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Environmental Economics

Readings for Homework #1

Reading #1:

A Mighty Wind

By **ELINOR BURKETT**

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The buzz on Cape Cod is grim as summer approaches. There is little talk about beach permits or Kennedy sightings and much talk about dead birds littering beaches, jellyfish clogging waterways and tourism collapsing. Even Walter Cronkite, America's éminence grise, has issued a dire warning from his second home on Martha's Vineyard. "I'm very concerned about a private developer's plan to build an industrial energy complex across 24 square miles of publicly owned land," Cronkite intoned in a radio and television ad recently broadcast across the Cape.

The industrial energy complex in question is a wind farm. And the publicly owned land is really water -- Nantucket Sound, which separates the Cape from Martha's Vineyard and Nantucket. That is where a Boston-based company called Cape Wind Associates hopes to build America's first offshore wind farm. At a cost in excess of \$700 million, Cape Wind plans to spread 130 windmills, spaced a third to a half of a mile apart, across a shoal less than seven miles off the coast of Hyannis. Embedded in the ocean floor, each turbine would tower higher than the top of the Statue of Liberty's torch, its three 161-foot blades churning at 16 revolutions per minute. The wind forest promises to provide Cape Codders, on average, with 75 percent of their electricity, 1.8 percent of the total electrical needs of New England, without emitting a single microgram of greenhouse gases, carbon dioxide, nitrous oxide or mercury and without burning a single barrel of Middle Eastern oil.

The nation's leading environmental groups can barely control their enthusiasm. "We're bullish on wind," says Kert Davies, research director of Greenpeace USA. "Everybody has to ante up in the fight."

But like residents of dozens of communities where other wind-farm projects have been proposed, many Cape Codders have put aside their larger environmental sensitivities and are demanding that their home be exempt from such projects. As Cronkite puts it, "Our national treasures should be off limits to industrialization."

Wind is the world's fastest-growing energy resource, and after a decade of federal and state subsidies kick-starting the industry, creating enough power for more than a million American families in 27 states to tap into the breeze when they flick on their light switches. The country's oldest turbines have been part of the landscape on the Altamont Pass, east of San Francisco, for two decades. And Texans zooming along I-10 west to El Paso top a slight rise to the sight of a vast field of turbines stretching across the mesa. But energy providers in the Northeast, with its

lack of wide open spaces, have long been consigned to dependence on oil, coal and natural gas, with only the occasional small-scale wind project.

Then Jim Gordon got restless. The president of Cape Wind, Gordon is a quixotic sort of energy executive. At the age of 22, he put aside his dream of becoming Francis Ford Coppola and instead started a small company that designed and installed heat-recovery systems for hospitals and factories. Ten years later, after a change in regulatory law opened a niche for independent power producers, he pioneered the building of natural-gas-generated electric plants in New England, a region long captive to highly polluting coal and oil.

Gordon eventually developed seven power plants throughout New England and became a very wealthy man. But with too much "creative juice," as he puts it, to rest on what he had already done, he went looking for the next challenge. Wind became his fixation.

"Imagine tapping into this inexhaustible supply of energy right here in our own state, lowering the cost of electricity, decreasing pollution, reducing reliance on foreign fuel," Gordon said recently as he paced his company's boardroom in downtown Boston. "We're feeding oil cartels whose whims move our economy and our armies. With wind, we can free ourselves from that."

In 1999, Gordon sold off his power plants. With a Department of Energy wind map in hand, he and his team began searching for a place to build dozens of technologically advanced turbines that would plug directly into the region's energy grid. If he had been building in the West, Gordon would have looked to the plains, what those in the wind industry call "the Saudi Arabia of wind." It being New England, he naturally looked to the mountains. But while the ridges of northern Maine offered plenty of gusts, he says, the transmission lines out of such underpopulated areas were already clogged. His eyes then fell on the sea.

Europeans had been constructing offshore wind farms for more than a decade. Just two miles outside of Copenhagen harbor, 20 turbines provide enough electricity for 32,000 homes. The British are developing more than a dozen wind projects in the Irish and North Seas. And a wind farm south of Dublin is expected to produce 10 percent of Ireland's electricity, reducing greenhouse gas emissions by 13 million tons per year.

"The Europeans are years ahead of us because they have had a consistent national policy to support wind power," Gordon said. Undaunted by the federal government's ambivalence toward alternative energy, Gordon sent his engineers out to find the perfect locale for a water-based wind farm. What they needed were fairly shallow waters, protection from the Atlantic's perfect storms, isolation from main shipping channels, easy access to the electrical grid and, of course, wind -- an annual average of 18 miles per hour. The ideal spot, it turned out, is smack in the middle of Nantucket Sound, in the federal waters of Horseshoe Shoal, less than seven miles from the Kennedy compound.

