Land Lines

QUARTERLY MAGAZINE OF THE LINCOLN INSTITUTE OF LAND POLICY

WINTER 2016

Nature and Cities

Ecological Urban Design and Planning

School Finance and the Property Tax

Public Library MakerSpaces

New Publications

Land Lines

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THE LINCOLN INSTITUTE OF LAND POLICY is an independent, nonpartisan organization whose mission is to help solve global economic, social, and environmental challenges to improve the quality of life through creative approaches to the use, taxation, and stewardship of land. As a private operating foundation whose origins date to 1946, the Lincoln Institute seeks to inform public dialogue and decisions about land policy through research, training, and effective communication. By bringing together scholars, practitioners, public officials, policy makers, journalists, and involved citizens, the Lincoln Institute integrates theory and practice and provides a forum for multidisciplinary perspectives on public policy concerning land, both in the United States and internationally.

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LINCOLN INSTITUTE OF LAND POLICY

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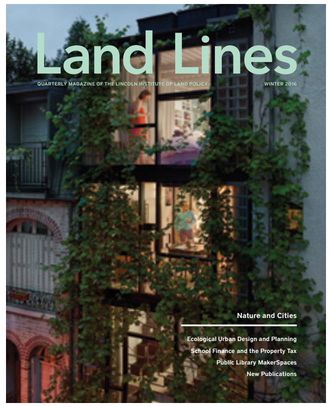

Cover photo: Villa Santos-Dumont, 15th *arrondissement*, Paris, 2013. Credit: Gail Albert Halaban.

New Logo, New Commitment to Impact

BACK IN THE BRONZE AGE, when I was a graduate student, the American Economics Association invited me to present a paper at their annual meeting. At the time, being a nonconformist, I was struggling over whether or not to appear in a suit and tie. My Ph.D. adviser provided some excellent guidance. "I'm not going to tell you whether to wear a suit or not, but consider whether you want the audience to remember what you say or what you wear." It was a helpful reminder that if one has a message to deliver, it is best to package it in a way that improves the chances that it will be received and understood. In the end, I wore the suit and tie, and I recorded a useful lesson in the sometimes subtle, sometimes not-so-subtle interplay of form and content.

An ongoing public outreach effort, clear and crisp, will facilitate the impact we want our work to have on policy, and on people.

From time to time, think tanks like the Lincoln Institute need to consider whether they are packaging content in a way that draws people to read and use it. Over the last year, we have taken a careful look at how we present and disseminate our research and policy analysis. We started in January 2015 with a newly reimagined *Land Lines*, designed to make the magazine more compelling to a broader audience. Our first redesigned issue featured a dramatic aerial photograph of the Colorado River Delta, where a "pulse flow" released from upstream dams in 2014 allowed water to flow down its dry old path to the Sea of Cortez for the first time in decades, stimulating efforts to restore the native ecosystem that had existed under different land use patterns in the river's watershed. We also started hiring journalists to write compelling narratives that connected our research and policy analysis to the people whose lives would be improved by better land use practices.

The redesign of *Land Lines* and our Policy Focus Reports are a small part of a larger effort the Lincoln Institute is making to disseminate our formidable arsenal of research and ideas more widely. An ongoing public outreach effort, clear and crisp, will facilitate the impact we want our work to have on policy and on people.
In August, we launched a multiyear campaign to promote municipal fiscal health as the foundation from which local governments can deliver the goods and services that define a high quality of life for residents. Our researchers, staff, and partners are working across disciplines to elevate this important issue, while building new, cross-cutting efforts to address climate change and resilience; developing state-of-the-art scenario planning tools; and probing the nexus of land policy and water, or of land use and transportation.

This month, we are taking another step to disseminate our ideas more effectively by introducing a new Lincoln Institute logo, tagline, and mission statement:

Finding answers in land: helping to solve global economic, social, and environmental challenges to improve the quality of life through creative approaches to the use, taxation, and stewardship of land.

The logo retains the Lincoln "L" within a symbolic outline of a land section, with a more modern, open design that invites new audiences to discover our work. The tagline and mission statement make explicit what has always been true: that good land policy can help address some of the most vexing global challenges, such as climate change or poverty and financial stress in the world's cities.

We are not reinventing the Lincoln Institute, but aiming to introduce our work to broader audiences and to clarify the threads that connect seemingly disparate topics, such as the link between land conservation and climate change mitigation. Our "refresh" will culminate later this year, when we launch our redesigned website, with a format that allows us to convey new narratives about how land policy can shape a better future for billions of people.

This issue previews two important new books that upgrade our presentation of subjects we have been probing for decades. In *A Good Tax*, Joan Youngman makes a clear, strong case for the property tax—the most important and least understood source of revenue for local governments. This magisterial treatment of a difficult topic is rendered in lucid prose by the Lincoln Institute's chair of Valuation and Taxation. The chapter on school finance, featured in this issue, defends the tax that people love to hate in service of a public good that defines the fortunes of future generations.

Nature and Cities—edited by Frederick R. Steiner, George F. Thompson, and Armando Carbonell, the Lincoln Institute's chair of Planning and Urban Form—explores the economic, environmental, and public health benefits of ecological urban design and planning. With essays by New York City's High Line designer James Corner and other leading landscape architects, planners, and architects around the world, *Nature*

We are not reinventing the Lincoln Institute, but aiming to introduce our work to broader audiences.

and Cities offers an erudite and visually captivating treatment of a topic that is urgent in the face of climate change and urban population growth.

As you will see, we will continue to serve our long-time partners and friends with rigorously researched and well-written content. But we also will expand the network of researchers, policy makers, and practitioners who will apply our research findings in ways that we can only imagine. Because in the end, our collective endeavor is to improve the lives of all who call this planet home. And we know that it all starts on land.

LINCOLN INSTITUTE
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3-D Printers for All in Public Libraries

IT'S A THURSDAY AFTERNOON IN CINCINNATI, and people at the downtown public library are making stuff. In the corner, a $14,410 Full Spectrum laser cutter and engraver hums away, used to create anything from artworks to humble coasters out of paper, wood, and acrylic. Over by the windows, a MakerBot replicator is buzzing; it's one of the library's four 3-D printers, used to fabricate a range of objects, from toys to a custom bike pedal compatible with shoes designed for a patron with a physical disability. Nearby, a young designer is producing a full-color vinyl sign with a professional-grade Roland VersaCAMM VS-300i large-format printer and cutter. "This is our workhouse," my tour guide Ella Mulford, the library's TechCenter/MakerSpace team leader, says of the $17,769 machine. Most of us couldn't afford such a pricey piece of equipment, but apparently plenty of Cincinnatians can think of useful things to do with it: it runs practically nonstop during library hours, Mulford explains, and is usually booked out for two weeks in advance.

"There's no real reason to yoke the fate of the library as civic infrastructure to the fate of the physical book. It's a community space for learning."

The Public Library of Cincinnati and Hamilton County still offers plenty of books and other media for borrowing and browsing. But its roomy MakerSpace section, opened at the start of 2015 and packed with free-to-use tech tools, is an impressive example of how the library idea is adjusting to a digital era that has not always been kind to books. More to the point, it hints at an evolving role for libraries in cities large and small—contributing in new ways to the municipal fabric they have long been a part of.

In Cincinnati, the process that led to the MakerSpace started a couple of years ago, says Kimber L. Fender, the library's director. A smattering of libraries across the country were experimenting with technology as a new component of what they might offer the public. "And part of our strategic plan," Fender continues, "was to introduce new technologies to our community. So we were actively exploring: What does that mean when we say that? What does it look like?" Adding a 3-D printer to the library's existing computer center served as a low-risk experiment—and attracted the attention of every TV station in town. "There was just all this conversation," Fender recalls. "So we thought, 'Hm, this is getting us toward our goal.'"

Enrique R. Silva, research fellow and senior research associate at the Lincoln Institute of Land Policy, points out that there's no real reason to yoke the fate of the library as civic infrastructure to the fate of the physical book. "It's a community space for learning," he suggests. A 2015 Pew Research Center study indicates that the public agrees: While it found signs that Americans have visited libraries somewhat less frequently in recent years, it also concludes that many embrace the idea of new educational offerings in this specific context—tech included. "It's not a difficult leap to make," Silva says.

Indeed, making that leap both extends and updates the role that libraries have long played in many U.S. city and town plans. One of the breakthrough developments in that history was the explosion of such institutions funded by Andrew Carnegie in the decades before and after the turn of the 20th century. Fanning out from Pennsylvania, nearly 1,700 so-called Carnegie Libraries were built in Beaux-Arts, Italian Renaissance, or other classic styles—an effort that both played into and fueled an even wider library-building movement that placed significant landmarks in municipal centers from coast to coast. While remarkable, this ubiquitous element of civic infrastructure often goes overlooked today.

"In modern-day planning," Silva observes, "I think libraries are largely seen as: You're lucky if you have it as an asset, part of the bones of a city that you work around." In the United States, at least, architecturally significant new library construction is rare (the Seattle Public Library Central Library, opened in 2004 and designed by Rem Koolhaas and Joshua Prince-Ramus, is a notable exception). So libraries tend to be planned around, as an "inherited" element of "social-civic infrastructure," as Silva puts it. A 2013 report from the Center for an Urban Future, focused on New York City, argued that libraries have been "undervalued" in most "policy and planning discussions about the future of the city."

