition of the serious and growing impacts of man's activities on the environment and the development of the concept of sustainability as we now know it first became widespread in the 1970s. *The Club of Rome's The Limits of Growth* (Meadows, et al. 1972) sounded a widely heard warning. The United Nations instituted its Environment Program in 1972, and the Cocoyoc Declaration in 1974 recognized that humanity was at a critical turning point. The Declaration stated: "Environmental degradation and the rising pressure on resources raise the question whether the 'outer limits' of the

planet's physical integrity may not be at risk." (cited in Friedman, J., 1992:2) Satisfying the basic needs of the world's poor was proclaimed as more important than simple growth maximization.

The United Nations General Assembly established the World Commission on Environment and Development (WCED) in 1983. Its report, *Our Common Future*, articulated the widely quoted definition of sustainability: "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs." (W. C. E. D. 1987-8)

The United Nations Conference on Environment and Development (the Earth Summit) in Rio de Janeiro in 1992 was a particularly important and influential international conference on the environment. It adopted two major documents. First, the Rio Declaration recognized that social equity must coexist with economic development and called on the polluting nations to contribute to cleaning up the environment. President George W. Bush has refused to implement the Kyoto Accord, which grew out of the Rio Declaration, much to the consternation of the leaders of the European Community. In fact, in February, the European Community committed itself to a major reduction in the emission of green house gases by 2020. (http://europa.eu/pol/env/index_en.htm). The second major document produced by the Earth Summit, Agenda 21, set out a full set of goals and over 120 strategies for achieving them. Again, it recognized that, "[H]umanity stands at a defining moment in its history. We are confronted with a perpetuation of disparities between and within nations, a worsening of poverty, hunger, ill health and illiteracy, and continuing deterioration of the ecosystems on which we depend for our well-being." (Sitarz, 1993:28) The 1996 Habitat II Conference in Istanbul continued that line of thinking, and confirmed that social equity and human resource development are essential components of a truly sustainable development process.

We have come to understand that we must find ways to promote technological innovation, social learning, and social change that at the same time increase social equity. We must bring our patterns of production, reproduction, consumption, and disposal into concert with the capacity of the ecological system to perform life-giving

functions over the long run. We must find ways of using renewable raw materials to generate energy and produce goods, of recycling more successfully, and of absorbing the wastes we produce without jeopardizing fundamental natural balances. This is what we mean by sustainable development.

As urban conservationists, our field of concern can be conceived of as the intersection of four areas:

1. the culture and social institutions through which our values are transmitted from one generation to the next,
2. the economic and technological sectors that shape the production and distribution of goods and services, especially as they affect the built environment,
3. the legal institutions and planning procedures that give teeth to societal norms,
4. the built environment that embodies the social and aesthetic traditions of the past.

Aldo Leopold observed forty years ago, in *A Sand County Almanac* (1966), with respect to natural systems: "The economy of nature is a fountain of energy flowing through a circuit of soils, plants, and animals." (Leopold, 1966) We can paraphrase Leopold thus: The economy of man is a flow of energy and materials through the social, cultural, religious, economic, and legal institutions that each of our societies has constructed. Clearly, the link between the two is the energy flow. If we consume energy at an unsustainable rate, sooner or later the economy of man will collapse.

The historical preservation and cultural conservation movements can be seen as anti-entropic efforts that seek to maintain variety and difference in both the built environment of buildings and places, and the cultural environment of values as they are reflected in distinct societies and neighborhoods. By analogy to natural systems, the movements can be viewed as maintaining cultural diversity, in much the same way as environmentalists seek to maintain biological diversity by preserving vibrant ecosystems. Each monument, each landmark, each site, each urban neighborhood, each city center, each natural setting, is a special creation that may be worthy of conservation. Conservationists seek to resist the homogenization of style

and culture that results from the overpowering technology of the Internet, mass communications, television, and other mass media, the cell phone, “big box” commercialism, out-sourcing, and the globalization of so many aspects of our 21st century lives.

