

Economics, Sustainability, and Historic Preservation

.....Donovan D. Rypkema

As we've heard all week, the theme of this conference is *Sustain America: Vision, Economics, and Preservation*. So I'd like to expand the vision of the relationship among those things—economics, sustainability, and preservation.

In 2004 I attended the World Urban Forum in Barcelona. The World Urban Forum is UN Habitat's biennial gathering of people from around the world who are dealing with issues of cities.

In Barcelona there were 5,000 people from 150 countries. During the week, there were 300 sessions—workshops, plenary addresses, panel discussions—and thousands of less-formal interactions. Not surprisingly, the most commonly heard phrase was *sustainable development*. But you know what the second most common phrase was? *Heritage conservation*. There were perhaps a dozen sessions specifically about historic preservation, so hearing the phrase there was no surprise. But *heritage conservation* permeated the sessions that on the surface weren't about historic preservation at all—sessions about

economic competitiveness, job creation, housing, public-private partnerships, social cohesion.

Much of the world has begun to recognize the interrelationship and the interdependency between sustainable development and heritage conservation.

Much of the world, but much less so in the United States. With one notable exception, I'm not so sure we've really connected the dots. Too many advocates too narrowly define what constitutes sustainable development. Let me give you an example.

Over a year ago in Boulder, Colo., a homeowner in a local historic district applied to paint his window sash and trim, and approval was given the same day. Two weeks later the landmarks commission learned that the historic windows had all been removed—a clear violation of the local ordinance—and had been replaced with new windows. This was done by a contractor who claims to specialize in "ecologically sound methods" and bills himself as "Boulder's greenest contractor."



The landmarks commission sent a letter directing that the original windows be retained and their condition documented. The contractor responded saying that the greater energy efficiency of the new windows should outweigh the regulations that apply to houses within the historic district. A subsequent commission hearing upheld the staff position and a city council hearing supported the commission's ruling.

Here's the next chapter—a reporter for the local alternative newspaper decided to take matters into his own hands. He went to the house, picked up the historic windows, took a sledgehammer to them, hauled them to the dump, and arranged to have a bulldozer run over them. Sort of a 10-year-old's version of civil disobedience.

Now I want to stop the story for just a minute. I'm not necessarily sure that the landmarks commission's decision was right. But I'm telling you the story to demonstrate our ignorance about what sustainable development really is.

First from an environmental perspective:

1. The vast majority of heat loss in homes is through the attic or uninsulated walls, not windows.

2. Adding just three and one-half inches of fiberglass insulation in the attic has three times the R factor impact as replacing a single pane window with no storm window with the most energy efficient window.

3. Properly repaired historic windows have an R factor nearly indistinguishable from new, so-called "weatherized" windows.

4. Regardless of the manufacturers' "lifetime warranties," 30 percent of the windows being replaced each year are less than 10 years old.

5. One Indiana study showed that the payback period through energy savings by replacing historic wood windows is 400 years.

6. The Boulder house was built more than a hundred years ago, meaning those windows were built from hardwood timber from old growth forests. Environmentalists go nuts about cutting down trees in old growth forests, but what's the difference? Destroying those windows represents the destruction of the same scarce resource.

7. Finally, the diesel fuel to power the bulldozer consumed more fossil fuel than would be saved over the lifetime of the replacement windows.

The point is this: Sustainable development is about, but not only about, environmental sustainability.

- Repairing and rebuilding the historic windows would have meant the dollars were spent locally instead of at a distant manufacturing plant. That's economic sustainability, also part of sustainable development.

- Maintaining the original fabric is maintaining the character of the historic neighborhood. That's cultural sustainability, also part of sustainable development.

Most of you know of the LEED certification system of the U.S. Green Building Council. Currently circulating is a draft of a proposed rating system for neighborhood developments. To its credit, the council assigned weight for adaptively reusing a historic building—up to 2 points...out of 114. Well, at least it's a step in the right direction.