But maybe this oversight implies an opportunity: These existing structures can take on fresh roles that make them newly relevant to ever-evolving municipal plans. The Cincinnati library's rethink of what it means to be a community center of learning and information-sharing is one example. As with the Carnegie Libraries, smart use of philanthropic resources played a role: Fender says the library had a $150,000 discretionary bequest that it decided to direct to the MakerSpace. To make room, it reorganized its periodicals collection.

The library then took an adventurous view of what kind of technologies it could offer. There's a mini recording studio with pro-quality microphones, used by aspiring podcasters and DJs; photography and video equipment; and a popular "media conversion station" for digitizing VHS tapes and the like. There are also more analog offerings such as sewing machines and a surprisingly popular set of button-making machines. During my tour, I met a charming man named Donny—well known to the library staff—making football-themed buttons. "What's the word, 'entrepreneur'? That's what they tell me I am," he explained.

Turns out lots of entrepreneurial types, from aspiring startup-founders to Etsy sellers, make use of the library's offerings. There are collaborative computer workstations, connected by Wi-Fi and used by everyone from designers working with clients to students teaming up on class projects.

And there's a broader trend here. The Chattanooga Public Library has converted what used to be the equivalent of attic space into a maker center and public tech lab called 4th Floor, regularly hosting related public events. The Sacramento Public Library's "Library of Things" allows people to check out GoPro cameras and tablet devices, among other tech tools. Other experiments abound from Boston to St. Louis to Washington, DC, to Chicago: according to one survey, more than 100 libraries had added some variety of makerspace as of 2014; another report said more than 250 have at least a 3-D printer available.

Ken Oster used the Cincinnati public library's 3-D printer to create a custom bike pedal compatible with special shoes he wears because of a physical disability. Credit: The Public Library of Cincinnati and Hamilton County.

And the progressive thinking and creativity of libraries align with the goals of many planners: maintaining and exploiting community touchpoints, often embedded deep into crucially central public spaces, and expanding the range of citizens drawn to them. Interestingly, some urban thinkers have begun to explore the potential of makerspaces arising either from the private sector or the grass roots as a component of "a new civic infrastructure." Perhaps libraries like Cincinnati's are already building that.

One challenge, Fender says, is the lack of widely accepted metrics for gauging the impact on a given institution—or, by extension, its civic environment. So Cincinnati has been keeping its own numbers: in September 2015, the MakerSpace took 1,592 equipment reservations, including 92 for the MakerBot, 157 for the laser engraver, and 298 for the vinyl printer. All reflect steady or growing interest. (Thus the MakerSpace collection is growing, with the addition of an Espresso Book Machine that prints volumes on demand.)

"The MakerSpace reminds people the library is there," Fender says, "but it also causes them to look at it in a different way and say: 'Oh, they're thinking about the future, about what the community needs are, and how they can provide something more than the books on the shelf.'"

Rob Walker (robwalker.net) is a contributor to Design Observer and *The New York Times*.

NATURE AND CITIES

The Ecological Imperative in Urban Design and Planning

By Frederick R. Steiner, George F. Thompson, and Armando Carbonell

This feature is adapted from the introduction to Nature and Cities: The Ecological Imperative in Urban Design and Planning, *a compilation of essays and images by leading international landscape architects, architects, and planners, some of whose work is showcased here. The book is scheduled for publication in June 2016 by the Lincoln Institute of Land Policy, in association with the School of Architecture, The University of Texas at Austin, and George F. Thompson Publishing.*

EVERYTHING SEEMS SO CLEAR FROM THE AIR, where details do not get in the way. At an elevation of 33,000 feet (10,058 meters), we see the handiwork of our actions all over the ground below, as if the landscape were our reflecting mirror. As we know, landscapes do not lie; they are the embodiment of all that we do on Earth.

Some roads parallel rivers and valleys—no ingenuity there. Other roads converge into settlements like cattle paths leading to a water tank, or they may follow deer paths and other animal trails or topographic contours and soon resemble the organic majesty of a spider's web. Picture El Greco's (1541–1614) home town, Toledo, Spain, from the air: a kind of perfection in organic urban form.

Old North American prairie, largely untouched until two centuries ago, now bears rectangular grids of large-scale farms with no room for any vegetation besides the crops and a thin line of trees alongside riverine and creekside banks, looking like a token tithe to nature and wildlife. And 40-acre (16.1-hectare) center-pivot circles of corn, soybeans, or alfalfa (the trifecta of corporate agriculture) look as if someone had tossed, in perfect symmetry, large half-dollars on the land. Resembling pavements of crops stretching as far as the eye can see, even from one state to another, all this handiwork is the result of a federal farm policy insanely out of balance with nature. No wonder the butterflies and countless other creatures and plants are struggling so mightily against such unnatural odds.

Left: The High Line, designed by James Corner Field Operations and Diller Scofidio + Renfro, runs along a disused elevated freight rail line from the Meatpacking District to West 34th Street, Manhattan. Photographs by Iwan Baan.

On the site of a former garbage dump in Tianjin City, China, Turenscape's Tianjin Qiaoyuan Wetland Park features paved pedestrian paths and a rainwater pond designed to irrigate vegetation that remediates saline-alkali soil. Photograph by Kongjian Yu.

> Landscapes do not lie; they are the embodiment of all that we do on Earth.

New sites of natural gas extraction have popped up so suddenly and pervasively that they now permeate much of the Great Plains and interior West of North America, as if enormous prairie dogs on steroids had burrowed through these large swaths of land. It is Gulliver's travels all over again. Meanwhile, open-pit mines generate impressive depressions in the ground, as if meteors had crashed from outer space. The pits' glorious russet and red and golden and sand-colored hues contrast hard against surrounding terrain, as if the mines, too, were inscribed works of art, poor attempts at recreating a subterranean Roman coliseum or a mini-Grand Canyon. Meanwhile, the new and starkly white wind-powered turbines—some spanning 413 feet (126 meters) and towering 312 feet

More cities boast integrated systems of parks, open spaces, and greenways, providing evidence that nature can return to the urban scene and enhance communities in biological and socioeconomic ways.

(85–95 meters) in the sky—appear as if a giant surgeon had administered stitches of varying lengths and shapes on the land and in the sea, even as untold numbers of birds die upon impact.

Towns and cities along the coasts cram hard against the adjacent sea, with few buffers to protect communities against a rising tide that likely will be at least three feet (.9 meter) higher a century from now. And the same condition holds true for those towns and cities that reside along rivers, large and small, that naturally want to ebb and flow like the tide, overrunning banks and streets alike from time to time. Even world-class cities such as Chicago, Sydney, Tokyo, and Toronto look like LEGO sets from above and bar graphs at eye-level, in which cars and trucks move about like busy ants, and trains slide like snakes along the concrete.

Deserts, long the forlorn outposts of biblical wilderness, are now bespeckled oases of new towns, cities, and resorts, each with homes nestled against aquamarine-blue swimming pools, as if pools are required for entrance into a neighborhood. Shimmering lakes are impounded by large-scale dams, the water evaporating into the dry, cloudless sky. A jigsaw puzzle of improbably green lawns is highlighted by extensive, even more preposterously verdant golf courses. One might believe that a new school of art called Landscape Cubism had gone awry on the land.

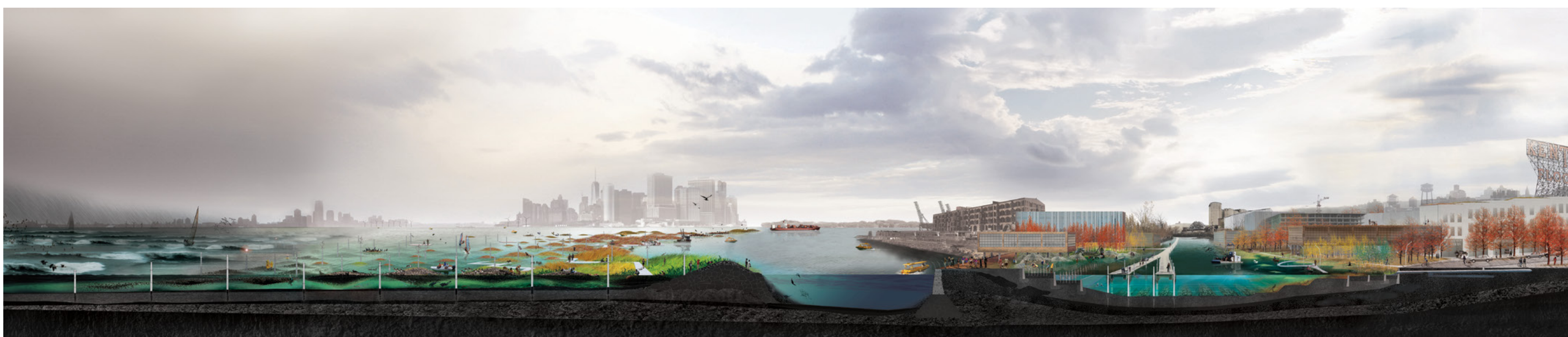
Yet there are the exceptional expanses of undeveloped land as well. Trails such as the Appalachian, Continental, Ice Age, Grande Randonnée, Greater Patagonian, Natchez, Pacific Crest, Te Araroa, and Tokai saunter along for great distances deep into the heart and soul of their respective countries. Forests stretch for thousands and thousands of square miles and kilometers, relieving a planet in dire need of new lungs in order to process the increasing levels of carbon dioxide (CO^2). Still-intact watersheds and wetlands retain their natural place between land and water, providing incalculable value as a water supply for towns and cities downstream and as habitat for fisheries, insects, birds, and other wildlife. Contour farming thrives in harmony with the terrain and the life-giving principles of the Soil Conservation Act of 27 April 1935. And more cities boast integrated systems of parks, open spaces, and greenways, providing evidence that nature can return to the urban scene and enhance communities in biological and socioeconomic ways.[1]

The land tells us so much. And it is the role of landscape architecture, urban planning and design, and architecture to continue their pioneering ways, offering an ecological approach to the design, planning, and management of our varied landscapes—urban, suburban, rural, regional, social, and wild. It all begins on the ground, in nature and our communities, in the multiple ecologies and economies and cultures that encapsulate our home turf, wherever that may be.