Thomas L. Friedman has summarized many of these forces that have, in his term, “flattened the world.” (Friedman, T. L., *The World Is Flat*, 2005 and 2006) The phrase is built on the idea that these fundamental changes in the modes of production and exchange of information have leveled the playing field between the First World and the Third World. Friedman identified ten major developments that have combined to create profound changes:

1. The fall of the Berlin Wall in November 1989 and the subsequent collapse of the Soviet Empire. (Friedman, T.L., 2006, p. 50) Instead of being divided between two competing systems that were engaged in a continuing Cold War, the economies of the world began to move toward being parts of a seamless whole and the balance of power shifted ‘toward those advocating democratic, consensual, free-market-oriented governance, and away from those advocating authoritarian rule with centrally planned economies.’ There was only one system left and a major barrier dividing different parts of the world had fallen. (Friedman, T.L. 2005, p. 51)

2. The emergence of the internet, the creation of the World Wide Web, and the release of the web browser, Netscape, in August 1995. (Friedman, T.L., 2006. p. 59) The Internet made it possible to send digital data anywhere and to retrieve documents stored on Internet sites and display them on computer monitors. Netscape made it possible to surf the Internet, using a newly developed network of fiber-optic cables, to find and send data, documents, images, books, music, photographs throughout the world from the financial centers of the world to the smallest village. Later, Microsoft’s Internet Explorer would supplant Netscape as the browser of choice because of Microsoft’s dominance in the software field.

3. The development of work flow software. (Friedman, T.L., 2006. p. 76) People now wanted do more than simply exchange documents. They wanted to “shape, design, create, sell, and buy

things, keep track of inventories," and do things such as read X-rays and prepare income tax returns a half a world away. Work flow software connects all the different software applications so that people in different countries can work together instantaneously. All systems had to be mutually interoperable. The development of a new data description language, XML, and of AJAX, a new way of coding, made this possible. "They enabled digitized data, words, music, and photos to be exchanged between diverse software programs so that they could be shaped, designed, manipulated, edited, reedited, stored, published, and transported" throughout the world. (Friedman, T.L., 2006, pp. 76-91)

4. The growth of the practice of up-loading using community-developed software to allow open-sourcing and the creation of self-organizing collaborative communities. (Friedman, T.L., 2006, p. 93) The core idea underlying open sourcing is that software should be available to every person who could contribute improvements and expansions to it, rather than have the programs frozen by copyright or patent protection. The explosion of web "Blogs" (web logs) is testimony to the idea of open sourcing. They have become an open source newsroom, a personal virtual soapbox, in Friedman's phrases, and have already had impacts on elections, judicial appointments, and the current discussion on the causes of climate change. Wikipedia is an open source encyclopedia to which any one can contribute an entry, subject to only minimal review by the managers of the project. Open sourcing reflects the insight that, in the words of one wag, "Software is not gold: it's lettuce." (Friedman, T.L. 2006, pp. 93-126)

5. The explosion of the practice of outsourcing: of rationalizing of production processes, dividing them into logical elements, and distributing those that can be more economically performed elsewhere to other firms. (Friedman, T.L., 2006, p. 126). Whether the area of activity involves technical assistance with computer problems, straightening out credit card issues, reading of X-rays and CAT scans, the transcription of doctors' notes on their patients, or the production of different components of a computer or a High Definition television, it is now possible to locate these activities in

the country with the lowest labor cost because they can all be linked through the Internet platform.

6. The growth in offshoring: The movement of production entire facilities to countries with low labor costs. (Friedman, T.L., 2006, p. 136). The economies of the United States, European countries, and, lately, even, Japan, have "hollowed out" as entire industries have moved to Latin America, East and South Asia and Eastern Europe.