But if we don't yet "get it" in the United States, others do. King Sturge—an international real estate consulting firm headquartered in England—has been at the forefront of broadening the concept of sustainable development. The firm's framework for sustainable development certainly includes

environmental responsibility but also economic responsibility and social responsibility. I'm going to take the liberty of expanding the third category into social and cultural responsibility.

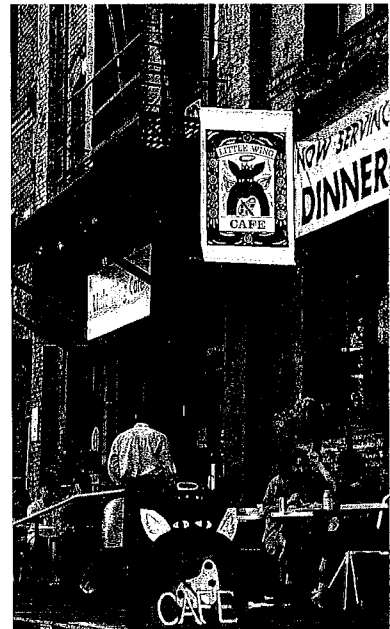
The firm further identifies these important nexus: For a community to be viable there needs to be a link between environmental responsibility and economic responsibility; for a community to be livable there needs to be a link between environmental responsibility and social responsibility; and for a community to be equitable there needs to be a link between economic responsibility and social responsibility.

When we think about sustainable development in this broader context, the entire equation changes—and includes more than simply asking, "Is this building LEED certified?" or "Is the snail darter habitat being protected?"

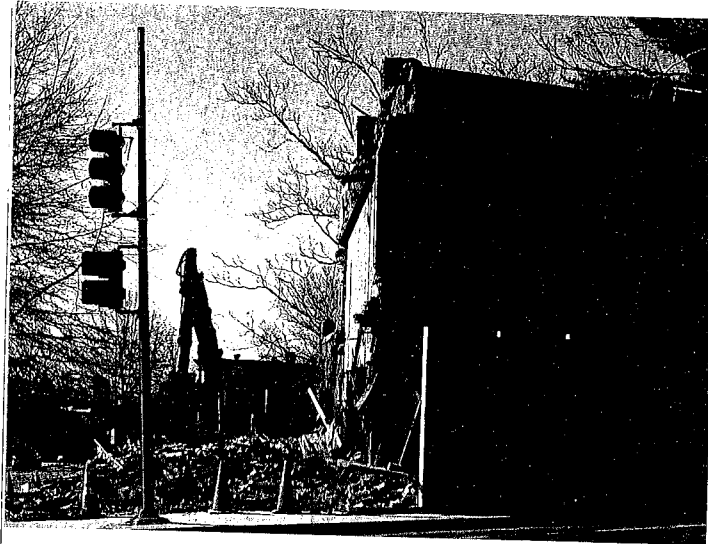
When we think about sustainable development in this broader context, the role of historic preservation becomes all the more clear.

Environmental Responsibility

How does historic preservation contribute to the



In downtown neighborhoods across the country, such as Portland, Ore.'s trendy Pearl District, a new generation of restaurants, shops, and small businesses are making good use of historic commercial buildings. Photo by Mr. Janis Miglaus, courtesy of the Portland Oregon Visitors Association.



The United States faces a shortage of affordable housing. Yet older residential buildings are being razed at an alarming rate—wasting their “embodied energy” as well as their potential to meet community housing needs.

Photo by Donovan D. Rypkema.

environmental responsibility component of sustainable development?

Let's start with solid waste disposal. In the United States we collect almost one ton of solid waste per person annually. Around a fourth of the material in solid waste facilities is construction debris, much of that from the demolition of older and historic buildings.

We all diligently recycle our Coke cans. It's a pain in the neck, but we do it because it's good for the environment. A typical building in an American downtown is perhaps 25 feet wide and 120 feet deep. If we tear down that one small building, we have now wiped out the entire environmental benefit from the last 1,344,000 aluminum cans

that were recycled. We've not only wasted a historic building, we've wasted months of diligent recycling.