Cape coddors tend to be vain about their environmental sensitivities, so you would think they'd cheer the coming of alternative energy. But supporting the construction of dozens of towering turbines visible from their beaches, boats and waterfront homes is a very different thing from avoiding tern nesting grounds or attending a lecture on shoreline erosion. Even before Gordon

finished his analysis of the shoal's sands, a forceful and well-connected army of opposition had formed.

Wayne Kurker, the owner of Hyannis Marina, set about issuing dire warnings of the "industrial park" being planned for the sound. When his neighbors ignored him, Kurker asked a graphic artist to create a mock-up of the proposed wind project and mailed it to thousands of boaters. His mantra was simple: "Windmills are probably great for the environment, but we shouldn't have to sacrifice the environment to build renewable energy."

Soon, the Alliance to Protect Nantucket Sound was filing lawsuits, mounting political pressure in Boston and Washington and, to bolster its legal case and maximize public anxiety, generating volumes of doomsaying critiques: The turbines will break up and the oil inside will spill into the sound, in a repeat of the Exxon Valdez disaster. Birds will be torn apart in "pole-mounted Cuisinarts." Whales will bump their heads. The annual Figawi race, the Memorial Day weekend Hyannis-to-Nantucket regatta, will have to be canceled. The pristine sound will become the world's 11th largest skyline, flashing 520 red and amber lights.

Representative William Delahunt spearheaded an effort to protect the sound by advocating that it be declared a national marine sanctuary. Robert F. Kennedy Jr. offered his name and voice to the struggle, despite the fact that the Natural Resources Defense Council, the environmental organization for which he is a senior attorney, is a strong advocate of offshore wind development. And the yacht-club set opened its checkbooks, donating money and stock to cover the \$100,000-a-month bills for rent, three full-time salaries, television and radio time, two lobbyists and three law firms.

The alliance's legal strategists are basing their opposition to Cape Wind's proposal on what they say they believe is the absence of sufficient regulation of the private use of federal waters. "A for-profit company is taking advantage of a loophole in federal law," says Isaac Rosen, the Woody Allen-ish executive director of the alliance. "Developers cannot be allowed to swoop down, stick their shovels in the ground and claim a piece of the public waters for themselves. If they're allowed to do so, pretty soon we'll have liquid natural gas processing platforms in the sound, offshore casinos. It will be like the gold rush."

To bolster the legal struggle, Rosen also set about amassing a kind of Cape Cod-style Rainbow Coalition. He brought aboard commercial fishermen to decry the despoiling of their fishing grounds, motel owners worried about an eyesore that would send beachgoers north to Maine and boaters afraid that their small craft could crash up against the massive structures.

Environmentalists across the country chafe at what they see as the hypocrisy of those supposed Greens on the Cape who oppose the windmills. "The opponents of Cape Wind say they support renewable energy, but exactly what do they support?" asks Seth Kaplan of the Conservation Law Foundation, who admits he is more comfortable suing corporations than siding with them. "One or two turbines at town landfills? That's not going to solve global warming."

Kaplan, like many other environmental advocates, also challenges the alliance's penchant for overstatement: whales will not be harmed, because their sonar allows them to avoid large

objects; birds might be killed in the turbines, but at the rate of one or two per year; the turbines contain little oil, so a Valdez replay is impossible.

But nowhere has the alliance been more bitterly accused of peddling half-truths than in local environmental circles. "The sound is not pristine," says Matt Patrick, a member of the State Legislature whose support for the plan greatly compromised his re-election campaign. "You can't get to shore because it is lined with memorials to bad taste. Motorboats race around it, and if you go offshore in the summer, you look back and see yellow brown haze hanging over the mainland. And they make it sound as if Nantucket Sound will look like downtown New York, but the wind farm will be only a thumbnail on the horizon."

Dick Elrick, a Barnstable councilman who has been a ferryboat captain for two decades, is even angrier. "It's tough to listen to the same fishermen who have hurt the habitat by overdragging the bottom of the sound waving the flag of environmentalism," he says. "This isn't environmentalism; it's the not-in-my-backyard syndrome."

