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25 new runways would eliminate most air travel delays in America. Why can't we build them?

50 patent owners are blocking a major drug maker from creating a cancer cure. Why won't they get out of the way?

90% of our broadcast spectrum sits idle while American cell phone service lags far behind Japan's and Korea's. Why are we wasting our airwaves?

98% of African American–owned farms have been sold off over the last century. Why can't we stop the loss?

All these problems are really the same problem—one whose solution would jump-start innovation, release trillions in productivity, and help revive our slumping economy.

Every so often an idea comes along that transforms our understanding of how the world works. Michael Heller has discovered a market dynamic that no one knew existed. Usually, private ownership creates wealth, but too much ownership has the opposite effect—it creates gridlock. When too many people own pieces of one thing, whether a physical or intellectual resource, cooperation breaks down, wealth disappears, and everybody loses.

Heller's paradox is at the center of *The Gridlock Economy*. Today's leading edge of innovation—in high tech, biomedicine, music, film, real estate—requires the assembly of separately owned resources. But gridlock is blocking economic growth all along the wealth creation frontier.

A thousand scholars have applied and verified Heller's paradox. Now he takes readers on a lively tour of gridlock battlegrounds. Heller zips from medieval robber barons

one

THE TRAGEDY OF THE ANTICOMMONS

Big business is acting strangely. IBM recently donated five hundred software-code patents to the public for free use. Explaining the gift, a company executive said, "This is like disarmament. You're not going to give away all your missiles as a first step."[1] But why would IBM voluntarily disarm at all?

Celera Genomics, meanwhile, invested hundreds of millions of dollars to decode the human genome, then donated its massive DNA database to the public. A Celera spokesman said, "I feel like ultimately we did the best for science."[2] Sure. But science doesn't vote at board meetings or drive share prices. Wouldn't Celera's shareholders prefer that the firm try to profit from its investment rather than give it away?

Here's another puzzle: Drugmaker Bristol-Myers Squibb announced that it would not investigate "more than 50 proteins possibly involved in cancer." The patent holders, it explained, "either would not allow it or were demanding unreasonable royalties."[3] Why wouldn't these patent owners agree with Bristol-Myers Squibb to cure cancer now and divvy up the profits later?

These mystifying corporate behaviors are linked. Each results from a principle I call the *tragedy of the anticommons*. What's that? Start with something familiar: a *commons*. When too many people share a single resource, we tend to overuse it—we overfish the oceans and pollute the air. This

tragedy? Often, by creating private property. Private owners tend to avoid overuse because they benefit directly from conserving the resources they control.

Unfortunately, privatization can overshoot. Sometimes we create too many separate owners of a single resource. Each one can block the others' use. If cooperation fails, nobody can use the resource. Everybody loses. Consider the example of a brother and sister who jointly inherit the family home. "All of us as parents want to believe our children will be friendly when we're gone," says an estate-planning expert, but leaving the house to the kids is "a sure recipe for disaster."[4] One wants to rent the house out; the other, tear it down. If they can't strike a deal, neither can move forward.[5] The house sits empty. That's gridlock.

Now imagine twenty or two hundred owners. If any one blocks the others, the resource is wasted. That's gridlock writ large—a hidden *tragedy of the anticommons*. I say "hidden" because underuse is often hard to spot. For example, who can tell when dozens of patent owners are blocking a promising line of drug research? Innovators don't advertise the projects they abandon. Lifesaving cures may be lost, invisibly, in a tragedy of the anticommons.