Driven in part by concerns for sustainable development, there is an emerging movement made up of planners, architects, landscape architects, and some developers. The movement wants us to stop building endless sprawl and start building better cities. Everybody has their own name for it—New Urbanism, Traditional Neighborhood Development, Transportation-Oriented Development—slightly different names but largely the same goals and principles. At the National Governors Association, they call it New Community Design. In the association's publication—*New Community Design to the Rescue*—they establish a set of principles, and they are these:

- Mixed use
- Community interaction
- Transportation/walkability
- Tree-lined streets
- Open space
- Efficient use of infrastructure
- Houses close to the street
- Diverse housing
- High density
- Reduced land consumption

- Links to adjacent communities
- Enhances surrounding communities
- Pedestrian friendly

It's a great list. Building cities in that fashion would certainly advance the sustainable development agenda. But you know what? We don't need new community design to rescue us. That list of principles is exactly what our historic neighborhoods are providing right now. We just need to make sure they are protected. And by the way, the number of times the phrase "historic preservation" appears in their publication? Exactly zero.

If we want to slow the spread of strip-center sprawl, we must have effective programs of downtown revitalization. Throughout America we have seen downtowns reclaim their historic role as the multi-functional, vibrant heart of the city. Downtown is where I do most of my work. I visit 100 downtowns a year of every size, in every part of the country. But I cannot identify a single example of a sustained success in downtown revitalization where historic preservation wasn't a key component of that strategy. Not one. Conversely, the examples of very expensive failures in down-

town revitalization have nearly all had the destruction of historic buildings as a major element. The relative importance of preservation as part of the downtown revitalization effort will vary, depending on the local resources, the age of the city, the strength of the local preservation groups, and the enlightenment of the leadership. But successful revitalization and no historic preservation? It ain't happening.

Next is the concept of embodied energy. I hadn't paid much attention to embodied energy, not until oil hit \$70 a barrel. So I did a bit of research. *Embodied energy* is the total expenditure of energy involved in the creation of the building and its constituent materials. When we throw away a historic building, we simultaneously throw away the embodied energy incorporated into that building. How significant is embodied energy? In Australia they've calculated that the embodied energy in their existing building stock is equivalent to 10 years of the total energy consumption of the entire country.

Razing historic buildings results in a triple hit on scarce resources. First, we are throwing away thousands of dollars of embodied energy. Second, we are replacing it with mate-

rials vastly more consumptive of energy. What are most historic houses built from? Brick, plaster, concrete, and timber—among the least energy consumptive of materials. What are major components of new buildings? Plastic, steel, vinyl, and aluminum—among the most energy consumptive of materials. Third, recurring embodied energy savings increase dramatically as a building's life stretches over 50 years. You're a fool or a fraud if you claim to be an environmentalist and yet you throw away historic buildings and their components.

The World Bank specifically relates the concept of embodied energy with historic buildings saying, "the key economic reason for the cultural patrimony case is that a vast body of valuable assets, for which sunk costs have already been paid by prior generations, is available. It is a waste to overlook such assets."

I said earlier that in the U.S. we haven't generally made the connection between sustainable development and historic preservation, but that there was one notable exception. The exception is Smart Growth. Richard Moe brought the preservation movement—with many of us kicking and screaming—into the forefront

of Smart Growth...as well we should be. There is no movement in America today that enjoys more widespread support across political, ideological, and geographical boundaries than does Smart Growth. Democrats support it for environmental reasons, Republicans for fiscal reasons, big city mayors and rural county commissioners support it—there are Smart Growth supporters everywhere.

The Smart Growth movement also has a clear statement of principles and here it is:

- Create a range of housing opportunities and choices
- Create walkable neighborhoods
- Encourage community and stakeholder collaboration
- Foster distinctive, attractive places with a sense of place
- Make development decisions predictable, fair, and cost effective
- Mix land uses
- Preserve open space, farmland, natural beauty, and critical environmental areas
- Provide a variety of transportation choices
- Strengthen and direct development toward

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Historic preservation is Smart Growth.