Walter Cronkite squirmed a bit at this characterization. "The problem really is Nimbyism," he admitted when I reached him by phone not long ago, "and it bothers me a great deal that I find myself in this position. I'm all for these factories, but there must be areas that are far less valuable than this place is." With prodding, he suggested the deserts of California. Then, perhaps realizing that might be a tad remote to serve New England's energy needs, he added, "Inland New England would substitute just as well."

As we talked, his discomfort was so keen that he interrupted his thought and pleaded, "Be kind to an old man," before summing up. "We have a lot of interesting wildlife, like porpoises and whales," he said. "It's a very important commercial fishing ground, and it's a marvelous boating area for recreational fishermen, for sailors. Last -- but this is not inconsequential -- it will be most unsightly for what is now open bay. Everybody will see it, anyone who wanders on the water, who has a home that faces the water."

This is a familiar refrain from wind-farm opponents across the country who insist on the intrinsic value of their neighborhoods. Activists in the mountains of Tennessee blocked the Tennessee Valley Authority from building 13 to 16 windmills on the ridgeline of Stone Mountain, despite the 33 metric tons of bomb-grade uranium that have been trucked in to nearby Erwin to power nuclear reactors. Their complaints? Up to 120 birds would be sucked into the turbines annually, and Weller's salamanders might be bombarded by spare electrons.

In Rosalia, Kan., residents pleaded the potential damage to native tall grass and the possible harm to the nesting grounds of prairie chickens. In Maine, hikers feared turbines would be within sight of a stretch of the Appalachian Trail. In rural Illinois, one farmer complained that it was "very annoying, seeing all this spinning around."

No matter how baseless the fears, everywhere the polemic is identical: we're not opposed to wind power, but this is not the right place.

"Traditionally, power plants were built in poor neighborhoods, so people living in nice neighborhoods weren't forced to confront the human cost of using electricity," said Greg Watson of the Massachusetts Technology Collaborative, an agency that administers Massachusetts's renewable energy trust. "But unlike coal, oil or natural gas, which you can truck, pipe or barge, Mother Nature dictates where you can locate a wind farm."

This is not, like most anticorporate sagas, a David and Goliath tale. Despite the alliance's portrayal of Cape Wind as an "energy giant," nothing about Jim Gordon suggests evil capitalist or environmental rapist. During his 25 years in the energy business, he has never fallen afoul of the Environmental Protection Agency and has even won the admiration of notoriously feisty Greens. "Jim Gordon is the real thing," says Kert Davies of Greenpeace. "There aren't many entrepreneurs out there willing to take risks to clean up the environment."

The members of the alliance's board are similarly miscast in their self-assigned roles as small-town folk fighting corporate greed. Over the past several years, Wayne Kurker infuriated many Cape environmentalists when he expanded his Hyannis Marina by erecting corrugated metal hangars along the harbor. And the group's president, Doug Yearley, is a former C.E.O. of Phelps Dodge, one of the world's leading copper-mining companies. The alliance's lobbyist, John O'Brien, is a principal in a Boston firm that represents Exelon Generation, one of the largest fossil-fuel generating companies in the United States. Its Washington attorney is Guy Martin, a former assistant secretary of the interior. And, of course, there is the high-profile support of Robert Kennedy Jr.

"I am all for wind power," Kennedy insisted in a debate with Gordon on Boston's NPR affiliate. "The costs . . . on the people of this region are so huge, . . . the diminishment to property values, the diminishment to marinas, to businesses. . . . People go to the Cape because they want to connect themselves with the history and the culture. They want to see the same scenes the Pilgrims saw when they landed at Plymouth Rock." (It should be pointed out that the Pilgrims never saw Nantucket Sound, and if they had, they wouldn't have spied the Kennedy compound.)

Ultimately, though, the Kennedy that the alliance most wants on its side is Ted, but to date he has made only halting efforts on its behalf. It has managed to garner the support of Gov. Mitt Romney, and the state's attorney general, Tom Reilly, has also joined the antiwind brigade. But since Horseshoal Shoal is in federal waters, the state has little control, and opponents hold out scant hope that their junior senator, John Kerry, will lend them his aid. "Kerry's in a box," says Cliff Schechtman, editor of *The Cape Cod Times*. "He owns a house on Nantucket, but he's running for the presidency on a strong alternative energy platform." So they wait for Teddy to swoop in and introduce legislation that will bring Cape Wind's plans to a stop.

Like many serious environmentalists, Deborah Donovan of the Union of Concerned Scientists worries that the alliance's wish will come true and that Kennedy will intervene on its behalf. "Legislative intervention could go on and on every time there's a wind project that politically influential people don't like," she says. "I don't see how anybody would be willing to spend money on this industry."