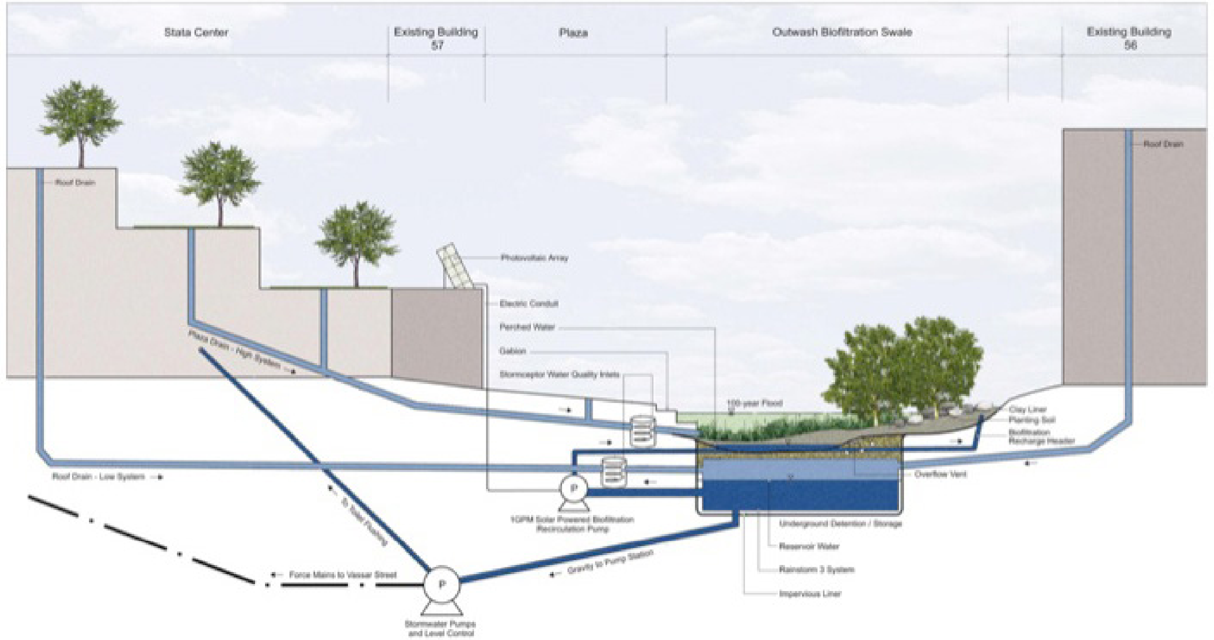
But much of that ground is already urban, and that pervasive and expansive pattern of settlement by every account has no end in sight. So how can we do better? That scene and question are the focus of *Nature and Cities: The Ecological Imperative in Urban Design and Planning.*

EVEN AS LAND USE MAY SEEM RELATIVELY CLEAR and simple from the air, on the ground the picture grows more complicated, because of the unavoidable details. All aspects of life—human and natural intertwined, to varying degrees of success—appear before our very eyes, are heard by our ears, are felt by our skin and clothes by way of dew point, humidity, dry air, sunlight, evening breezes, and cool or warm temperatures. That is a lot of ground to comprehend, even within the limited scope of our senses.

Perhaps this view encompasses your backyard or city street; the one well from which you and your community draw water; a favorite gathering place; a beloved vacation spot; a scene ravaged by drought, flood, or fire; a place recovering from earthquake, cave-in, crime, or war. The imagination can transport us to any place we wish, but there is a bottom line to such inquiry. As you imagine or walk or ride or drive through that landscape around you, take it all in: every blade of grass that adorns your lawn or survives in the seam of a sidewalk; every field, common, or pasture that may be part of your everyday life; every hovel, condo, or mansion that gives you shelter; every tree, greenway, or park



This image depicts SCAPE's Oyster-tecture (2010) concept for New York Harbor: a living breakwater seeded with oysters that diminishes waves and harnesses the biotic processes of shellfish to clean millions of gallons of Harbor water, and stewarded by community schools. The project has since been refined and ultimately received $60 million in funding from the U.S. Department of Housing and Urban Development in 2015. It is currently advancing through a permitting and construction phase off the shore of Staten Island. Image by Kate Orff/SCAPE.



Laurie Olin designed this system to capture, filter, clean, and recycle storm water for use in MIT's Stata Center in Cambridge, Massachusetts. A landscape basin containing plants, sand, and boulders, set atop a very large Silva cell storage basin, provides bio-filtration and prevents runoff from entering the municipal drain system. Illustration by OLIN.

that embellishes your space; every economic entity and activity before you; every smell emanating from a bakery or foundry; every breath you take that, inevitably, is a respiratory cocktail of Earth's natural elements (sand, pollen, and dust) and of all the human-induced chemicals too numerous to name.

Now that you have seen, heard, and felt that landscape, imagine that you are suddenly in charge of the scene. Your family, neighborhood, village, city, region, and country are depending on you. First, to explain every aspect of what you perceive and to make some sense of it all—whether in a public setting or classroom or even corporate boardroom. And second, to envision, communicate, plan, and design improvements to what you see. Where would you begin? What would you do? Under what circumstances would or could you implement change? And how? Bottom-up or top-down? Diplomatically, democratically, or dictatorially? How will your vision, and its associated array of actions, be maintained, nurtured, and, perhaps, changed over time? And by whom and under what circumstances or authority?

This is the terrain that the landscape architect, architect, and planner inherit. So return to your "vision" of what your place wants to be, and consider a process by which change is sought and made through attention to three primary and overarching themes: the human need for clean water, ample and safe food, and humane shelter; the human need for economic well-being; and the natural need to take care of and heal the land, nature itself. How does one work with structure, purpose, and meaning to provide fulfillment, value, and public good? How does one add value to place, communities, cities, and regions by way of designs and plans that offer reprieve from single-purpose thinking and direct us to a sense of stewardship in its many manifestations? Importantly, how do we citizens, as part of increasingly large urban populations, reconnect with the natural world on which we are still dependent, and become engaged in the benefits of ecology to biological and socioeconomic life?

Although nature is at the core of our being and every other life-form, plant, tree, soil, water, and rock on Earth, too often our human connections to nature take a backseat to all-too-prevalent interests of every kind that compete for social good and economic gain without the benefit of a land ethic, as espoused by Aldo Leopold.[2] When we look at the varied landscapes on the ground, questions arise as to how well we are actually doing as human beings in our care of this bountiful planet.

If one travels far enough, long enough, one can still find longstanding human communities and cultures living intimately with the natural systems that surround them. Homes in the Amazon are still built on stilts to allow for the annual and seasonal fluctuations of the world's second-longest river and world's largest river basin. Homes in the American South have traditionally used the front and wraparound porch to offer shade and some relief from the noteworthy heat and humidity of the summer season, even as it allows for socialization from one neighbor's house to another, as can be seen any day of the week in Vicksburg, Mississippi, where streets are lined by shotgun houses with shady front porches animated by conversation. Many Scandinavians still artfully use wood and the fine-art craft of notching to create some of the most energy-efficient cabin-homes anywhere, even as Nordic winters are among the most challenging on Earth. And, increasingly, LEED (Leadership in Energy & Environmental Design) initiatives are helping transform the world's new architecture into energy-efficient structures, from the geothermal-powered Aldo Leopold Center in Baraboo, Wisconsin, winner of a LEED Platinum Award, to the Shanghai Expo UBPA redevelopment, the first project outside North America to receive a LEED Neighborhood Development Platinum Award.

Beyond LEED, landscape architects, planners, ecologists, and others designed the Sustainable Sites Initiative (SITES). Now administered by Green Building Certification Inc., SITES was envisioned as LEED for the outdoors. SITES was developed through pilot projects, including those undertaken by Andropogon, OLIN, and James Corner Field Operations. Pilot projects that received certifications include Andropogon's Shoemaker Green on the University of Pennsylvania campus and the Phipps' Center for Sustainable Landscapes in Pittsburgh, Pennsylvania, OLIN's Washington Canal Park in the District of Columbia, and James Corner Field Operations' Woodland Discovery Playground at Shelby Farms in Memphis, Tennessee.

Yet with every passing generation that becomes ever more urban, the direct connections to nature and its bounties are reduced in spades. In too many cities around the world, nature is an afterthought. The following story is all too common:

> Not very long ago, perhaps it was ten years or so, I read a piece in the newspaper that caught my attention: A boy from Harlem in New York City was being interviewed about his views on nature. He was quoted as saying that the blade of grass at his feet, the blade of grass that was emerging from a seam in the concrete sidewalk, was, to him, the embodiment of nature. It was all he needed from the natural world. Here was a sign of wildness along his city street, his home place. The blade of green grass, somehow managing to survive a half-mile away from Central Park to the south, provided that elementary presence of nature in the urban world that was his comfort zone.[3]

How do we citizens, as part of increasingly large urban populations, reconnect with the natural world on which we are still dependent, and become engaged in the benefits of ecology to biological and socioeconomic life?