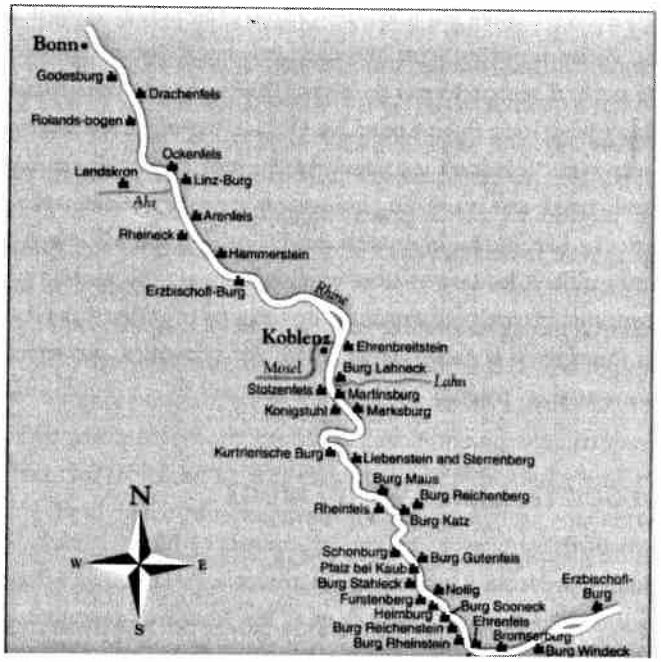
Gridlock is a paradox. Private ownership usually increases wealth, but too much ownership has the opposite effect: it wrecks markets, stops innovation, and costs lives. Savvy companies such as IBM, Celera, and Bristol-Myers Squibb already understand some of the hidden costs of gridlock. Rather than waste time and money trying to assemble fragmented ownership rights that might profit them and benefit us all, many of the world's most powerful businesses simply abandon corporate assets. They redirect investment toward less challenging areas, and innovation quietly slips away.

But this debacle has a flip side. Assembling fragmented property is one of the great entrepreneurial and political opportunities of our era. We can reclaim the wealth lost in a tragedy of the anticommons. After you learn to spot gridlock, you will become convinced, as I am, that the daunting costs it imposes can be reduced or even reversed—not just in the business world but in our political, social, and everyday lives. You will want those who made the mess to clean it up. You may even find ways to profit from

THE ORIGINAL ROBBER BARONS

During the Middle Ages, the Rhine River was a great European trade route protected by the Holy Roman Emperor.[6] Merchant ships paid a modest toll to safeguard their transit. But after the empire weakened during the thirteenth century, freelance German barons built castles on the Rhine and began collecting their own illegal tolls. The growing gauntlet of "robber baron" tollbooths made shipping impracticable. The river continued to flow, but boatmen would no longer bother making the journey.[7]

Today, the hundreds of ruined castles are lovely tourist destinations (figure 1.1 shows the location of a few of these castles along a short stretch of the river). They are bunched so closely together that you can easily bicycle from one to the next. But for hundreds of years, everyone suffered—even the barons. The European economic pie shrank. Wealth disappeared. Too many tolls meant too little trade.



To understand gridlock, we just need to update this image. *Phantom tollbooths* can emerge whenever ownership first arises—and property is being created all the time in ways many of us do not realize. Today's robber barons are public officials, ordinary companies, and even private individuals. Today's missing river trade takes the form of crushed entrepreneurial energy and forgone investment across the wealth-creation frontier. When too many public regulators or private owners can block access to a resource, or can separately set their terms for its use, they harm us all.

Here's a modern tollbooth example: In the 1980s, when the Federal Communications Commission first gave away licenses to provide cell phone service, it divided the country into 734 territories. According to one reporter, "Because the country was cut into so many slices, national service [was] difficult to establish, as if there were hundreds of little duchies, each with its own interests."[9] Today, the United States has less extensive wireless broadband service than a dozen of the leading world economies.

Phantom tollbooths in the airwaves mean that in America, "most of the spectrum is empty most of the time," says Dennis Roberson, Motorola's chief technology officer. "It's absurd." What's the hidden cost of spectrum gridlock? *Forbes* reporter Scott Woolley answers: "One of America's most valuable natural resources sits paralyzed, consigned to uses that time and technology have long since passed by. Old technologies are swamped with excess airwaves they don't use; newer technologies gasp for airwaves they desperately need; and promising industries of the future are asphyxiated."[10]

Americans live in the high-tech equivalent of the Middle Ages, with spectrum gridlock leading to slow wireless connections and dropped calls. Lost economic growth measures in the trillions of dollars; the harm from forgone innovation is incalculable. Gridlock dynamics, not spectrum dynamics, cause this "tragedy of the telecommons."[11]