Greenpeace's Davies suspects that might well be the alliance's real intention. "My gut reaction when I heard about them was that it was a front for the coal industry or some other power-industry sector that didn't want wind power to do well," he says. "And when I see who's on their board, I'm still not entirely sure. But I'm certain they're feeding the forces who want to discredit such technologies."

This sort of stance drives alliance supporters to distraction. "The others believe in green power above all," Yearley despairs. "I'm for trying to jump-start alternative energy, but we need to look at the costs. I don't know what the rush is. We're not going to solve global warming overnight."

The wind supporters at least agree with Yearley on one point: the struggle is ultimately about costs -- it is about the costs of scattering turbines along ridgelines and sounds versus the costs of not doing so. To them, the national illusion that you can have electricity, clean air, a stable climate and independence from foreign oil without paying a steep price is ludicrous.

In fact, in late April, part of the price Cape Cod is already paying began washing up on its shores. En route to a power plant in Sandwich, on the northwest corner of the Cape, a leaking barge spilled 98,000 gallons of oil into Buzzards Bay. Shellfish beds were closed for a month. At least 370 birds died; 93 miles of coastline were tainted by thick globs of black oil.

"This is all about trade-offs," says Kaplan of the Conservation Law Foundation. "How much weight do you give aesthetics against the weight I give the reduction in CO₂? How heavily do you count yachting against the number of people who die from particulate matter? The opponents say they support renewable energy. But it's not acceptable to say that you're in favor of renewable energy only as long as you can't see it."

Kert Davies agrees. "It feels strange for Greenpeace to be fighting a grass-roots group," he says. "And it's sad for me to be arguing against the Kennedys, the only liberals left, and Cronkite, who is everybody's grandfather. But we, as environmental advocates, have to be consistent, and that includes the Kennedys and Cronkite. It's not fair to stomp about how scary global warming is one week, then oppose this the next. It's not fair, in terms of environmental justice, for communities with cash to demand that projects they don't want be built somewhere else."

Elinor Burkett is the author of the coming book, "So Many Enemies, So Little Time: An American Woman in All the Wrong Places."

Reading #2:

Urban Sprawl

By John G. Mitchell

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Tom Spellmire lives with his mother on an 87-acre (35-hectare) farm in Turtle Creek Township, Warren County, Ohio. One county away, to the south, lies Cincinnati. One county north, Dayton. Spellmire's is a place of silos and barns and a turn-of-the-century white frame farmhouse with a green roof. Another farm or two can be seen along the road in one direction. But going the other way, after a mile or so, you begin to run out of green roofs and open fields, and what you see instead are the kinds of manicured lawns and picture windows that for half a century have signified fulfillment of the American dream.

One blustery day late last year I traveled with Tom Spellmire to see how that dream had been playing around Warren County. Harvest time was behind him then, the corn and soybeans taken in, the winter wheat planted. Crops from a homestead of 87 acres (35 hectares) couldn't begin to pay all his taxes, so Spellmire leases 2,400 acres (970 hectares) from other landowners, though this is not as many acres as were once available to him. As we drove south, then west into an adjoining county, he could point to a subdivision (like Four Bridges) or an industrial site (Mitsubishi Electric) saying, "We used to farm all this land."

Spellmire is a tall, ruddy, intensely focused man who served on Ohio's Farmland Preservation Task Force in the 1990s. And he is not happy about the prospects for farming in Warren County. "Believe it or not," he says, "this county is promoted as having rural character, but the zoning codes, in effect, say: 'We want to develop everything.' That's why the county is a haven for real estate investors."

When investors come, can developers be far behind? And behind the developer comes the family in search of a home in the suburbs. We drove past or through a dozen new subdivisions that day. The Meadows at Mason. Heritage Club. Hickory Woods. Simpson Creek Farms. Presently we arrived at a subdivision called Trailside Acres, featuring homes that we figured might sell for up to half a million dollars apiece. At the end of a cul-de-sac Spellmire gestured toward a wide, open field we could see in the distance beyond the slim side yards of the big houses.