Even in cities graced by larger representations of nature, these green spaces too often feel like isolated pockets for daily use or the occasional visitor, like small museums or zoos. This need not be the case; this need not be an unintended aspiration or consequence of ignorance of the multiple benefits that nature bestows when it is more fully integrated into the urban fabric of any town or city, whether in Jerusalem or Medellín or Stuttgart, Arkansas. We know how to do better. Landscape architects, architects, and planners have often led the way.

So how is it possible that towns, cities, and counties continue to ignore floodplains and sea level and willingly allow homeowners, developers, and resorts to build and rebuild in areas that contend regularly with chronic flooding and storm surges? How is it possible that a utility company can disobey the basics of common-sense planning and be permitted to construct a 564-mile (908-kilometers) natural gas pipeline on a route that will not only penetrate and divide critical habitat for rare and endangered species within existing national forests, but also overlay an area known for its extreme karst landscape and major sinkholes—thereby endangering the aquifer that lies beneath that path, a font of the greatest significance for the supply of fresh water for cities, towns, and farms throughout that region? How is it possible that mining companies are not required to close the loop and provide for the ecological restoration and reclamation of project areas as part of the economic deal? How is it possible that Rio de Janeiro was awarded the Games of the XXXI (Summer 2016) Olympiad with full knowledge that water events will be conducted in Guanabara Bay, in conditions at times equated with raw sewage? Obviously, those landscape players do not include the principles and practices of ecological design and planning as part of their respective worldview, and behold the consequences of their chosen ignorance and greed.

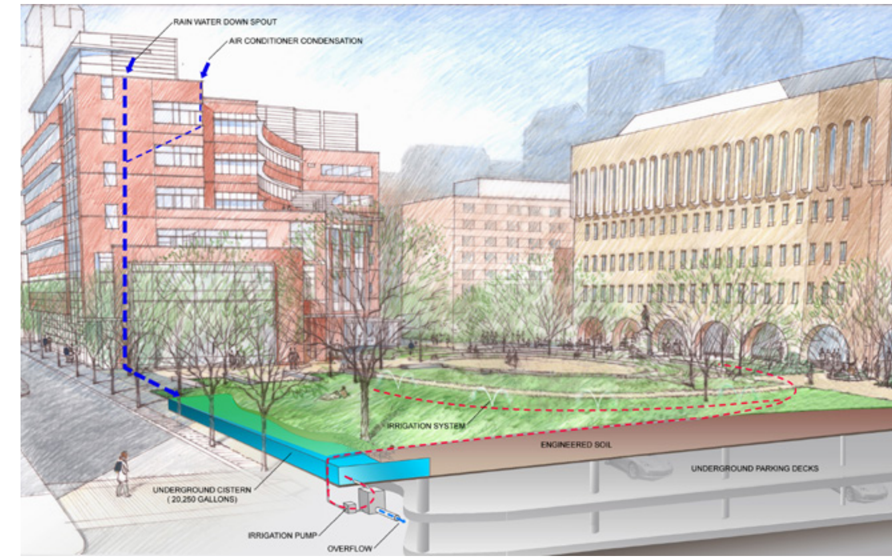
Collectively, the essays in *Nature and Cities* convey the great hope and promise of an ecological imperative in urban planning and design, of a tried-and-true approach by which nature and culture, science and art, come together in a united but creative and fluid way to make life better for all.

The promise of ecological design and planning as it pertains to the health and welfare of our communities and cities everywhere is there for the taking, there for action, there for implementation, there for ongoing care. But too often we dismiss the obvious in how we citizens conceive of urban design and planning: we humans, by our very presence in nearly every sphere on Earth, are the essential players not only in the eternal dance with nature that is part of life and the human condition, but also the overall health and welfare of our home ground.

The essayists in *Nature and Cities* reveal that monumental work has been done and is ongoing in the ecological design and planning of our cities and communities at large. Because landscape architects, architects, and planners have done so repeatedly and throughout the world, we, as a society, can say with certainty that we know how to work collaboratively with all players to provide safe water, food, and shelter; reduce runoff into city streets; accommodate areas prone to flooding and storm surges; safely locate a utility corridor and design it in such a way that it becomes more than a single-purpose pathway for natural gas obtained by the unruly practice of fracking; design parking lots in commercial developments; provide citizens of the world's cities with more than a sliver of grass in the seam of a sidewalk; restore and heal worn and contaminated sites; and provide joy and economic vitality through green design and infrastructure.

But even more progress needs to be achieved, no matter where we live, because the world is becoming more urban, and the consequences of climate change and of poverty, disease, conflict, and war are real. Once again, landscape architects, architects, and planners have been engaged historically in the process of understanding the natural world before us and its multiple manifestations on the ground, where details and interconnections matter. And, by way of their designs and plans, some of them centuries old, we have examples of finished work that has made this a better world. Landscape architects, architects, and planners have historically offered alternative visions to the failed practice of serendipity and single-purpose thinking that have, for too long, dominated the public and private view.

The contributing authors in *Nature and Cities* share real-life experiences and perspectives about where we can go in the future. They discuss and reveal their respective perspectives on the historical and contemporary practice of ecological design and planning in their own



Andropogon ‘s Lubert Plaza, at Thomas Jefferson University in Phildelphia, was built over an underground parking lot. The plaza effectively manages stormwater onsite, including air conditioning condensation from the adjacent buildings, through infiltration, capture, treatment, and reuse as irrigation. Image by Andropogon.

work and in the work of others. In many cases, this work involves award-winning and path-breaking designs and plans known throughout the world. And so reading their essays is an eye-opening experience, as we share and explore their thoughts about nature and cities, even as they offer reflective worldviews for design and planning. Collectively, the essays convey the great hope and promise of an ecological imperative in planning and urban design, of a tried-and-true approach by which nature and culture, science and art, come together in a united but creative and fluid way to make life better for all.

As is often the case, big projects, designs, and plans tend to dominate the professional view and the ability of design and planning to contribute toward this greater good. Historically, this has included a wide range of undertakings, as large as the design and construction of national parks and new cities, and as small as the private garden and urban mall. But, to most people, ecological design and planning remains an idea and approach not yet in the vernacular. That is where additional work needs to be done. And so here is another story of how far we can travel in but one generation, if landscape architects, architects, and planners are willing to seek work in new ways:

A woman from South Africa, a naturalized American citizen, was inspired by the healing powers of nature. She was well known and highly respected in the community where she lived. She was a quiet but steadfast leader in peeling back the built environment and integrating nature more fully into areas of everyday city life. Even after she was diagnosed with terminal cancer, she served the community and fellow cancer patients as if there would always be a tomorrow. When she died, she was remembered by a new serenity garden, adjacent to an existing park along a popular river. When the city organized a public dedication of the new park in her memory, an overflowing crowd of hundreds showed up on a hot, summer day.

The city manager was among the first to speak. Soon after welcoming everyone and conveying the purpose for the gathering, he began to share this message:

> There is something called a “sense of place.” It is a term often hard to describe, but we certainly know a special place when we see it, be it a memorial garden such as this, an historic neighborhood or building or landscape, a community at large, or even a region. As public officials, we strive to cultivate a sense of place in many ways: by providing obvious services and an infrastructure intended to serve all, but also by making connections to the natural world. Even as we may live near one of the most popular and most visited national parks, we need nature to return to the city so that it becomes a daily experience, fully integrated into our fabric of being. Just as Anne-Marie would have wanted.[4]

We dare say that, 30 years ago, the phrase "sense of place" seemed like a pipe dream or even an illusion that had no place in our everyday lives, much less public policy. Yet today, as expressed by this 30-something city manager, the term has been fully realized and embraced. We even hear of teachers at every institutional level, proclaiming the need for and success of "place-based" education—place, of course, referring to the natural and human processes intertwined.

As the world becomes more urban, and even for those who remain tied to rural land, there is the need for "ecological design and planning" to be integrated into our collective being, into our everyday lives, in fundamental ways—just as a "sense of place" has so quickly taken hold during the preceding generation. Even as landscape architecture, urban planning and design, and architecture can continue to advance a "green" vision of a better world through specific projects, both great and small, public and private, it will require a move toward the vernacular, toward the common person, toward the common place, for that vision to be expressed, appreciated, accepted, and embraced more fully: to the point where ecological design and planning becomes an afterthought and, thus, an essential player in providing a healthy and healthful life for human beings and our compatriot life-forms. To heal Earth, our home ground, is to heal ourselves.

In many professional fields and human endeavors, a green vision for an ecological infrastructure has already been achieved. In places where this vision has been allowed to take hold, we see how an ecological approach fosters the necessary interplay between the biotic and abiotic. Establishing a watershed, for instance, as a primary unit of analysis, conservation, and concern has led to instructive work relating to combined sewer overflows (CSOs) within a hydrological system, offering citizens a safe and secure source of water. And it is easy to be impressed by the advances of rain gardens and reduced runoff and other creative solutions that mimic natural processes in biotic enrichment. The further integration of ecological, socioeconomic, and political capacities within specific communities and urban environments at large provides a tried-and-true pathway for landscape architects, architects, and planners to envision improvements at every scale and to implement them through community-based interaction and design.