7. The development of supply-chaining: the integration of suppliers, retailers, and consumers. (Friedman, T.L., 2006, p. 152). Best exemplified by Wal-Mart's revolutionary system for joining manufacturers and wholesalers to its integrated distribution, inventory managing, retail systems, and finally, to its customers, supply chaining entails the standardization of processes across the full range of the manufacture and sale of goods so as to improve the efficiency of the entire operation.

8. The use of insourcing to reduce inefficiencies in the system for producing, selling, and servicing of goods. (Friedman, T.L., 2006, p. 167). UPS has expended its services to include analysis of the transportation needs of its customers and the inclusion of service centers, such as Hewlett-Packard's printer-repair facilities, within its distribution network so as to reduce the time and expense of transportation of inoperable printers. It may mean adopting identical labeling and product tracking systems, often making them available to customers.

9. The growth of the possibility of "in-forming:" the revolutionary explosion in the availability of knowledge exemplified by Google and other open access information sites. (Friedman, T.L., 2006, p. 176) Google (a play on the word "googol," the name of the number 1 followed by 100 zeros) makes available to the individual an enormous amount of information, knowledge, and entertainment in over a hundred languages. It, with the Internet, empowers each of us to be a researcher, a writer, an editor, and an informed publisher in ways that were hardly imaginable ten years ago. As Friedman points out, in-forming opens up rich possibilities of collaboration, political organization, intellectual and cultural exchange, and transnational exchange.

10. **The availability of what Friedman calls “The Steroids.”** (Friedman, T.L., 2006, p. 186). In the last ten years have seen the proliferation of digital, mobile, personal, and virtual devices such as cell phones, small laptop computers, PDAs (personal digital assistants), digital cameras, voice-over-internet protocols, and wireless computer connections that create wireless connectivity. Now they are being integrated into smoothly interchangeable systems with steadily increasing capacity.

The convergence of these technological developments, the working out of news ways of doing business that take advantage of the opportunities they provide, the falling away of many of the barriers between democratic and socialist states, and the emergence of millions of educated, linguistically competent people in China, India, and Eastern Europe - all these developments have combined to create a new world of horizontal connectedness. As the walls of separation between cultures fall and more and more people live in an interconnected world, cultures themselves are at risk of becoming homogenized. The challenge for historic preservationists of maintaining cultural diversity becomes greater.

II. The Unsustainability of Human Activities

Over the past two centuries, human activities have had an increasingly disruptive impact on the natural ecosystems of every continent. They are throwing a worldwide ecosystem that was once more or less in rough equilibrium into disequilibrium.

The rapid growth in human population from less than 1 billion in 1800 to 6.6 billion in 2007 is one of the causes of this disequilibrium. Fortunately, the rate of growth of this population has declined in recent years to a little under 80 million per year. Still, this means that we will add another billion people to the world population by the end of 2019.

Technology, whose power and extent are increasing at a rapid rate, enables us to transform the face of the earth, whether it be by clearing major parts of our tropical rain forests for agricultural and other uses, consuming non-renewable resources, discharging large volumes of carbon dioxide, methane, and other “green house gases”

for heating, cement production, transportation and many other purposes. All of these processes contribute to a process of global warming, or polluting the planet's air, water, and soil.

In February 2007, The Intergovernmental Panel on Climate Change released its report, *Climate Change 2007: The Physical Science Basis, a Summary for Policy Makers (IPCC Special Report)*. This document is the Executive Summary of the larger report on the subject, *The Fourth Assessment Report* which will be released later in 2007. The report made a number of factual findings (IPCC Special Report, pp. 2-7):

1. The global concentration of carbon dioxide in the atmosphere has increased 35%, from a pre-industrial level of about 280 ppm to 379 ppm in 2005. This exceeds the highest natural level reached at any time over the last 650,000 years.
2. The primary source of the increased atmospheric concentration of carbon dioxide [is] fossil fuel use, with land use change providing another significant, but smaller, contribution.
3. The global concentration of methane in the atmosphere has increased from a pre-industrial level of about 715 ppb to 1774 ppb in 2005.
4. Mean sea level rose about 7 inches in the 20th century.
5. Mountain glaciers, snow cover, and polar ice caps are melting at faster rates than in the historic past.
6. The earth's average temperature has also risen more than 0.7 degrees Celsius (1.5 degrees Fahrenheit) in the last 100 years.