"We lease that farm," he said. "We rotate corn, soybeans, and wheat on it." Then he shook his head. "And what I find so ironic is that all these people who live here look out their back windows and see this fine old farmstead. When I'm out there on a tractor, the subdivision kids are hanging over their fences, watching me. And you know what their parents say to the people who own that farm? They say, 'You're not going to sell it for development, are you? *Are you?*'"

An old saying has it that you can't have your cake and eat it too. So it would seem in the land of the manicured lawn and the picture window, the treeless cul-de-sac, the sterile shopping center, the blockbuster mall, the corporate campus, the amorphous parking lot, the clogged highway that inevitably fails to serve its desired function as soon as it is built. Yet most Americans who live among these icons of suburban growth aren't terribly troubled by them. It's the way things are, a tolerable nuisance even if the process does gobble up the land, skewer the fabric of community life, and erode the economic base of older towns and central cities. And perhaps it is tolerable to so many because it has become so familiar. After all, outward growth of this kind has been occurring in most regions of the country since the end of World War II. Region to region the scenario has almost always been the same: As a city ages, crime and other urban problems induce many of the affluent residents to move out.

Cincinnati, for example, a century and a half ago the second most populous municipality west of the Appalachians, had by the 1960s begun to hemorrhage its population into the exurbs of its own county, Hamilton. And by and by Hamilton began hemorrhaging too, into Warren and other adjacent counties.

"Why are the people leaving?" John Dowlin, a Hamilton County commissioner, put the question to himself when I called on him at the county courthouse in downtown Cincinnati. "I don't think it's just a racial situation." African Americans now make up 43 percent of the city's population of 330,000. "All the polls show that the people moving out are unhappy with the public schools. And they want larger homes on larger lots. I think what we're seeing is that same old thing—people wanting a piece of the American dream."

The media and the professional planners have long had another name for it. They call it sprawl. And they have measured its imprint on the nation in a hundred and one different ways. Here are just a few of them:

Seventy million Americans lived in the nation's urbanized areas in 1950; these regions covered some 13,000 square miles (34,000 square kilometers). By 1990 the urban-suburban population had more than doubled, yet the area occupied by that population almost quintupled—to more than 60,000 square miles (155,000 square kilometers).

Phoenix, Arizona, one of the Sunbelt's fastest growing communities, has been spreading outward at the rate of an acre an hour. Atlanta, Georgia, another overachiever, boasts a metropolitan area that is already larger than the state of Delaware.

Sprawl is claiming farmland at the rate of 1.2 million acres (500,000 hectares) a year. Throw in forest and other undeveloped land and, for net annual loss of open space, you're waving good-bye to more than two million acres (800,000 hectares).

Sprawl keeps a person in the driver's seat. The suburban family, on average, makes ten car trips a day (keeping in mind that most families have two vehicles). A commuter living an hour's drive from work annually spends the equivalent of 12 workweeks, or 500 hours, in a car. Traffic delays rack up more than 72 billion dollars in wasted fuel and productivity.

So pervasive is sprawl, extremists are using it to justify their acts of ecoterrorism. Last year in suburban New York several houses and a condominium, all newly built and unoccupied, were set afire; earlier, gasoline was used to torch a luxury house for sale in Colorado.

By 2025 the United States will be home to nearly 63 million more people than are here today. If current trends prevail, they're going to need more than 30 million new homes. Most of those homes will be single-family, detached units built beyond the edge of today's newest suburbs. And most of the families occupying those houses will be in and out of their cars at least ten times a day.

Apart from the fact that the Greater Cincinnati area today ranks high on almost anyone's list of the nation's most sprawl-threatened metropolitan regions, I suspect it was the homing instinct that brought me back to southwestern Ohio. I grew up there through the 1930s and '40s, in a quiet neighborhood only four miles (six kilometers) from downtown Cincinnati, in a house near the end of a winding sylvan street called Garden Place.

My father was in the real estate business. He developed raw land into residential subdivisions. The one I remember best was way out near what was then the far north edge of Greater Cincinnati, in the village of Woodlawn, at a place called Mayview Forest. It really was a forest then—oaks and hickories, and big sycamores down where the West Fork of Mill Creek cut through. I loved going to that forest with my father, seeing the limestone pools in the stream and smallmouth bass in the pools and squirrels in the hickory trees. While I fished or hunted, my father drove wooden stakes into the ground at the corners of his house lots. Now Mayview is just another old subdivision, and the north edge of Greater Cincinnati is miles beyond it, rolling inexorably toward a confluence with Dayton in the once and former cornfields of Butler and Warren Counties.