GRIDLOCK IN LIFESAVING DRUGS

A tragedy of the anticommons can be a matter of life and death. For example, gridlock prevents a promising treatment for Alzheimer's disease from being tested. The head of research at a "Big Pharma" drugmaker told me [illegible] developed the potential cure (call it Compound X)

years ago, but biotech competitors blocked its development. Had my informant's company and the biotech firms joined together, they might have earned a fortune; we might have limited Alzheimer's brutal human toll. But the head of research was frustrated by what was then a problem without a name. He found his answer in an article in *Science* that a colleague and I wrote on the paradoxical relationship between biomedical privatization and drug discovery.[12]

Around 1980, the U.S. government began allowing people to patent a wide range of the medical research tools and tests that underlie drug development. On the plus side, expanding the scope of ownership helped spark the biotech revolution. Private money poured into basic science because of the promise of profits. As biotech firms mapped the pathways in the brain affected by drugs like Compound X, they patented their findings. In many cases, the patents have led to better drug testing and safer drugs.

But the reforms had an unexpected side effect. As patents accumulated, they began to function like phantom tollbooths, slowing the pace of new drug development. Just as boatmen on the Rhine had to pay each baron's toll, the company developing Compound X needed to pay every owner of a patent relevant to its testing. Ignoring even one would invite an expensive and crippling lawsuit. Each patent holder viewed its own discovery as the crucial one and demanded a corresponding fee, until the demands exceeded the drug's expected profits. None of the patent owners would yield first. Biotech firms focused on their private gain, but the sum of their reasonable, individual decisions compromised the market for next-generation drugs such as Compound X.

The story does not have a happy ending. No valiant patent bundler came along. Because the head of research could not figure out how to pay off all the patent owners and still have a good chance of earning a profit, he shifted his priorities to less ambitious options. Funding went to spin-offs of existing drugs for which his firm already controlled the underlying patents. His lab reluctantly shelved Compound X even though he was certain the science was solid, the market huge, and the potential for easing human suffering beyond measure.

My informant asked me to keep confidential the name of his firm and the [illegible]

property rights and does not want to tip his hand to competitors or regulators. But for the purposes of our story, his identity doesn't matter, because he's not unique. Every pharmaceutical firm operates in the same competitive environment. All are reluctant to disclose the patent thickets they struggle through; none will go on the record about the promising drugs they have abandoned.[13]

Biotech researchers are not evil. They are innovators who are doing exactly what the patent system asks of them. As individual property owners, they are behaving rationally. But from the perspective of overall social welfare, they might as well be robber barons. In sparking the biotech revolution, the federal government inadvertently created a property rights environment for basic medical research that can stymie collaboration and block the development of lifesaving drugs.

Compound X is not gridlock's only victim. Not only do research labs lose potential profits, but families lose loved ones and communities lose friends and neighbors. Research scientists have whispered to me about other potential cures blocked by a multiplicity of patent owners. These missing drugs are a silent tragedy. Millions have suffered and will continue to suffer or die from diseases that could have been treated or prevented, but no one protests. Where do you go to complain about lifesaving drugs that could exist—*should exist*—but don't? How do you mobilize public outrage about the gridlock economy in drug innovation?

THE QUAKER OATS BIG INCH GIVEAWAY

Phantom tollbooths capture one aspect of the tragedy of the anticommons. One after another, biotech patent owners demand their cut and block innovation. But there's another way to imagine gridlock. Multiple owners may appear before you all at once. Each holds one jigsaw puzzle piece. Unless you can buy up all the pieces, no one gets to see the whole picture.[14]

The World's Smallest Park?

Here's a small example. Readers of a certain age may recall the Quaker Oats Big Inch Giveaway.[15] In the late 1950s, Quaker Oats bought about


DEED OF LAND

This indenture

KLONDIKE BIG INCH LAND CO. INC.,

Q 578898

FIGURE 1.2: *My Quaker Oats Klondike Big Inch deed.*[16]

one million parcels of one square inch apiece. Then they put deeds to the square inches inside specially marked cereal boxes. After their fictional radio spokesman, Sergeant Preston of the Yukon, talked up the Klondike land on his weekly radio program, the "big inches" became a national phenomenon. Kids fought to get the deeds. I own the deed to square inch #Q578898 (fig. 1.2). You can buy your own big-inch deed on eBay.