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- existing communities
- Take advantage of compact built design.

But you know what? If a community did nothing but protect its historic neighborhoods it will have advanced every Smart Growth principle. Historic preservation is Smart Growth. A Smart Growth approach that does not include historic preservation high on the agenda is stupid growth, period.

Economic Responsibility

Historic preservation is vital to sustainable development, but not just on the level of environmental responsibility. The second component of

the sustainable development equation is economic responsibility. So let me give you some examples in this area.

An underappreciated contribution of historic buildings is their role as natural incubators of small businesses. It isn't the Fortune 500 companies that are creating the jobs in America. Some 85 percent of all net new jobs are created by firms employing fewer than 20 people. One of the few costs firms of that size can control is occupancy costs—rents. In downtowns and in neighborhood commercial districts a major contribution to the local economy is the relative affordability of older buildings. It is no accident that the creative, imaginative start-up firm isn't located in the corporate office "campus," the industrial park, or the shopping center—it simply cannot afford those rents. Historic commercial buildings play the natural business incubator role, usually with no subsidy or assistance of any kind.

Pioneer Square in Seattle is one of the great historic commercial neighborhoods in America. The business management association there did a survey asking why Pioneer Square businesses chose that neighborhood. The most common answer? That it was a his-

toric district. The second most common answer? The cost of occupancy. Neither of those responses is accidental.

I'm often introduced as a preservationist, but I'm really an economic development consultant. The top priorities for economic development efforts are creating jobs and increasing local household income. The rehabilitation of older and historic buildings is particularly potent in this regard. As a rule of thumb, new construction will be half materials and half labor. Rehabilitation, on the other hand, will be 60 to 70 percent labor with the balance being materials. This labor intensity affects a local economy on two levels. First, we buy a HVAC system from Ohio and lumber from Idaho, but we buy the services of the plumber, the electrician, and the carpenter from across the street. Further, once we hang the drywall, the drywall doesn't spend any more money. But the plumber gets a haircut on the way home, buys groceries, and joins the YMCA—each recirculating that paycheck within the community.

Many people think about economic development in terms of manufacturing, so let's look at that. In Oregon for



every million dollars of production by the average manufacturing firm, 24.5 jobs are created. But that same million dollars in the rehabilitation of a historic building? Some 36.1 jobs. A million dollars of manufacturing output in Oregon will add, on average, about \$536,000 to local household incomes. But a million dollars of rehabilitation? About \$783,000.

Of course the argument can be made, "Yeah, but once you've built the building the job creation is done." Yes, but there are two responses to that. First, real estate is a capital asset—like a drill press or a boxcar. It has an economic impact during construction, but a subsequent economic impact when it is in productive use. Additionally, how-

Seattle's historic Pioneer Square neighborhood has become well known for providing affordable spaces with character for new software companies and other start-up businesses. Photo by Tim Thompson, courtesy of the Seattle Convention and Visitors Bureau.

ever, since most building components have a life of between 25 and 40 years, a community could rehabilitate 2 to 3 percent of its building stock per year and have perpetual employment in the building trades. And these jobs can't be shipped overseas.

Some economists and politicians argue that in economic downturns public expenditures should be made to create employment. As you all know, politicians' favorite form of public works is building highways.

David Listokin at the Center for Urban Policy Research calculated the relative impact of public works. Let's say a level of government spends \$1 million building a highway. What does that mean? It means 34 jobs, \$1.2 million in ultimate household income, \$100,000 in state taxes, and \$85,000 in local taxes. Or we could build a new building for \$1 million, which translates to 36 jobs, \$1.2 million in household income, \$103,000 in state taxes, and \$86,000 in local taxes. Or we could spend that million rehabilitating a historic building, which means 38 jobs, \$1.3 million in household income, \$110,000 in state taxes, and \$92,000 in local taxes. You tell me which

public works project has the most economic impact.