"This is one of the largest and fastest growing communities in Warren County," Dan Theno was saying with a proud smile. Theno is the director of economic development and community relations for Deerfield Township. We were sitting in his office just off U.S. 22, a thoroughfare so congested at rush hour that the township trustees are begging the state for a major widening. Theno said, "We're more than 25,000 residents now. We're heading on a hundred million dollars of new development a year. We're putting up 600 new homes a year. Sure, good schools here *are* a primary draw. But so are jobs. We've got over 800 businesses right here in Deerfield, including some big names like Hewlett-Packard."

To illustrate how aggressively the township is inviting such growth, Theno handed me a slick 24-page special advertising section that appeared in *Cincinnati Magazine*. Describing Deerfield as "a township for tomorrow," the promotional copy reflected Dan Theno's enthusiasm for the way Greater Cincinnati has expanded into this corner of Warren County. "Where rolling fields of corn once flourished," the lead article declared, "businesses and residential communities have sprouted seemingly overnight, providing jobs and housing for the Tristate population as it moves north. . . ."

But not everyone in southern Warren County feels as cheerful as Dan Theno—or, for that matter, as threatened as Tom Spellmire, the farmer. Over in Mason I turned into a subdivision cul-de-sac to visit the home of Jim and Helen Fox, neither of whom believes that growth necessarily means progress. Jim Fox was born and raised in Mason and is now the city's vice-mayor. Helen Fox is co-founder of a small grassroots group called Balance, which seeks to put a brake on the way Mason and Deerfield have been growing.

"Every other day there was a story in the newspaper," Helen Fox said, explaining what motivated her to get active. "Traffic snarls one day, schools can't keep up the next—800 new students projected for Mason every year for the foreseeable future. And the day after that it's something else. So rather than get sick about it, we decided—Hey! What can we try to do to slow down this runaway train?"

We sat in the kitchen over coffee. The vice-mayor was away at work. She explained that the mission for Balance was just getting out the word about sprawl and maybe finding the funds to buy up a few of the green spaces remaining. "But let's be realistic," she said. "We're not going to change Mason now. It's so far along. I just hope it's not too late to make other parts of Warren County see what's happening so that they can become more thoughtful about how they want to grow in the future."

The urge to move on lies entrenched in most Americans. It is a kind of cultural impulse, as one historian has defined it, "to withdraw from the great world and begin a new life in a fresh, green landscape." Here is the tired city, out there the fresh country, the pastoral Jeffersonian ideal, the sort of place where that fellow Thoreau built a hut and grew beans, far from the townies living lives of quiet desperation.

So begins the succession from country to suburb to sprawl.

Contrary to popular opinion, the suburb was not an invention of the 20th century. By the late 1800s suburbs galore—rural communities brought closer to the urban workplace by the moving miracles of streetcars and steam—ringed most of the older cities in the East. If Boston could have its Concord, then Manhattan would have the Bronx and Staten Island too. After the Civil War there were even a few new communities designed specifically for suburban living. One of the first was Riverside, Illinois, straddling a rail line nine miles (fifteen kilometers) west of the Chicago Loop. Laid out by the landscape architect Frederick Law Olmsted and his park making partner Calvert Vaux, Riverside would become what one Olmsted biographer described as an "agreeable" community, "knit in upon itself by curving streets, a place apart but in convenient reach of a great city."

With Chicago's Riverside as an inspiration, if not a model, the great cities reached out to enlarge or establish other convenient and agreeable places apart—Scarsdale and Swarthmore and Shaker Heights, and Mariemont, right there on the eastern flank of Cincinnati.

At the end of World War II the United States faced an acute shortage of housing and promptly declared war on that. Loan programs previously created under the Federal Housing Administration and the Veterans Administration encouraged the development of single-family, detached houses in the suburbs. And the secret to that effort was the guaranteed fixed-interest mortgage, which in many cases made it cheaper to buy a house than to rent an apartment.

By most accounts nothing moved the suburbs so efficiently toward sprawl as a certain stroke of President Dwight Eisenhower's pen, signing into law the Federal-Aid Highway Act of 1956, which launched a 41,000-mile (66,000-kilometer) interstate highway system. Among other things, the interstates would grease the skids for commerce, industry, and a burgeoning roster of fast-food emporiums to roll off the exit ramps into a countryside previously reserved for corn. And it was thought at the time that the interstates would facilitate the evacuation of central cities in the event that our Cold War nemesis might post an intercontinental ballistic missile into city hall. *Voilà!* A warhead did explode, but it wasn't nuclear. It was sprawl.