Left: Rome is ecological, full of interconnections with environments and organisms of all sorts. Photograph of Trastevere, Rome, November 21, 2013, by Frederick R. Steiner.

Right: In the heart of Piazza San Pietro in Rome, one is reminded of the hydrological cycle in the midst of Gian Lorenzo Bernini's (1598–1680) timeless design for Vatican City—and of how we depend on water, which sustains life and helps to sculpt our landscapes. Great urban design reminds us of such fundamental processes. Photograph by Frederick R. Steiner, January 18, 2014.

Each author in *Nature and Cities* offers a sense of direction, purpose, and model for how landscape architecture, architecture, and planning can continue to move forward and be taken more seriously, to be engaged in community life at every scale and in every city and town in the world. This may well mean that a new generation of practitioners will need to explore pathways other than the traditional design and planning office and become instruments of enlightenment and change in occupations still very much in need of such care: notably, engineering, transportation, utilities, agriculture, resource industries, and commercial development—which, with too few exceptions, remain behind the times.

Imagine engineers embracing the tenets of ecological design and planning as they create roads, parking lots, interstates, impoundments, and other basic infrastructure. Imagine those engaged with municipal management as well as agricultural, industrial, transportation, and utility sectors abandoning single-purpose thinking and embracing something grander and more impactful in providing benefits than does a single endeavor. Imagine a young adult being able to swim in clean waters in Rio's Guanabara Bay, a utility company finding a safe and not just the shortest path for the transfer of power and natural gas, a corporation building parking lots that percolate and repurpose runoff, a citizenry knowing that all human life begins and ends with nature, the source of all life. Imagine that.

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[1] To which Yi-Fu Tuan, the world-renowned geographer responded, "Is it Andy Warhol who said that he is biased in favor of the city? Why? Well, one can find nature in the city, but one cannot find the city—not even a small token of it—in the midst of nature." Personal email to George F. Thompson. October 23, 2015.

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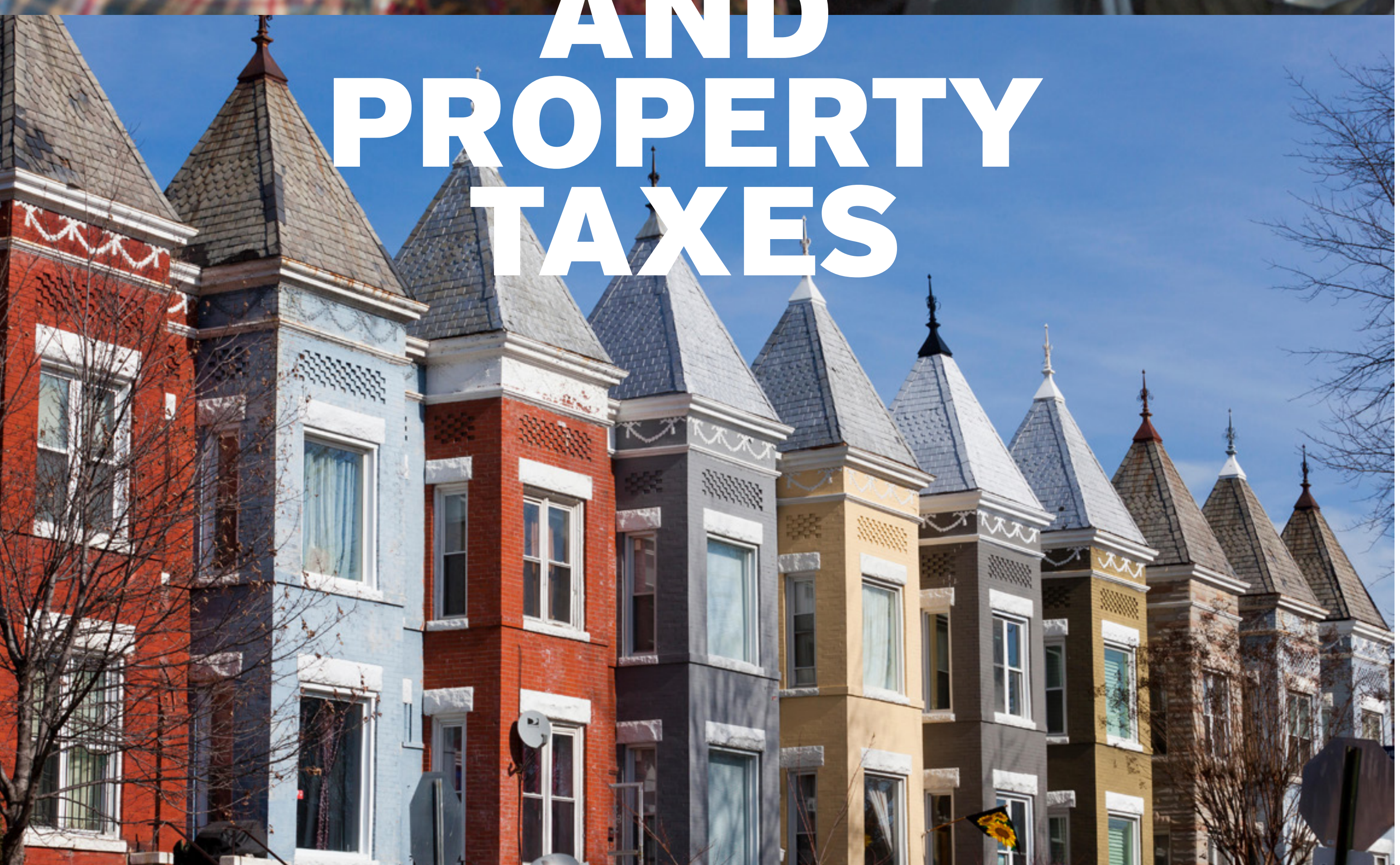


SCHOOL FINANCE AND PROPERTY TAXES

By Joan Youngman

This feature is excerpted from A Good Tax: Legal and Policy Issues for the Property Tax in the United States, *by Joan Youngman, scheduled for publication in April 2016.*

SOME OF THE MOST SIGNIFICANT POLICY DISCUSSIONS concerning the property tax do not deal with the tax itself but rather with the use of its revenue to support local public schools. This vigorous and long-running controversy highlights the role of the property tax, but the tax itself is of secondary importance to the substantive points at issue, such as the amount of total education spending, its distribution across school districts, and the levels of government that are to provide these funds. If income taxes constituted the primary local revenue source and property taxes were imposed at the state level, the school finance debate could continue as it stands, merely substituting the term "income" tax for "property" tax.

School funding challenges generally begin with one basic problem: how best to expand the revenue available to schools in impoverished districts whose own resources cannot support adequate public education, even at tax rates far higher than those imposed by more affluent jurisdictions. This is not a property tax problem, but a *local* tax problem. A needy area restricted to its own income tax or sales tax revenues would find it equally difficult to support a successful school system, no matter how high its tax rates. Some transfer of external resources is essential for districts that cannot fund their vital services independently. This statement may seem self-evident, but it sometimes represents the limit of consensus in this extremely heated debate.

By itself, this consensus only establishes that no local tax can serve as the sole support for basic services when the local tax base is inadequate for that purpose. This is a far cry

Left: The overwhelming majority of U.S. property tax collections fund local government operations, and the property tax remains the main source of autonomous revenue for most local jurisdictions, including school districts. Credit: Alamy.

School funding challenges generally begin with one basic problem: how best to expand the revenue available to schools in impoverished districts whose own resources cannot support adequate public education. . . . This is not a property tax problem, but a *local* tax problem.

from demonstrating the unfairness of the property tax or any other local tax. But the traditional use of the property tax as a primary support for local schools has sometimes given rise to that implication.

Although the property tax generally functions as a local tax in this country and provides the largest share of independent local revenue, this has not always been the case. Before widespread adoption of state sales and income taxes in the twentieth century, property taxes were a major source of revenue at the state level. At the same time, many local jurisdictions also impose other taxes, such as sales or income taxes. Nevertheless, the overwhelming majority of U.S. property tax collections fund local government operations, and the property tax remains the main source of autonomous revenue for most local jurisdictions, including school districts. Therefore, debate over reliance on local resources to fund education generally questions the fairness of using property taxes as the primary means to finance local schools. It is important to clarify the extent to which the property tax itself is at issue in this debate, and the extent to which it is simply the most commonly used instrument for raising the revenue whose distribution and use is in question.

The Property Tax and Equalization of School Funding

Property taxes were most dramatically linked to the equalization of school funding in the 1971 California *Serrano* decision, which ushered in a

Per-pupil spending in California has plummeted since 1971, when the *Serrano v. Priest* decision decoupled school finance from the local property tax on the grounds that disparate property values in Baldwin Park (left) and Beverly Hills (right) led to constitutionally unacceptable variations in public school budgets. Credit: realtor.com.

new era of state constitutional challenges to education finance. In that case, the California Supreme Court found that divergent local property tax bases led to constitutionally unacceptable variations in school budgets: "The source of these disparities is unmistakable: in Baldwin Park the assessed valuation per child totaled only $3,706; in Pasadena, assessed valuation was $13,706; while in Beverly Hills, the corresponding figure was $50,885—a ratio of 1 to 4 to 13. Thus, the state grants are inadequate to offset the inequalities inherent in a financing system based on widely varying local tax bases."[1] Within a decade, California had pioneered a new system of centralized school finance. Instead of districts setting their budgets on the basis of local revenues, budget decisions were made for each district at the state level.[2] The initial phase of school finance reform in California focused strongly on equalization of basic funding, with the very first judicial decisions seeking to limit variations in per-pupil spending across the state to no more than $100.[3]

The same decade saw California voters lead a wave of property tax limitations with the passage of Proposition 13 in 1978. In the wake of this initiative, the state legislature changed the system for distributing property tax revenue as well. As a result of these measures, state law now governs the property tax rate, the budgets of local school districts, and the distribution of property tax collections. Approximately one-third of property tax revenue is allocated to K–14 school districts.[4] The California experience demonstrates that the property tax can be a tool for centralization and equalization of school finance as well as for decentralization and local variation.