Another area of preservation's economic impact is heritage tourism. In a Virginia study a few years ago, we analyzed the patterns of heritage visitors. We defined heritage visitors as those who did one or more of the following: visited a museum (in Virginia around 90 percent of the museums are history museums), visited a Civil War battlefield, or visited a historic site. We contrasted those patterns with visitors to Virginia who did none of those things. Here's what we found: Heritage visitors stay longer, visit twice as many places, and on a per trip basis spend two and one-half times as much money as other visitors. Whenever heritage tourism has been evaluated, this basic tendency is observed: Heritage visitors stay longer, spend more per day, and, therefore, have a significantly greater per trip economic impact.

The University of Florida and Rutgers University did an economic analysis of historic preservation in Florida. Florida is not a state that immediately comes to mind as being heritage tourism based. We think of Disney World, beaches, and golf courses. Tourism is the largest industry in Florida. But

just the heritage tourism portion of that industry has impressive impacts, bringing in more than \$3 billion in visitor expenditures and half a billion in taxes, and providing over 100,000 jobs. While most of the jobs, predictably, are in the retail and service industries, in fact nearly every segment of the economy is positively affected.

The area of preservation's economic impact that's been studied most frequently is the effect of local historic districts on property values. It has been looked at by a number of people and institutions using a variety of methodologies in historic districts all over the country. The most interesting result is the consistency of the findings. By far the most common conclusion is that properties within local historic districts appreciate at rates greater than the local market overall and faster than similar non-designated neighborhoods. Of the several dozen of these analyses, the worst-case scenario is that housing in historic districts appreciates at a rate equivalent to the local market as a whole.

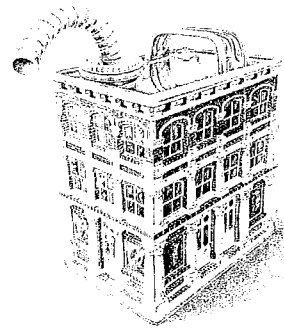
Like it or not, we live in an economically globalized world. To be economically sustainable it's necessary to be economically competitive.

But to be competitive in a globalized world a community must position itself to compete not just with other cities in the region but with other cities on the planet. A large measure of that competitiveness will be based on the quality of life the local community provides, and the built heritage is a major component of the quality of life equation. This lesson is being recognized worldwide. Here's what the Inter American Development Bank has to say: "As the international experience has demonstrated, the protection of cultural heritage is important, especially in the context of the globalization phenomena, as an instrument to promote sustainable development strongly based on local traditions and community resources."

What neither the supporters nor the critics of globalization understand is that there is not one globalization but two—economic globalization and cultural globalization. For those few who recognize the difference, there is an unchallenged assumption that the second is an unavoidable outgrowth of the first. Economic globalization has widespread positive impacts; cultural globalization ultimately diminishes us all. It is

PRESERVATION:

Reusing America's Energy
Preservation Week May 11-17 1980



It takes energy to construct a new building.
It saves energy to preserve an old one.

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This 1980 poster produced by the National Trust to promote Preservation Week shows that preservationists have long understood the relationship between historic preservation and energy conservation.



Ecotrust's conversion of a Portland, Ore., warehouse into the Jean Vollum National Capital Center was the first historic restoration project in the nation to receive LEED Gold certification—showing how reuse of a historic building and energy-efficient construction practices can go hand in hand. The center houses Ecotrust headquarters and a mix of environmentally conscious nonprofits and businesses.

through the adaptive reuse of heritage buildings that a community can actively participate in the positive benefits of economic globalization while simultaneously mitigating the negative impacts of cultural globalization.

So there are some ways that historic preservation contributes to sustainable development through environmental responsibility and through economic responsibility. But I saved the third area—cultural and social responsibility—for last, because in the long run it may well be the most important.