The problem is that what's good for Quaker Oats is not necessarily good for the rest of us. Quaker Oats had little reason to focus on future use when it fragmented land for a marketing campaign. Suppose oil and gas were discovered under the big inches. If drillers required access to all the square inches, the oil would have remained underground even if every owner negotiated drilling rights in good faith. Just the cost of finding and bargaining with all the owners would have been prohibitive. Everyone suffers a hidden cost when legal rights diverge too much from the scale of efficient use and when simple tools to reassemble ownership do not exist.

In response to these hidden costs, legal systems have an odd assortment of rules that curb owners' freedom to divide their own property. Everyday annoyances such as real estate taxes and obscure laws such as the "rule against perpetuities" (a complex estate-planning law dreaded by generations of law students) all have an unappreciated role in overcoming or preventing grid-

and freedom of contract. Why shouldn't we be able to use our property as we please? Who would possibly suffer if, for example, we subdivide it too much? Now you can glimpse a unifying reason for such rules: they serve as crude tools for reining in the impulse to create big inches.

Because Quaker Oats saw its big inches only as a marketing device, it did not worry about future land uses and did not bother registering the subdivision or paying land taxes. In time, the unpaid taxes mounted, the big inches were forfeited back to the territory, and the Yukon government auctioned the reassembled land to a single private owner. Almost everyone was happy: Quaker Oats sold a lot of cereal, the Yukon government returned the land to economic use, and my deed became a collectors' item. The disgruntled included a deed owner who tried to donate his three square inches to create the world's smallest national park, and a little boy who sent the local title office four toothpicks so that they could fence in his inch.[18] These disappointments aside, the law did the right thing. Real estate taxes were the hidden hand that gathered up the big inches and averted gridlock.

Fifty Miles of Concrete

There are weightier big-inch tragedies than those created by cereal companies. When you sit on the tarmac because the plane is delayed or circle waiting to land, a regulatory version of big-inch gridlock is a leading cause. Passenger travel has tripled since 1978 when airlines were deregulated. So how many new airports have been built in the United States since then? Only one: Denver's, in 1995. Local communities act like big-inch owners, blocking assembly of the land needed for new airports, both here and abroad.[19] Neighbors do all they can to delay or derail airport projects. Because of their ability to control the local land-use regulatory process, neighbors need not even own the underlying land to create gridlock and prevent needed development.

Neighbors block expansion of existing airports as well. Chicago O'Hare Airport has for decades desperately needed to realign its runways and add new ones. (Each new jet runway is about two miles long.) Neighboring home owners in Bensenville and Elk Grove Village have blocked the work.

les: everywhere we need airport expansion, we get gridlock instead. According to the Air Traffic Controllers Association, "Fifty miles of concrete poured at our nation's 25 busiest airports will solve most of our aviation delays."[20]

Gridlock blocks new capacity in airspace as well as on the ground. In the New York City area, we could decrease air-travel delays by about 20 percent just by streamlining departure and arrival paths. Some of the existing approach routes date back to when pilots found the city by flying down the Hudson and looking out their windows for bonfires and beacons. Last year, regulators floated the first redesign plan in more than two decades. But the new routes would fly planes over well-organized home owners below. So Rockland County, Fairfield, Elizabeth, Bergen County, and suburban Philadelphia immediately filed lawsuits. Meanwhile, air-traffic delays in New York continue to radiate throughout the country.[21]

My all-time favorite news headline on big inches in air travel comes from the *Christian Science Monitor:* "Gridlock over How to End Flight Gridlock."[22] The underlying problem is that America currently lacks a fair and efficient way to assemble land for economic development—whether for new airports or any other large-scale land use. (In Chapter 5, I propose a solution.)

GRIDLOCK IN HISTORY AND CULTURE

Big inches don't involve just deeds in cereal boxes or land for runways. They can also cut us off from our own history and culture. Think of the legacy of Martin Luther King, Jr. A few readers may have marched with him in Selma or heard his "I have a dream" speech on the steps of the Lincoln Memorial. Today, though, most of us know him indirectly, through writings, interviews, recordings, and videos.