Complexities of Centralized School Finance

Although Proposition 13 closely followed school finance reform in California, the causal connection between the two remains controversial. One perspective considers centralized, standardized school finance and administration to erode homeowners' support for the property tax.[5] "Homeowners were willing to pay higher property taxes if they were convinced this led to quality schools. The school finance litigation movement essentially breaks this tie—local property tax revenues tend now to be redistributed statewide and not directed, on the margin, to local schools."[6] At the same time, other scholars vigorously contest this hypothesis on statistical and historical grounds: "[T]he evidence does not support the claim that *Serrano* caused Proposition 13."[7]

Whatever their connection, these two elements—constitutional challenges and property tax limitations—reinforced one another in shifting authority and responsibility for school funding from localities to the state government. This process also exposed school budgets to new political pressures. At the local level, school spending is often the single most important element of the budget, but wider state needs include public health and safety, transportation, corrections, and higher education. Centralization also carries the challenge of maintaining parental contact and involvement if crucial educational decisions are perceived to be the province of state or other higher-level officials.

The California experience has demonstrated that these concerns should be taken seriously. In 1969–1970, before centralization of its school finance and the introduction of Proposition 13, California ranked 11th among all states and the District of Columbia in per-pupil K–12 spending. By 2013, it had fallen to 36th.[8] Its shortfall in spending is even greater than per-pupil figures indicate, because California teacher salaries, to be competitive, are above the national average. Eric Brunner and Jon Sonstelie observe, "California students performed considerably better in the period before the transformation from local to state finance. . . . This apparent decline in average performance would be less troubling if it were accompanied by equalization across districts and income groups. There is little evidence of equalization across school districts, however." They note that the decline in performance cannot be attributed to resources alone. "The dismal performance of California students on achievement tests is a disappointment, but that performance is due more to the inefficiency with which funds are deployed than to the paucity of those funds."[9] This situation is the result of many complex factors, but it is clear that state support for local education in California has not fulfilled the high expectations of early proponents of school finance reform.

Michigan undertook a major centralization of its school finance system in 1994, but the state's continuing economic difficulties have diminished its ability to maintain funding levels. As in California, changes in school funding were part of a set of sometimes contradictory goals, including educational improvement, enhanced equity, and tax relief. Michigan's 1994 "Proposal A" reduced property taxes dramatically and substituted a number of other sources, such as portions of state income tax collections and revenue from state sales tax increases, for school purposes.

Ten years later, two analysts who judged the results of Michigan's centralization to be "decidedly positive" nonetheless expressed concern that the state's revenue base for its school aid fund was "dangerously vulnerable to cyclical fluctuations."[10] In 2010, the Citizens Research Council of Michigan reported:

> Given the practical realities of the current financing system, state-controlled revenues (directly or indirectly) comprise nearly 85 percent of the total operating funding for local schools. As a result, state, not local, policy makers control the purse strings of Michigan's local schools. . . . In addition to the fiscal challenges posed by Michigan's near-decade-long economic malaise, which have been exacerbated by the Great Recession, public education finances also face another serious long-term problem. Since the early 2000s, the state has failed to come to grips with the dual structural deficits affecting its major operating funds, General Fund and School Aid Fund.[11]

A shift to centralized school finance does not in itself address the issues of adequacy and efficiency crucial to education reform, no matter what tax is utilized as the source of education revenue.

In a little-noticed provision of Michigan's 1994 legislation, typical of the intricacies of such enactments, the state government's former annual payments to the school retirement fund became a local responsibility.[12]

A shift to centralized school finance does not in itself address the issues of adequacy and efficiency crucial to education reform, no matter what tax is utilized as the source of education revenue. The substantive challenges of education reform are larger than the choice of a tax instrument.

Property Taxes and Local Supplementary Spending

Local taxes can also be controversial when they are used to supplement centrally set spending levels. No state is likely to fund all schools at the level the wealthiest districts might set for themselves if they made these budgetary decisions independently. This presents a choice when a state intervenes to ensure that less wealthy districts receive necessary funding. The state may direct resources to needy districts without guaranteeing them a per-pupil budget equal to that of the highest-spending jurisdictions. Alternatively, it may impose spending restrictions that limit the ability of affluent districts to supplement their budget from their own resources. Under the former approach, use of the property tax to increase the local school budget would be acceptable; under the latter, it would not. For example, Michigan does not permit local districts to seek additional tax revenue for school operations. High-spending districts that have seen their funding decline brought a new dimension to school finance litigation by considering legal action against the state.[13]

Excellent school systems can be expected to increase local property values, providing an incentive even for homeowners without children in local schools to support effective education spending.

One of the attorneys who filed the original challenge to California education funding argued that it is unfair to permit parents to raise funds for local schools: "If we have a lousy education system, then the parents of the rich have to be just as concerned as the parents of the poor."[14] The opposing position considers some variations in spending a reflection of legitimate local choice, particularly if parents who cannot supplement baseline budgets may withdraw from the public school system altogether and instead send their children to private schools.

Vermont experimented with a unique approach to the issue of above-average spending after the state's Supreme Court overturned its method of school funding.[15] The legislature responded with Act 60, which from 1999 to 2004 provided a uniform statewide allowance for all elementary and secondary students. At the time, 90 percent of Vermont's school districts were already spending more than that standard amount per pupil. However, under Act 60, districts that chose to spend more had varying amounts of these additional local funds allocated to a state pool to benefit poorer areas. The wealthier a district, the greater the amount that was allocated to this "sharing pool." The state could reallocate more than two-thirds of the funds raised from the wealthiest districts to support schools in poorer districts. As reported in 2004, "Roughly 91 percent of Vermont's school districts receive more funding under the new scheme, and the residents of property-poor districts have actually experienced tax reductions. Taxes have more than doubled in the wealthiest districts, though, and per pupil spending in those districts has decreased. These results engendered an intense response from Vermont's wealthier districts, sparking civil disobedience, local withholding from the state education fund, circumvention of the 'sharing pool' through the use of tax deductions, and an unsuccessful lawsuit challenging the constitutionality of Act 60."[16]

This controversy was a major reason for later legislative change. In Vermont, as in other states, limitations on school budgets also led to extensive private fundraising and the use of charitable foundation grants to replace tax revenues lost to local schools. In California, for example, private voluntary nontax contributions to public schools accounted for $547 million in 2011 alone.[17]

To some observers, the ability of affluent parents to purchase extra educational resources for their children's schools signals a return to the situation that gave rise to education finance court challenges in the first place. A New York teacher expressed the view that the very concept of public education "suppresses all distinctions between groups of individuals as inherently unjust."[18] On the other hand, the opportunity for local support can help foster a broad-based commitment to the public schools.

From Equalization to Adequacy

A 1986 California decision in the long line of related *Serrano* cases offered another perspective on the problems faced by spending equalization. "The adverse consequences of years of effective leveling down have been particularly severe in high spending districts with large concentrations of poor and minority students. Some of the state's most urban districts, with high concentrations of poor and minority students, are high-revenue districts."[19] As this opinion noted, "high wealth" jurisdictions with large amounts of commercial or industrial property can be home to low-income urban residents who could actually lose funding under a strict equalization approach. Many large cities with poor students need to spend more, not less, than the statewide average per student on public education.[20]

Efforts to address the needs of underserved students have shifted the focus of school finance reform from equalization to provision of sufficient funds for adequate achievement. "In 1989, the Kentucky Supreme Court declared the entire state system of public elementary and secondary education unconstitutional and held that all Kentucky schoolchildren had a constitutional right to an adequate education. The decision resulted in a dramatic overhaul of the state's entire public school system, and sparked what many scholars have called the 'adequacy movement.'"[21] Yet it is far easier to calculate differences in funding than to provide an operational definition of an adequate education. This influential decision by the Kentucky Supreme Court interpreted the state's constitutional requirement of "an efficient system of common schools" in terms of seven fairly abstract goals, including "sufficient oral and written communication skills to enable students to function in a complex and rapidly changing civilization" and "sufficient self-knowledge and knowledge of his or her mental and physical wellness."[22]

In the absence of a federal constitutional claim to equality in school finance[23], these cases

Efforts to address the needs of underserved students have shifted the focus of school finance reform from equalization to provision of sufficient funds for adequate achievement. Credit: Christopher Futcher.

are left to state courts. However, challenges to state systems cannot address the most important source of nonuniformity in education spending: differences in spending across states. These are far more significant than differences among districts in any individual state. "[R]oughly two-thirds of nationwide inequality in spending is between states and only one-third is within states, and thus school-reform litigation is able to attack only a small part of the inequality."[24]

Complexities of Per-Pupil Spending

The shift in focus from strict equalization in spending to directing adequate resources to needy districts can weaken the argument against allowing localities to choose to tax themselves to supplement state-mandated revenues. If many disadvantaged and low-performing urban districts need to spend far more than the average per-pupil budget, uniformity will not be an optimal outcome.