The issue about which there is widespread controversy is one of causation: Are the carbon dioxide levels rising because the earth is getting warmer as a result of receiving more energy from the sun or because of some other astronomical process? Or is the earth getting warmer because man's activities are creating higher levels of the so-called "green house gases?" The Intergovernmental Panel concluded: "Most of the observed increase in globally averaged temperatures since the mid-twentieth century is *very likely* (with a greater than 90% probability) to be the result of the observed increase in anthropogenic greenhouse gas concentrations. . . . Discernible human influences now extend to other aspects of climate, including ocean warming, continental average temperatures, temperature extremes, and wind patterns." (IPCC Special Report, pp. 8-9)

The increased affluence of at least the first world nations and the upper tier of the peoples of other "worlds" is reflected in rapid increases in per capita consumption of natural resources, energy, and human services and products. If developing countries raise their standard of living, they will also gain increased capacity to consume more material goods and energy and, because of their large populations, their impacts on the ecosystem will be even more dramatic.

Mankind's assault on the natural environment is resulting in a mass extinction of species on a par with the five other mass extinctions that have taken place over the last half billion years, such as the one 65 million years ago caused by the impact of an asteroid that ended the dinosaur age. In fact, Professor E. O. Wilson estimated that if we do not modify our ways drastically, as many as one fifth of the world's species may become extinct by 2025, as a result of anthropogenic causes. (Wilson, 1992)

I have cited these examples to show that, quite clearly, humanity's current course of action, premised on a growing population's pollution of the earth and profligate consumption of non-renewable resources, is not sustainable, and that the current trajectory will lead to a collapse of human society as we now know it, within a few centuries.

But what, you may ask, does all this have to do with historic preservation and sustainability? What are the obligations of historic preservationists? Is not our focus on landmark buildings, historic districts, and historic landscapes? Since there are many causes for our rashly unsustainable course of action, the remedy has many components, some of the most important of which are within the purview of the historic preservation movement. In my view, there are two major areas of appropriate concern. The first addresses the management of the broad processes of development and redevelopment of urban centers in a way that promotes sustainability. The second addresses the specific economically sound and politically feasible programs for maintaining and rehabilitating the built environment that have come down to us from times past.

*III. Sustainable Approaches to the Conservation of the Built Environment:
The Link between Sustainable Development and The Conservation
of Urban Settlements and Monuments*

We are concerned with the conservation of historic neighborhoods and city centers, as well as with individual monuments and sites of unique natural beauty. We wish to maintain cultural diversity in much the same ways as environmentalists aim to protect biological diversity. We seek to conserve and remediate components of the built environment that were constructed decades or centuries ago and which embody the values and aesthetics of times gone by. The medinas of the Arab world, the medieval walled towns of Europe, the frontier settlements of the United States, the mission towns of Mexico and Peru, the plazas of historic Latin American cities with their cathedrals and palaces, even the suburban subdivisions that surround American cities - each is analogous to a species of urban settlement. While we should guard against drawing facile analogies between cultural diversity and biological diversity and against drawing unwarranted conclusions for one field based on findings from the other, the comparison is often instructive.

For example, sites such as the colonial heart of Morelia, in Mexico, New Orleans' French Quarter, Philadelphia's Society Hill, the urban cores of European cities, such as Santiago de Compostela, Grasse, and Rothenburg, and the medinas of North African cities such as Fez and Kairouan, just to mention a few places with which I am familiar, communicate to future generations a special aesthetic, a perception of the built environment, a view of the relationships between man and his environment, and a tangible, materialized expression of long-treasured values. They also embody substantial material resources. They required energy to build and would consume energy were they to be demolished and replaced with contemporary town sections. The same is true of the infrastructure that serves them.