One of the most congested peripheral corridors in the nation is the stretch of Greater Cincinnati's own beltway, I-275, as it brushes the topside of Hamilton County to scoop up I-75 from Dayton and I-71 from Columbus before sending them on their converging way to and through inner neighborhoods of the central city. From his Turtle Creek farmhouse north of the beltway Tom Spellmire can get to either of these interstates in less than 20 minutes. That fact alone may explain why, given the bracketing proximity of three superhighways, Warren County is on such a roll, and why Tom Spellmire's farming future isn't.

You'd never guess it from the looks of Greater Cincinnati and most other metropolitan regions around the country, but there is an alternative to mindless sprawl. Some people call it smart growth.

Smart growth rests on the assumption that we can curb sprawl by building better kinds of new communities, by fixing up and filling in the old ones, by finding ways to get people out of at least *some* of their cars, and by going out into the countryside to preserve large tracts of open space before the developers can pave them. This is one tall order, and only time will tell to what extent it can be filled.

One measure of how the nation might be willing to tackle the smart-growth agenda is the ballot box. Last November referenda authorizing bonds or tax increases to pay for land conservation, neighborhood redevelopment, or mass transit passed overwhelmingly; voters said yes to seven of every ten growth-related initiatives in state and local

elections. And in Ohio voters approved a 400-million-dollar measure for redevelopment of abandoned industrial sites and—good news for Tom Spellmire—farmland and green-space preservation.

Smart-growth advocates looking for further encouragement or inspiration are likely to turn to the one state that has managed better than any other to put a brake on runaway sprawl. That state is Oregon. And the man who designed the brake was its governor from 1967 to 1975, Tom McCall.

Early on, McCall ordered a study of land use patterns in the crop-rich Willamette Valley. Among other things, the study found that in the 1960s Clackamas County lost 100,000 acres (40,500 hectares) of farmland to development flowing outward from Portland. Oregon, said McCall, was under siege from a "buffalo-hunter mentality" inserting "cancerous cells of unmentionable ugliness into our rural landscape." The legislature agreed and enacted a law mandating urban-growth boundaries for Oregon's 240 cities. Development was to be contained inside the boundaries. Outside the boundaries, farmland and forestland were to be protected by zoning, the minimum lot size set at 80 acres (32 hectares).

As a result of the rural zoning program, some 25 million acres (10 million hectares) of privately owned farmland and forestland are now shielded from sprawl throughout the state. There's no way you can make a subdivision out of houses on 80-acre (32-hectare) lots.

Oregonians hate two things," Mike Burton was saying. "They hate sprawl. And they hate density." Burton is the executive officer of Metro, Portland's metropolitan planning agency and the nation's first (and, so far, only) popularly elected regional government. Metro oversees land-use plans and the urban-growth boundary that encompasses 24 cities, including Portland, in the three-county region. So when Burton speaks of people hating both sprawl and density, he is simply putting a spin on that impossible human urge to have it both ways. Obviously, to avoid hateful sprawl outside, density somewhat less hateful must be accommodated inside the urban-growth boundary.

And yet today there isn't a whole lot to dislike about Portland. It is a handsome, tight little city of some 529,000 people (up from 366,000 in 1980) tucked into the confluence of the Willamette and Columbia Rivers; its downtown, pedestrian friendly; its residential areas growing *up* rather than out; its growth in transit use outpacing its increase in auto use. Its open spaces range from Forest Park, at nearly 5,000 acres (2,000 hectares) the largest woodland park within any city in the United States, to a riverfront greenway named in honor of the late Tom McCall.

Some critics, mostly homebuilders, contend that Portland's growth boundary is riddled with flaws, that it hasn't been as flexible as the law intended, that it has raised housing prices substantially. But defenders of the system say it's the region's hot high-tech economy that's inflating the housing market. And even with that, they say, it is still less expensive to live in Portland than in San Francisco or Los Angeles, which do not have urban-growth boundaries.

From downtown Portland I rode the MAX (the Metropolitan Area Express aboveground light-rail system) out to the western suburbs to take a peek at a place I'd been hearing a lot about, a place called Orenco Station. MAX has 33 miles (53 kilometers) of light-rail track, and the idea at Metro is to use MAX as a magnet for new residential and commercial development, all within the growth boundary and all within walking distance of a light-rail station. Orenco is one of those stations.

From the station the walk to town center is a long quarter mile (0.4 kilometer). You have the feeling, as you approach across an open field, that you are about to enter a village stylishly snatched from the 19th century. There are cottages and bungalows and Main Street shops with bay windows. When the community's 200 acres (80 hectares) are fully developed, there will be 1,800 units of mixed housing types, including home-office town houses, lofts, and rental apartments.