For millions of Americans, Dr. King came alive through the Emmy Award–winning public television documentary *Eyes on the Prize.*[23] Clayborne Carson, a history professor at Stanford University, editor of Dr. King's papers, and senior adviser to the documentary, calls it "the principal film account of the most important American social justice movement of

FIGURE 1.3: *A public domain image of Dr. King.*[26]

Henry Hampton talked with hundreds of people who knew Dr. King—fellow activists, family members, journalists, and friends—and drew from many sources in a variety of media: video footage from 82 archives, almost 275 still photographs from 93 archives, and some 120 songs.[25]

To put these materials into the film, Hampton had to secure licenses from their copyright owners. Otherwise he faced possible lawsuits. Many of these licenses expired in 1987 after the film was first broadcast. Over time, rights to these video clips, images, and songs changed hands. Often, the original permission did not include rights to a television rebroadcast or use in new media such as DVDs. Because the *Eyes on the Prize* filmmakers lacked broad permission to use the underlying sources, the film could not be shown again. It sat unwatched for years.

When I talked with Professor Carson about *Eyes on the Prize*, he told me that the film could not easily be made today. Licensing all the pieces of intellectual property would be too daunting. Along with the film's other creators, Carson has spent many frustrating years trying to bring *Eyes on the*

dollars to help buy licenses; other donors gave hundreds of thousands more. Even with these contributions, and a lot of volunteer efforts, the negotiations took nearly twenty years.

What caused the gridlock? Suppose the filmmakers used a film clip of an interview. People who were honored to appear in the original documentary can now demand payment for inclusion in the DVD. Owners of copyrighted songs sung in the background as Dr. King marched can demand compensation. So can the interviewer or narrator. And Dr. King's estate can request compensation for use of his likeness in the film.

To re-release the film, the producers had to jump through a thousand hoops, a process called "clearing rights" in the trade. Clearing rights is not cheap or fast. It has become a business that one practitioner describes as "half Sherlock Holmes and half Monty Hall."[27] While a merchant sailing on the Rhine could easily spot fortress tollbooths, the *Eyes on the Prize* team had to search hard for the many big-inch owners. Bringing the film to DVD meant identifying and locating each of the partial owners or their heirs, then negotiating payment to, or a release from, every single one of them. There is no convenient mechanism for bundling copyrights in the way that unpaid taxes can prompt the reassembly of fragmented, abandoned land.

Clearing rights is especially complex for music. When the *Eyes on the Prize* team could not get the rights to a song, the music had to be removed and replaced without "damaging the integrity of the sequence," according to Rena Kosersky, music supervisor for the project. "We're not talking about digital formats, we're talking about actual reels of material. It's difficult and very time-consuming."[28]

In 2006, the team effort finally succeeded in clearing the rights to (or replacing) each element of the film. *Eyes on the Prize* was re-released.

GRIDLOCK IN THE ARTS

James Surowiecki, writing in the *New Yorker*, argues that "the open fields of culture are increasingly fenced in with concertina wire."[29] He's right. The *Eyes on the Prize* DVD is one example among many thousands of potential new media creations that have been delayed or lost because of gridlock—a

Films and DVDs

Many documentaries are off the market or, worse, never made at all, and our collective history is lost. According to a 2004 study by the American University Center for Social Media, rights-clearance costs have risen dramatically, and clearing rights is now "arduous and frustrating, especially around movies and music."[30] Pat Aufderheide, a study coauthor, said, "Anyone who intends to make products for mass media is really hostage to the terms of copyright."[31] Copyrights may each be reasonable on their own, but together they add up to big-inch gridlock.

A recent *New York Times* story titled "The Hidden Cost of Documentaries" highlights a few other examples: *Tarnation*, a spunky documentary on growing up with a schizophrenic mother, originally cost $218 to make at home on the director's laptop.[32] It required an additional $230,000 for music clearances before it could be distributed. The adorable indie hit *Mad Hot Ballroom*, about eleven year olds in New York City who become passionate ballroom dancers, was almost not screened. Because of struggles to acquire clearances for music rights from multiple owners, many scenes had to be cut. Even having the law on the filmmakers' side didn't matter. The lawyer for *Mad Hot Ballroom* counseled film producer Amy Sewell that "honestly, for your first film, you don't have enough money to fight the music industry."[33]

To see how gridlock works in popular culture, consider *The Brady Bunch* sitcom from the 1970s. Creating a spin-off or sequel required agreement by, among others, each of the actors portraying the Brady kids (and their guardians while the kids were minors), the Brady parents, and Alice, the housekeeper. Getting simultaneous agreement from them all was, to say the least, a challenge.[34] To be fair, gridlock isn't always bad. Sometimes it's mined for comedy. In an episode of HBO's *Curb Your Enthusiasm*, actor Larry David discovers that the only way he can bury an ugly utility wire crossing his backyard is if all his neighbors approve. The deal collapses when one holds out.[35] No one loves the wire, but it stays. On balance, though, society's gains in comic plotlines don't outweigh our cultural losses.