Thus, both because these urban settlements embody the cultural values of different eras (and thus, to pursue the biological analogy, constitute different species of urban places) and because of the raw materials and energy that went into their construction

and maintenance over the years, these historic settlements should be conserved. The same is true of less distinctive urban areas and, for the same reasons, they should also be conserved. It is this embodiment that links urban conservation and sustainable development. (Hawken, 1993) However, because resources are limited, the challenge facing the conservation community is to develop a set of strategies and methods for setting priorities that will permit it to focus its efforts on the conservation of those resources where the benefit/cost ratio is most favorable.

The challenge of maintaining urban resources takes different forms in different societies because the processes of urban development and redevelopment vary so much from place to place. In the United States, for instance, suburban sprawl and downtown decline have been the predominant mode of metropolitan growth. Whole new communities grow up on the periphery of our metropolitan areas, while the inner cores of our cities lose jobs and residents, and their inhabitants are disproportionately poor and members of minority groups. In Latin America, urban development is characterized by the movement of rural families to the oldest parts of the cities and to squatter settlements that are often located near the downtown area. Often the wealthiest families live near the central core of the city. In other parts of the world, such as the Western Europe where national populations are stable or declining, the process of urban development and redevelopment takes still other forms.

To demolish the distinctive neighborhoods that characterize the world's cities and to replace them with uniform twenty-first century settlements is analogous to cutting down a rain forest and replacing it with pasture or monocrop tillage. It reduces cultural diversity and increases entropy.

IV. The Broader Strategy: the U.S.A. Experience

In the United States, at least since World War II, national urban development policy has focused on promoting suburban sprawl, as have current state and local statutes, economic incentives, and, perhaps, consumer preferences. This policy has been exemplified at the federal level by the interstate highway program, mortgage

insurance and guarantees for suburban housing, and federal grants for the construction of suburban water supply, sewerage and sewage treatment systems. At the metropolitan level, it has taken the form of low density suburban and exurban residential zoning ordinances designed to encourage sprawling development at the edges of our metropolitan areas and a virtual abandonment of inner city areas. Local governments have overzoned for industry, underzoned for townhouses, apartments, and mobile homes, restricted large areas to single-family detached housing on lots of one acre or more, and created burdensome and costly subdivision requirements. Their objective is to protect the municipal fisc, by limiting new development to commercial and industrial uses and relatively expensive homes, all of which generate tax revenues that more nearly approach or exceed their allocated share of municipal expenditures. In many cases at least, they also have the effect of excluding low and moderate-income families whom the suburban electorates perceive to be a threat. The policy operates in furtherance of the Norman Rockwellian dream of a young husband and his wife raising their two children in a small house in the suburbs, with the mother busy around the home and the children playing happily in the back yard. But more and more families do not meet this stereotype. With later marriage, fewer children, higher divorce rates, greater longevity, and greater participation of women in the work force, the number of American households composed of a father, a stay-at-home mother, and children has declined to about 25% of the total.

The policy of promoting suburban sprawl produces an unsustainable society. It squanders our precious resources and jeopardizes our nation's ability to compete in the world market place. Low-density, dispersed, residential development destroys a valuable portion of our capital stock of natural resources, such as prime farmland, temperate forests, and areas of ecological significance. Furthermore, automobile-powered suburban sprawl generates traffic congestion and air pollution, and requires inordinate amounts of time to travel to work, school, and shopping centers. Urbanists have come to realize that land use, transportation, and

air and water quality (the “LUTRAQ Connection”) are intimately interrelated. Distributed patterns of residential development generate more automobile travel. The additional automobile use creates greater emissions of nitrogen oxides, sulfur oxides, and particulates, which in turn exacerbate the ground-level ozone problem and acid rain deposition.