Nevertheless, uniform spending will always have an intuitive appeal. In California, decades of centralized school finance have effectively broken the connection between education spending and local property wealth. However, a 2011 report by the Center for Investigative Reporting's "California Watch" illustrated the ways in which per-pupil spending continued to vary widely across districts. The report quoted the president of the Alameda Education Association: "For us not to receive the same amount as other districts near us is like saying, 'We are going to value one child more than another.'" This report went on to describe California's post-*Serrano* funding system:

> In the landmark 1971 *Serrano v. Priest* ruling, the court found that using local property taxes to fund schools resulted in vast differences between a wealthy district like Beverly Hills and Baldwin Park, a low-income community east of Los Angeles.
>
> The Supreme Court ruled that differences in the basic amount spent per student—so-called "revenue limit" funding—had to be within $100 across all districts. Taking inflation into account, the permissible difference is now $350 per student. Although larger differences remain among some districts, disparities in the basic amount districts receive from the state have been substantially reduced.
>
> But that reduction has been wiped out by local, state, and federal funds for close to a hundred different programs. A large part of the money is based on formulas established in the 1970s for meals, transportation, and other services that often have little connection to current student needs.
>
> The inequities the court sought to alleviate with its *Serrano* ruling persist. About two-thirds of districts now spend at least $500 above or below the state average, according to California Watch's analysis.
>
> "What happened since the *Serrano* case is that we tried to equalize base funding for students across the state," said [Julia] Brownley, the Santa Monica assemblywoman. "But since then, we have instituted hundreds of different categorical funds that added to the base. That has taken it to another level and skewed spending again."[25]

Several aspects of this report are noteworthy. From a property tax perspective, perhaps the most significant conclusion is that continuing disparities in district budgets are not the result of differences in local property tax collections, since the allocation of property tax revenue is determined by the legislature and the governor.

Moreover, the goal of equalizing spending to within a few hundred dollars per student across a state as vast and varied as California is inappropriate. Costs of goods and services differ dramatically across regions, and between urban and rural centers. One of the major criticisms of Michigan's centralization of school finance concerned its failure to account adequately for cost differentials faced by school districts in different areas serving different populations.[26] The same criticism was applicable to California.

Many shortcomings of the post-*Serrano* funding system in California were addressed in landmark legislation signed by Governor Jerry Brown in 2013, "the most sweeping changes to the way California funds its public schools in 25 years."[27] This legislation seeks to direct more funds to needy districts, such as those serving low-income students and nonnative English speakers, rather than to equalize spending among districts.

As a numerical measure, per-pupil spending can sometimes offer a misleading suggestion of exactness. The calculations vary according to a multitude of choices about the figures to be included, such as capital expenditures, debt service, adult education, after-school programs, retirement contributions, and state administrative expenses, to say nothing of the many ways in which enrollment may be measured.[28] Appropriations may differ from budgeted amounts, and both may differ from actual spending. Thus, it is possible for the U.S. Census Bureau to calculate New York City's 2011 per-pupil spending as $19,770 and for the City's Independent Budget Office to find that figure to be under $8,000.[29] Comparisons of individual school district budgets can also be distorted if a few very small or remote districts necessarily incur very high per-pupil costs. And of course it goes without saying that the use of school funds, and not the amount of spending alone, is critical to improving instructional results.

All of these crucial issues are far removed from property tax policy, yet property taxes are still used as a convenient target in seeking blame for poor school performance. A 2013 *New York Times* editorial considering the reasons for this country's low ranking in international math and science tests took this position:

> American school districts rely far too heavily on property taxes, which means districts in wealthy areas bring in more money than those in poor ones. State tax money to make up the gap usually falls far short of the need in districts where poverty and other challenges are the greatest. . . .
>
> . . . Ontario [Canada], for example, strives to eliminate or at least minimize the funding inequality that would otherwise exist between poor and wealthy districts.

In most American states, however, the wealthiest, highest-spending districts spend about twice as much per pupil as the lowest-spending districts, according to a federal advisory commission report. In some states, including California, the ratio is more than three to one.[30]

Efforts to reduce schools' reliance on property tax revenue may draw as much or more support from anti-tax activists as from those motivated by a belief that these steps can foster greater equity or educational effectiveness.

After more than four decades of extremely ambitious school finance reform, centralization, and equalization, the deficiencies of California's educational system are not the fault of the property tax. An easy resort to criticism of the tax evades the enormously challenging and far more complicated problems of improving educational outcomes.

Statewide Property Taxes

The fairness of the property tax is an issue in this debate only to the extent that local funding is deemed unfair—and then only when the property tax serves as the local tax source. Therefore, a *statewide* property tax would not be judged unfair in the same way. Some states impose a small surtax on local property taxes and use the proceeds to fund education. But statewide property taxes can encounter serious problems when they are imposed on property values computed through nonuniform local assessment practices.

This was the situation faced by New Hampshire when its school funding system, which relied primarily on the local property tax, was ruled unconstitutional by the state Supreme

CONTINUED ON P. 27

NEW LINCOLN INSTITUTE POLICY FOCUS REPORT

Detroit and the Property Tax

Strategies to Improve Equity and Enhance Revenue

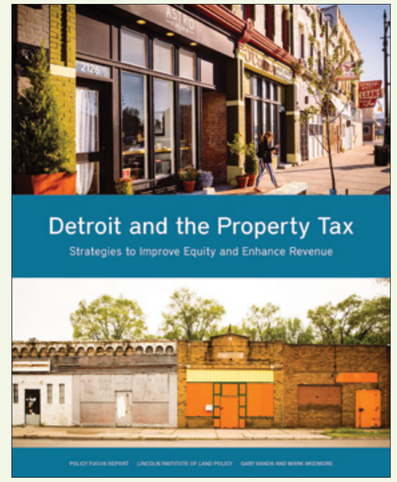
By Gary Sands and Mark Skidmore

HAVING EMERGED LAST YEAR FROM THE LARGEST MUNICIPAL BANKRUPTCY IN U.S. HISTORY, Detroit is still hindered in its recovery by structural flaws in its property tax system, according to this new report published by the Lincoln Institute of Land Policy in November 2015. Detroit's high property tax rates, delinquency problem, inaccurate assessments, and overuse of tax breaks, coupled with limitations imposed by the Michigan constitution and state statutes, continue to expose the city to fiscal stress.

"Property tax reform is just one of several challenges facing Detroit and its residents, but tackling it could have a real impact on the city's economy and quality of life, and could serve as an example for other cities struggling with population and job losses and a shrinking tax base," says Gary Sands, a professor emeritus of urban planning at Wayne State University and coauthor of this report with Mark Skidmore, a visiting fellow at the Lincoln Institute and a professor of economics at Michigan State University.

Detroit and the Property Tax: Strategies to Improve Equity and Enhance Revenue suggests several reforms to help strengthen Detroit's property tax, including the following:

- **Continue to improve assessments:** Vastly overassessed properties have contributed to Detroit's historically high property tax delinquency rate, which has improved but is still about 30 percent—or 10 times the median rate for major cities in the United States.
- **Improve the targeting of tax abatements:** Detroit has granted property tax breaks to about 11,400 properties, or 3.5 percent of all taxable private properties. Research shows that the fiscal benefits of abatements are often outweighed by the costs, suggesting this tool should be used more judiciously.
- **Implement a land-based tax:** A land-based tax is determined purely according to the value or size of a piece of land, with no additional tax for new development or improvements. Many economists favor this approach over the traditional property tax because it discourages holding property vacant or underutilizing land (e.g., a community garden on a prime piece of downtown property), and encourages development.
- **Eliminate the state's taxable-value cap:** Imposed by voters as part of Proposal A in 1994, the taxable-value cap restricts the growth of the tax base as the real estate market recovers. It also gives preferential treatment to longtime homeowners, locking in low effective tax rates at the expense of new buyers.
- **Reduce statutory tax rates:** Detroit has the highest tax rate of any major U.S. city—more than double the average rate for neighboring cities. Lowering the rate could reduce delinquency, help increase property values, and offset increased tax burdens that may otherwise result from reducing abatements or eliminating the taxable-value cap.



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The property tax and other land-based financing mechanisms are a key component of the Lincoln Institute's Municipal Fiscal Health campaign, a multiyear effort to help restore the capacity for local governments to provide basic services and plan for the future. Over the past few years, the Lincoln Institute has been engaged in research on several aspects of municipal fiscal health in Detroit, including papers on land value, tax delinquency, and Michigan's assessment growth limit.

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NEW LINCOLN INSTITUTE POLICY FOCUS REPORT

Use-Value Assessment of Rural Land

Time for Reform?

By John E. Anderson and Richard W. England

THE USE OF PREFERENTIAL TAX TREATMENT TO PROTECT RURAL LAND FROM DEVELOPMENT in the United States has been largely ineffective, with the costs often outweighing the benefits, according to a new report published by the Lincoln Institute of Land Policy. Use-value assessment—the undervaluing of rural properties to reduce the tax burden—has been modestly successful in protecting some land, but many states have implemented the policy poorly, often with unintended consequences.