Fans of the late-1980s classic television drama *China Beach* can't buy the series on DVD because the owner, Warner Brothers, cannot clear rights to

to assemble rights to all the classic rock playing in the background.[36] Reporting in *Wired*, Katie Dean writes, "Serious fans want the whole show, not mangled scenes missing critical music."[37] Dean quotes David Lambert, the news director of a Web site covering TV shows released on DVD saying that fans "don't want the songs replaced. . . . They want to see it in the way they originally saw it broadcast, enjoyed it and fell in love with it. You can almost always count on some music replacement. We've got entire theme songs being replaced."[38]

Frank Sinatra's "Love and Marriage" is gone as the theme song on the third-season DVD of *Married . . . with Children*. On the *Wiseguy* DVD, the Moody Blues' "Nights in White Satin" is missing from a critical scene. When you buy DVDs of your favorite TV shows, you'll often find a small disclaimer on the box saying, "Music may differ from televised version," or more optimistically, "Features brand-new music selected by the executive producer."[39] Each of these DVD examples is small, perhaps trivial, but together they add up. The problem of big inches—too many rights in impossibly small pieces—breaks the link between the images and songs you love.

Music

Even hip-hop music is a victim of gridlock. Over the past generation, the sound of hip-hop has changed radically, in part because of a tragedy of the anticommons. Take the classic 1988 album by Public Enemy, *It Takes a Nation of Millions to Hold Us Back*. The album helped transform hip-hop by assembling a musical collage sound from small samples of hundreds of borrowed works. Over this wall of sound, Chuck D rapped:

> *Caught, now in court 'cause I stole a beat*
> *This is a sampling sport . . .*
> *I found this mineral that I call a beat*
> *I paid zero.*[40]

After the "Public Enemy sound" took off, the major record companies responded by asserting rights and demanding license fees for even the briefest samples. The 1988 album could not be made today. In a recent interview, Chuck D said, "Public Enemy's music was affected more than any

sounds, they wouldn't have been anything—they were unrecognizable. The sounds were all collaged together to make a sonic wall. Public Enemy was affected because it is too expensive to defend against a claim. So we had to change our whole style."[41]

If you are one of the millions of fans of the early Public Enemy sound, and if you wonder why hip-hop today often raps over just one primary sample, that's the reason. It's not only that musical tastes have changed. It's that song owners use their copyrights like big inches. The collage sound in rap is gone from the major music labels (though underground versions are still made). An online music activist writes, "It's becoming impossible for any producer—even the wealthiest producers like Puff Daddy—to make collage. . . . Albums like the Beastie Boys' *Paul's Boutique* would be totally impossible to make now. . . . If you take the hip-hop tradition seriously, then you have to acknowledge that the current situation has killed off part of that art form."[42]

Collage is gone; rap "mixtapes" may be the next to go. These compilations of unreleased mixes, sneak previews, and never-to-be released bloopers are often the only way for fans to keep up with the fast-moving genre. Today, mixtapes are a "vital part of the hip-hop world." The major record labels quietly rely on, and sometimes even bankroll, mixtapes to promote their artists. Recently, though, the Recording Industry Association of America had leading mixtape practitioner DJ Drama arrested. According to the *New York Times*, "Now DJ Drama is yet another symbol of the music industry's turmoil and confusion."[43]

Copyrighting a Single Note?

In short, copyright has veered off the rails. A court recently ruled that even an unrecognizable one-and-a-half-second sound clip was copyright-protected and permission was required before the clip could be sampled.[44] One commentator says, "The stories sound like urban legends, only they're true. . . . What's next, copyrighting a single note? We're almost there."[45]

Just as phantom tollbooths cost us Compound X, big inches impose a hidden loss on film, music, art, and history. By making culture too hard to assemble, we silently diminish our own collective wealth. And the

greatest harm occurs along the frontiers of innovation, including artistic expression.