In addition, our metropolitan urban development policy raises the cost of public infrastructure - public water, sewage, sewage treatment, and transportation systems - on which the economy is based, in two ways:

1. The centrifugal urban sprawl it spawns requires massive investment in schools, roads, water and sewer systems, sewage treatment plants, and all the other elements of needed infrastructure.
2. The depopulation of our center cities results in abandonment of large areas and an uneconomical underutilization of their vast infrastructure. Many cities have excess water and system capacity. Furthermore, the partially abandoned areas of our older cities lie fallow and the resources that were used to construct them serve no public purpose.

In short, we are doubly wasteful: we raise the real cost of providing new homes, commercial facilities, industries, and public buildings to meet the needs of our families and our businesses, and we underutilize the built stock that we have, instead of finding ways to reuse it. We raise our costs of production and therefore diminish our capacity to compete in the world economy.

In its starkest form, urban sprawl results in an ever-widening ring of land conversion from agricultural, forest, and other open uses to suburban land uses, and the under-utilization or abandonment of the housing and infrastructural facilities –to say nothing of the residents of the communities and the human resources they represent– located at the cores of metropolitan areas. Historic preservation, with its emphasis on the conservation and renewal of historic components of our building stock and infrastructure and on the cultures that support their continuation, can contribute substantially to the reduction of sprawl and the creation of a more sustainable metropolitan development process.

*V. Sustainable Metropolitan Development:
An Alternative to Suburban Sprawl*

A sustainable form of metropolitan development, one that seeks to minimize impacts on natural resources on the edge and maximize returns on investments in infrastructure in the center, would limit centrifugal movement and turn development pressures back to the aging cores of metropolitan areas. It would conserve important natural resources such as farm- and forestland and make use of facilities in existing developed areas.

The many undesirable characteristics of suburban sprawl compel us to formulate and implement a different policy for metropolitan development, one that seeks to benefit from the recent efforts to find ways of moving toward sustainability in our national and state policies for land development and environmental protection. Such a policy would lead to a steady state in which there is a dynamic redirection of urban development pressures from the edges of metropolitan areas inward to the centers, coupled with a continuous renewal of older suburban sectors as they age. We can conceive of a metropolitan area as consisting of three broad types of sub-areas: the older core areas that were largely built before World War II, the post-War suburbs, and the rural-urban fringe. The shadow of obsolescence is moving out from the core and is beginning to affect some of the older, close-in suburbs. In thirty or forty years, it will loom large over late 20th Century suburban subdivisions.

A conservative policy would seek to reshape national and metropolitan urban development policies so as to create a different pattern of metropolitan development that results in essentially stable, sustainable metropolitan areas, characterized by (1) continuous redevelopment of older urban areas as they age, (2) in-fill development in the interstices of existing suburban areas, and (3) where new development is appropriate on the urban fringe, an urban pattern of nodes and corridors that creates denser communities while reducing the consumption of farmland, wooded areas, and other valuable resource land on the periphery.

Such a policy faces a number of substantial hurdles: deteriorated housing stock, poor inner city school systems, neighborhood

crime, relative paucity of rewarding jobs, high real property taxes, "brownfields" in need of unascertained levels of remediation, etc. ("Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off undeveloped open land, and both improves and protects the environment." U.S. Environmental Protection Agency: <http://www.epa.gov/brownfields>). Yet because of the imperative need for more sustainable development, we must find ways to accomplish this objective.

VI. Recommendations of the President's Council on Sustainable Development

In the United States, the President's Council on Sustainable Development was formed in 1993 and charged with recommending a national action strategy for sustainable development. It issued two major reports: *Sustainable Development: A New Consensus for Prosperity, Opportunity, and a Healthy Environment for the Future* (1996), and its final report, *Towards a Sustainable America* (1999). The latter report set out major goals and a number of implementing strategies and sought to create a process for generating consensus concerning the need to reshape a wide range of American policies in order to move toward the goal of sustainable development.