But just as there are those who would criticize Portland for being less than perfect, so can one also hear groans that Orenco and other so-called new urbanist experiments are simply attempts to disguise America's flight to the suburbs with a new suit of clothes.

Over the years, I became addicted to reading the country through an airplane window. It is a habit I acquired before jet engines took us higher and faster than propellers could, before we began to lose, for any number of unearthly reasons, the visibility one would expect from a cloudless sky. Still, the visibility was pretty good the last time a jetliner lifted me out of Chicago's O'Hare International Airport. I could see the gleaming office towers down in the Loop and the big blue lake and the suburbs sprawling north. The suburbs looked gray.

I had been down there where the gray begins to get green a day or two before, to check out another new railside community called Prairie Crossing. This one is a bit different from Oregon's mixed-use Orenco Station. This one features roomy frame houses with rocking chair porches clustered around or within more than 350 acres (140

hectares) of open space, including an organic farm, a swimmable lake, a restored prairie, and—in place of the concrete gutters and detention basins of a conventional development—a network of grassy swales and cattail marshes to filter the storm-water runoff.

Once upon a time the acres at Prairie Crossing might have been developed with conventional homes and non-native landscaping. But along came Victoria and George Ranney, Jr., with a better idea. Victoria Ranney is a conservation and cultural activist who edited a volume of the papers of Frederick Law Olmsted and who appears to see the land through Olmstedian eyes. George Ranney is president of Chicago Metropolis 2020, a group of business and civic leaders seeking to make some regional sense out of the chaos of Greater Chicago's 1,200 disjointed political jurisdictions.

Among the Ranneys' guiding principles for Prairie Crossing is a statement on economic and racial diversity. It holds that "a mix of incomes and races is essential to the future of our society" and expresses an intent to keep prices down "so that some homes will be within the range of families needing affordable housing." Several African-American families have purchased homes in Prairie Crossing, and the community has done far better on the racial diversity scorecard than many of its neighboring subdivisions. Its homes, however, sell in the range of \$270,000 to \$428,000—hardly affordable to lower- and middle-income families.

When the Ranneys pursued the economic side of their diversity principle and presented a plan that included garage apartments, they hit a stone wall. Officials in Grayslake, Illinois, with permitting authority over Prairie Crossing, resisted the idea of any apartments. So did some of the Crossing's own residents, fearing that apartments might lower the value of their homes. And perhaps there was something else, some kind of unspoken distress, a glimpse through that crack that has never been fixed in the picture window of the American dream: the dread of living next door to a cultural stranger, to a person of noticeably lesser means.

I was mulling the issue of affordable housing as the plane from O'Hare began its wide turn east toward the lake. I was thinking of how, all too often in cities like Chicago and Cincinnati, efforts to make over the inner-ring neighborhoods only reduce what little affordable housing there is. A renovated brownstone downtown may look good to the empty nester who is sick of vehicular life in the suburbs. But where does the dislocated downtowner of lesser means go when he cannot afford to buy into that gentrified brownstone? Move to a new subdivision in the suburbs? Can't often afford *that*. Besides, most new subdivisions don't want him.

In my earlier peregrinations through Deerfield Township and Mason, Ohio—those booming communities with the trophy homes and the 800 businesses strung out between the bracketing interstate highways—I had heard that the lack of affordable housing was beginning to take its toll. I remembered one of Helen Fox's colleagues telling me that the folks in the trophy homes weren't taking the low-paying jobs. "You go into the supermarket and stand in line behind a dozen people," said Tracy Molitors. "And why? The store can't hire enough cashiers to man the empty checkout slots. You see 'Help Wanted' signs all over the place."

Officials in Warren County say that they are beginning to address the problem of affordable housing. In the meantime a consortium of funding partners including the federal government has decided to subsidize JobBus, an expanded reverse-commute service that buses hundreds of workers from downtown Cincinnati to Deerfield and Mason to fill the low-paying jobs the locals don't want.

And then, as my jetliner flew out over Lake Michigan, Chicago's unofficial but effective urban-growth boundary, I remembered George Ranney saying, "Sooner or later it has to come. People have to live closer to their jobs. We've simply got to have housing that's affordable to the workforce where it works."

Then I heard another voice. It was Tracy Molitors', speaking to my memory of our meeting in a kitchen in Mason, Ohio. I had asked her where this national experience called sprawl was going to end. And she said, "End? Why there's no end in sight, the way it's going. We just keep moving farther and farther out until one of these days we'll all be rubbing elbows. All the way across America."