I believe that when Chuck D remixes short samples, much of it should be considered "fair use." Fair use is an old doctrine in American law that allows limited use of copyrighted material without permission or payment. It's not an exception or limitation to copyright. Fair use is part of our original compact with creators. Unfortunately, major copyright holders pressure Congress and the courts to shrink the zone of fair use. So what's the cost?[46] The answer is that an expansive sphere of fair use has a hidden value: it averts cultural gridlock.

The value we get from remixing tiny fragments of culture almost certainly exceeds the harm to individual creators. But Chuck D's record label won't defend this principle. Instead, it hopes to get paid when others sample its albums. The major record labels prefer an extreme version of copyright protection. We, as a creative society, are worse off. People will not stop making music even if their work is sampled.[47]

The fear of copyright lawsuits casts a shadow far beyond what the law grants—or should grant. Facing this shadow, almost everyone preemptively capitulates. As a professor, I run into Chuck D's sampling dilemma when I assemble course readings for my students. Scholars, like artists, tend not to have large budgets for teams of lawyers. Posting article excerpts on my nonpublic class Web site should be "educational fair use"—it's like holding a book for students in the library. Posting on class Web sites may indeed be fair use even under current law, depending on how we interpret some old cases.[48] But universities don't want to risk being sued. Instead of fighting to expand fair use, university lawyers demand that professors obtain copyright clearances and charge students for course readings. I don't want to burden my students with more debt, so I have two choices: either leave out excerpts that I think my students need or become a copyright pirate.

Copyright law has been unable to keep up with changing technological possibilities. In times past (less than a generation ago), the locus of value in the music industry was the individual song or album. Today, much value can be created from assemblies such as multimedia DVDs, mash-ups, and mixtapes. Documentary film[s]

but similar forms of gridlock affect what you see and hear, whatever your tastes in film, music, television, dance, or theater—or law school courses.

To circle back to the *Eyes on the Prize* documentary, at some point we might ask: who owns Dr. King's legacy—we the people or the scattered copyright owners who can hijack our collective memory? For now, filmmakers drop segments for which they cannot clear rights. They digitally mask background images. They cut out offending music. And they delete recalcitrant people.

The Commons and the Anticommons

It's not that lawmakers set out to stop filmmaker Henry Hampton from telling Dr. King's story or prevent rapper Chuck D from creating the Public Enemy sound. Property rights respond to a real problem. Unless we provide some copyright protection, people might have too little incentive to invest in artistic expression. But if we protect ownership too much, we reach gridlock.

To understand the dilemma, it is helpful to start with commons overuse. Aristotle was among the first to note how shared ownership can lead to overuse: "That which is common to the greatest number has the least care bestowed upon it. . . . [E]ach thinks chiefly of his own, hardly at all of the common interest; and only when he is himself concerned as an individual."[49]

Why do people overuse and destroy things that they value? Perhaps they are shortsighted or dim-witted, in which case reasoned discussion or gentle persuasion may help. But even the clearheaded can overuse a commons, for good reason. The most intractable overuse tragedy arises when individuals choose rationally to consume scarce resources even though each knows that the sum of these decisions destroys the resource for all. In such settings, reason cuts the wrong way and gentle persuasion is ineffective. For example:

- We insist on antibiotics for minor illnesses without regard to the collective cost we suffer from the drug-resistant diseases that emerge.
- We blast our air conditioners on steamy summer nights knowing that the sum effect is to increase global warming, and create the need for more air conditioners.
- We drive alone to save a few minutes individually, but we collectively create congestion that slows us all.

In other words, I do what's best for me, you do what's best for you, and no one pays heed to the sustainability of the shared resource. Discussing "Easter Island's end," biogeographer Jared Diamond notes that the large statues of stone heads on a now barren island implicitly make a statement: this was once a lush land able to support a thriving civilization. He asks, "Why didn't [the islanders] look around, realize what they were doing, and stop before it was too late? What were they thinking when they cut down the last palm tree?"[50]

Ecologist Garrett Hardin captured this dynamic well when he coined the phrase *tragedy of the commons.* In 1968 he wrote, "Ruin is the destination toward which all men rush, each pursuing his own best interest in a society that believes in the freedom of the commons. Freedom in a commons brings ruin to all."[51] Since Hardin wrote these lines, thousands have identified additional areas susceptible to overuse and commons tragedy.[52]

In addition, Hardin's metaphor inspired a search for solutions. Most solutions revolve around two main approaches: regulation or privatization. Suppose a common lake is being overfished. Regulators can step in and decide who can fish, when, how much, and with what methods. Such direct "command-and-control" regulation has dropped from favor, however, partly because it fails so often and partly because of disenchantment with socialist-type regulatory control.