Cultural and Social Responsibility

First, housing. In the United States today we are facing a crisis in housing. All kinds of solutions—most of them very expensive—are being proposed. But the most obvious one is barely on the radar screen: Quit tearing down older and historic housing. Homes built before 1950 disproportionately house people of modest means—in the vast majority of cases without any subsidy or public intervention of any kind. So you take these two facts—there is an affordable housing crisis and older housing is providing afford-

able housing—and one would think, “Well, then, there must be a high priority to saving that housing stock.” Alas, not so.

For the last 30 years, every day, seven days a week, 52 weeks a year, we have lost 577 older and historic houses, more than 80 percent of them single-family residences. Most of these houses were consciously torn down, were thrown away as being valueless.

For our most historic houses—those built before 1920—in just the decade of the 1990s, 772,000 housing units were lost from our built national heritage.

Affordable housing is central to social responsibility; older and historic homes will continue to provide affordable housing if we just quit tearing them down.

At least as important as housing affordability is the issue of economic integration. America is a very diverse country—racially, ethnically, educationally, economically. But on the neighborhood level our neighborhoods are not diverse at all. The vast majority of neighborhoods are all white or all black, all rich or all poor. But virtually everywhere I've looked in America, the exception is in historic districts. There rich and poor,

Asian and Hispanic, college educated and high school dropout, live in immediate proximity, are neighbors in the truest sense of the word. That is economic integration, and sustainable cities are going to need it.

Economic development takes many forms—industrial recruitment, job retraining, waterfront development, and others. But historic preservation and downtown revitalization are the only forms of economic development that are simultaneously community development. That too is part of our social responsibility.

Finally, I'd ask you to take a moment and think of something significant to you personally. You may think of your children, or your spouse, or your church, or your childhood home, or a personal accomplishment of some type. Now take away your memory. Which of those things are significant to you now? None of them. There can be no significance without memory. Those same things may still be significant to someone else, but without memory they are not significant to you. And if memory is necessary for significance, it is also necessary for both meaning and value. Without memory nothing has significance, nothing has

meaning, nothing has value.

That, I think, is the lesson of that old Zen koan, "If a tree falls in a forest and no one hears, did it make a sound?" Well of course it made a sound; sound comes from the vibration of molecules and a falling tree vibrates molecules. But that sound might as well not have been made, because there is no memory of it.

We acquire memories from a sound or a picture, or from a conversation, or from words in a book, or from the stories our grandmother told us. But how is the memory of a city conveyed? Here's what Italo Calvino writes: "The city...does not tell its past, but contains it like the lines of a hand, written in the corners of the streets, the gratings of the windows, the banisters of the steps ... every segment marked in turn with scratches, indentations, scrolls."

The city tells its own past, transfers its own memory, largely through the fabric of the built environment. Historic buildings are the physical manifestation of memory—it is memory that makes places significant.

The whole purpose of sustainable development is to keep that which is important, which is valuable, which is significant. The definition of

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sustainable development is "the ability to meet our own needs without prejudicing the ability of future generations to meet their own needs." We need to use our cities and our historic resources in such a way that they are available to meet the needs of future generations as well.

Historic preservation makes cities viable, makes cities livable, makes cities equitable.

I particularly appreciate that the broadened concept of sustainable development is made up of responsibilities—environmental responsibility, economic responsibility, and social responsibility.

Today throughout America there are thousands of advocacy movements. Most of them are "rights" movements: animal rights, abortion rights, right to life, right to die, states rights, gun rights, gay rights, property rights, women's rights, and on and on and on. And I'm for all of those things—rights are good. But any claim for rights that is not balanced with responsibilities removes the civility from civilization, and gives us an entitlement mentality as a nation of mere consumers of public services rather than a nation of citizens. A consumer has rights; a citizen has

responsibilities that accompany those rights. Historic preservation is a responsibility movement rather than a rights movement. It is a movement that urges us toward the responsibility of stewardship, not merely the right of ownership. Stewardship of our historic built environment, certainly, but stewardship of the meanings and memories manifested in those buildings as well.

Sustainability means stewardship. Historic preservation is sustainable development. Development without historic preservation is not sustainable. That's what your stewardship is assuring today, and future generations will thank you for it tomorrow.

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