"While well-intentioned, use-value assessment often does little to protect farmland and open space, while unfairly shifting the tax burden to residential and commercial property owners," said John E. Anderson, who coauthored the report, *Use-Value Assessment of Rural Lands: Time for Reform?*, with Richard W. England.

The report is a digest of a book published in 2014, condensed to give policy makers and their staffs, as well as property tax experts and practitioners, a snapshot of the history and consequences of use-value assessment, as well as options for reform.

Use-value assessment began in the 1960s amid concerns about rapid urbanization. Now nearly every U.S. state permits, and even requires, local assessors to value some rural properties below their fair market value to encourage their continued use for agriculture, or preservation as forestland or open space.

Despite their stated purpose of protecting farms and other rural properties from development, these policies often create tax shelters for the owners of "fake farms" intended for future development, or "hobby farms" that are not true commercial enterprises. These policies also employ inconsistent or inaccurate methods for assessing the use-value of a property, or the value of the farm as currently used—in contrast with the market value, which is typically higher because it considers the potential for development.

In addition, many state policies do not adequately penalize rural landowners who enjoy tax benefits for many years, only to sell their land for development. Finally, use-value assessment often fails to evaluate the public benefit of preserving a particular piece of land or type of property.

The authors recommend several reforms to improve use-value assessment, including:

- Weed out fake farmers by tightening eligibility and reporting.
- Disqualify landowners who have pending applications for rezoning.
- Stiffen penalties that are either nonexistent or weak.
- Standardize the practice of assessing a property's use-value.
- Take the public value of a property into consideration.

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Land and the City

Edited by George W. McCarthy, Gregory K. Ingram, and Samuel A. Moody

AMID UNPRECEDENTED CHALLENGES FACING THE WORLD'S CITIES, the Lincoln Institute of Land Policy has published an ebook that explores the centrality of land to the global urban future, and offers insights for cities grappling with changes in planning, financing, and housing needs.

The ebook, *Land and the City*, is a compilation of the proceedings from the Lincoln Institute's 2014 Land Policy Conference, edited by Lincoln Institute President George W. McCarthy, former President Gregory K. Ingram, and Program Manager Samuel A. Moody.

Drawing from a broad array of expertise and research, the book demonstrates how land policy shapes issues as diverse as the sustainability of local government revenues, the impacts of the foreclosure crisis, and urban resilience to climate change. The book contains four sections:

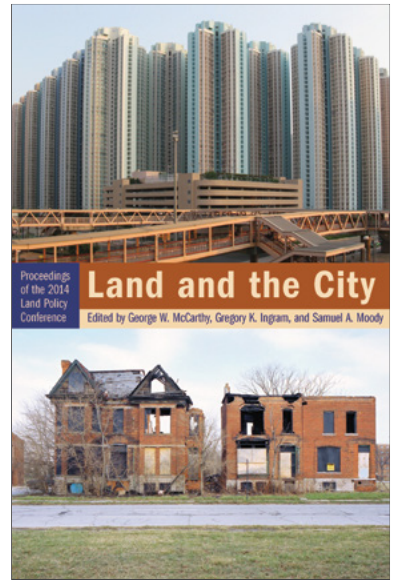
Urban Planning: The book addresses the contexts in which long-term urban planning will occur, from the potentially cataclysmic impacts of climate change to the ageing of baby boomers and the rise of millennials. It highlights the *Atlas of Urban Expansion* as a tool that can help planners navigate the challenge of putting land to the best and highest use while establishing a grid that allows for good mobility and infrastructure.

Taxation: This section describes the state of the property tax, the largest source of revenue raised directly by U.S. cities. It outlines the effects of limits imposed by tax revolts, and the impacts of the Great Recession on the property tax and municipal revenues more broadly.

Housing Finance: This section describes the impacts of the foreclosure crisis on households and neighborhoods, explores the uncertain future of Fannie Mae and Freddie Mac—government-sponsored enterprises for home mortgage finance—and explains the challenges facing China's housing system since the introduction of private housing markets in 1998.

Housing Policy: The final section describes policy approaches to deal with housing shortages and affordability challenges in Latin America, reviews the nature and impact of private communities on residential segregation, and compares the level of socioeconomic segregation in the educational systems of Latin America and the United States.

Chapters in this ebook include: **"Demographic Change and Future Urban Development,"** by Dowell Myers and Hyojung Lee, with commentary by Ann Forsyth; **"Monitoring the Share of Land in Streets: Public Works and the Quality of Global Urban Expansion,"** by Shlomo Angel with commentary by Michael B. Teitz; **"Climate Change and U.S. Cities: Vulnerability, Impacts, and Adaptation,"** by William Solecki with commentary by Matthias Ruth; **"The Past and Future of the Urban Property Tax,"** by Grant Driessen and Steven M. Sheffrin, with commentary by John Yinger; **"Local Government Finances During and After the Great Recession,"** by Adam H. Langley, with commentary by Michael A. Pagano; **"Foreclosures and Neighborhoods: The Shape and Impacts of the U.S. Mortgage Crisis,"** by Dan Immergluck, with commentary by James R. Follain; **"A Realistic Assessment of Housing Finance Reform,"** by Laurie S. Goodman, with commentary by William Apgar; **"An Evaluation of China's Land Policy and Urban Housing Markets,"** by Joyce Y. Man, with commentary by David Geltner and Xin Zhang; **"Housing Policies and Urban Development: Lessons from the Latin American Experience, 1960–2010,"** by Eduardo Rojas, with commentary by Stephen Malpezzi; **"The Relationship Between the Rise of Private Communities and Increasing Socioeconomic Stratification,"** by Evan McKenzie with commentary by Gerald Korngold; and **"Socioeconomic Segregation Between Schools in the United States and Latin America, 1970 –2012,"** by Anna K. Chmielewski and Corey Savage, with commentary by Tara Watson.



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School Finance and Property Taxes

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Court in 1997.[31] New Hampshire is the only state in the nation without either a statewide sales tax or a general income tax, leaving the property tax as an essential mainstay of public services. In response, the state imposed a tax on real property at a rate of .66 percent, based on locally assessed values equalized by the New Hampshire Department of Revenue Administration. A superior court ruled that a statewide tax could not be based on nonuniform local assessments.[32] However, a sharply divided state Supreme Court quickly reversed this decision, finding that a violation of the state's uniformity clause could only be established by "specific facts showing a 'widespread scheme of intentional discrimination.'"[33]

Other states have also made use of local property taxes to fund centralized school budgets. In Michigan, a property tax on nonhomestead property, such as vacation residences and second homes, is dedicated to the state school aid fund. This is not formally a statewide property tax, but districts that do not impose the tax do not obtain full state funding of their education grant. As in New Hampshire, a locally administered tax has become in substance a state levy.

In California, property tax assessments and collections remain a local responsibility, but the state legislature determines the use of the funds. With regard to education, the state determines funding according to a formula known as the revenue limit. As the state Department of Education explains, "A district's total revenue limit is funded through a combination of local property taxes and state General Fund aid. In effect, the State makes up the difference between property tax revenues and the total revenue limit funding for each district."[34] In 2009–2010, the average per-pupil revenue of California school districts was $8,801, and the average property tax received per pupil was $2,210, with state aid accounting for the difference. An increase in property tax revenue would cause a corresponding decrease in state aid. The property tax functions as an instrument of centralized state school finance. As noted, this has by no means eliminated objections to funding disparities between school districts. A report found that, among small elementary districts, the highest revenue limit funding per pupil in 2005–2006 was $31,237, and the lowest was $4,727.[35]

Impacts of Capitalization

School finance sometimes stands in a unique relationship to the property tax through the process of capitalization. The benefits of superior local public services clearly can have a positive influence on the value of real property within a jurisdiction. It is intuitively clear that if two houses are comparable in other respects, including their tax liabilities, the one in a municipality that enjoys a higher level of public services will command a higher price. At the same time, equivalent houses in different municipalities that receive similar services but bear unequal tax liabilities will command prices that reflect this difference in tax payments.

These two aspects of capitalization—the enhancement in price caused by superior services and the diminution in price caused by increased taxes—affect the school finance debate.[36] Excellent school systems can be expected to increase local property values, providing an incentive even for homeowners without children in local schools to support effective education spending. This also offers a reason to oppose wasteful or ineffective spending that may reduce the value of local property. There is no similar financial incentive for homeowners to support state-funded school spending, because their state tax payments do not affect their local property values. This is one potential advantage to local participation in school funding and operation decisions, and one reason for the hypothesis that centralized school finance helped gain support for Proposition 13 in California.

Clarifying the Debate

School finance reform is an immense challenge involving questions ranging from fundamental definitions of adequacy to legal interpretations of state mandates and measurement of costs. Public officials must balance sometimes competing concerns for equalization, adequacy of funding, centralization, and local autonomy. Moreover, school finance reform is only one part of the much larger challenge of improving educational outcomes. In many cases, the role of the property tax is only incidental to these overriding issues. The operation of the tax and the use of its revenues can be structured to support any of a number of desired financing outcomes, and a focus on the property tax as the cause of educational deficiencies can be a distraction from the essential and daunting task of improving school quality. Efforts to reduce schools' reliance on property tax revenue may draw as much or more support from anti-tax activists as from those motivated by a belief that these steps can foster greater equity or educational effectiveness. Debate on the property tax should proceed on its own merits and clearly distinguish between issues concerning its operation and the use of its proceeds.

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