Towards a Sustainable America covers several major areas ranging from climate change and environmental management to international issues. The one most relevant for my purposes here concerns metropolitan and rural strategies for sustainable communities. It, in turn, identified five strategic areas of sustainable community development:

1. Green infrastructure: the "network of open space, air sheds, watersheds, woodlands, wildlife habitat, parks, and other natural areas that provides vital services that sustain life and enrich the quality of life."
2. Land use and development, and the desirability of pursuing "smart growth" policies: the congeries of policies that minimizes "urban sprawl, conserves open space, reverses disinvestment in existing communities, respects nature's carrying capacity, increases social interaction, and provides protection from natural hazards."

3. Community revitalization and reinvestment: a natural complement to “smart growth,” it promotes the “use of local economic, ecological, and social resources and assets, such as undercounted purchasing power, vacant housing stock, transportation access, vacant and underutilized land, and biodiversity.
4. Rural enterprise and community development: also a complement to “smart growth,” this embraces contemporary strategies such as “community-supported agriculture, organic farming, conservation tillage, forest conservation, eco-tourism, and other sustainable enterprises.”
5. Materials reuse and resource efficiency: “strategies that conserve resources and minimize waste by retaining, recycling, reusing, and re-manufacturing materials. It also includes “deconstruction,” the process of systematic dismantling of buildings and the salvage of construction materials, and “eco-industrial” parks, such as the one in Cape Charles, Virginia, where the waste products of one manufacturer may be used as the raw materials of for another. (President’s Council on Sustainable Development, 1999).

Towards a Sustainable America recognized the need to conserve the existing historic stock of buildings and community facilities, to refurbish existing infrastructure, to internalize within productive entities the applicable real and environmental costs of doing business in our cities, to promote the expanded use of market-based incentives as contrasted to continuing heavy reliance on “command and control” strategies, to explore the use of innovative tax incentives to promote urban conservation and revitalization, and to strengthen community participation through development corporations and other local neighborhood leadership groups. The report also recognized, as have many other thoughtful analysts of “smart growth” programs, that regional institutions and partnerships should play an important role in the process of growth management because of the larger-than-local nature of most urban development processes.

VII. Conclusions on the Links between Historic Preservation and the Management of Urban Growth

In the United States and other countries around the world, preservation planners must work generally to slow urban sprawl and to encourage the rehabilitation of older urban areas. They must focus their efforts specifically on using traditional conservation techniques

such as historic district and historic landmark ordinances, tax incentives, transferable development rights, and flexible zoning. They should also seek to develop innovative measures, such as those that rely more on market-based incentives than on command-and-control techniques. Such actions will maintain cultural diversity, as well as the traditional built environment, an accomplishment analogous to maintaining bio-diversity by preventing the destruction of neighborhoods and buildings that embody the values of different times.

Author Biography

John C. Keene received his B.A. from Yale University. After serving in the U.S. Navy for three years, he earned his J.D. from Harvard Law School. He practiced law in Philadelphia with the firm of Pepper, Hamilton and Scheetz for five years, and then attended the University of Pennsylvania where he earned an M.C.P. in 1966. Since then, he has been on the faculty of the Department of City and Regional Planning, where he is now Professor Emeritus.

Professor Keene has specialized in the legal aspects of historic preservation, urban planning, and growth management, and environmental law and policy. He teaches courses in the Law of Planning and Urban Development, Environmental Law, Brownfield Remediation, and Urban Growth Management. He has been author and senior editor for two major national studies of Farmland Protection and two analyses of growth management techniques in New Jersey and Pennsylvania, and a number of law review articles on legal issues relevant to historic preservation, growth management, and environmental protection.

As partner in a small consulting firm, he has prepared plans for the protection of resource lands for county and municipal governments, and has testified as an expert witness on matters of agricultural zoning.

Professor Keene is currently Ombudsman for the University of Pennsylvania, and has served as chair of the Department of City and Regional Planning, and Chair of the Graduate Group in City and Regional Planning. He served three years of service as chair-elect, chair, and past-chair of the Faculty Senate.

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