These days, regulators are more likely to look for some way to privatize access to the lake. They know that divvying up ownership can create powerful personal incentives to conserve. Harvest too many fish in your own lake today, starve tomorrow; invest wisely in the lake, profit forever. Extrapolating from such experience, legislators and voters reason—wrongly—that if some private property is a good thing, more must be better. In this view, privatization can never go too far.

Until now, ownership, competition, and markets—the guts of modern capitalism—have been understood through the opposition suggested by figure 1.4. Private property solves the tragedy of the commons. Privatization beats regulation. Market competition outperforms state control. Capitalism

trounces socialism. But these simple oppositions mistake the visible forms of ownership for the whole spectrum. The assumption is fatally incomplete.

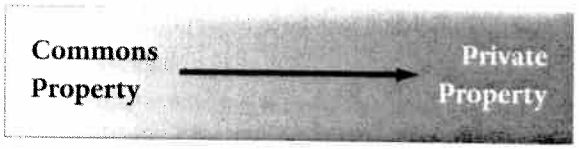


FIGURE 1.4: *The standard solution to commons tragedy.*

Privatizing a commons may cure the tragedy of wasteful overuse, but it may inadvertently spark the opposite. English lacks a term to denote wasteful underuse. To describe this type of fragmentation, I coined the phrase *tragedy of the anticommons.*[53] The term covers any setting in which too many people can block each other from creating or using a scarce resource. Rightly understood, the opposite of overuse in a commons is underuse in an anticommons.

This concept makes visible the hidden half of our ownership spectrum, a world of social relations as complex and extensive as any we have previously known (see fig. 1.5). Beyond normal private property lies anticommons ownership. As one legal theorist writes, "To simplify a little, the tragedy of the commons tells us why things are likely to fall apart, and the tragedy of the anticommons helps explain why it is often so hard to get them back together."[54]

FIGURE 1.5: *Revealing the hidden half of the ownership spectrum.*

Often, we think that governments need only to create clear property rights and then get out of the way. So long as rights are clear, owners can trade in markets, move resources to higher valued uses, and generate wealth. But clear rights and ordinary markets are not enough. The anti-

much as the *clarity.* Gridlock arises when ownership rights and regulatory controls are too fragmented.

Making the tragedy of the anticommons visible upends our intuitions about private property. Private property can no longer be seen as the end point of ownership. Privatization can go too far, to the point where it destroys rather than creates wealth. Too many owners paralyze markets because everyone blocks everyone else. Well-functioning private property is a fragile balance poised between the extremes of overuse and underuse.

GRIDLOCK HERE AND ABROAD

In the chapters that follow, I will show you gridlock battlegrounds in business, politics, and everyday life. Once you know what to look for, you can spot gridlock all around. New stories crop up every day. Here are a few gridlock puzzles people have sent me:

- Why do so many people die of organ failure? One reason is gridlock in organ donation. Even when the deceased was in favor of donating his or her organs, any relative may be able to hold up the donation process. Organs go to waste, and potential recipients get sicker or die, while doctors make sure they have all the necessary permissions.
- What caused a deadly 2002 midair plane collision over Germany? In part it was Europe's air traffic control system, which has been described as "a patchwork, fragmented by national boundaries and differing technical standards." A one-hour flight from Brussels to Geneva requires pilots to make up to nine manual changes in radio frequencies. Besides the occasional collision, this system "wastes an estimated 350,000 flight-hours a year and costs travelers about $1 billion in flight delays and increased operating costs."[55]
- Why isn't there more clean wind power in the United States? Turbines work reasonably well now, but there is transmission gridlock. The highest wind potential stretches from Texas to the Dakotas: the strongest demand for clean energy is in dense

coastal cities. According to one industry advocate, "We need a national vision for transmission like we have with the national highway system. We have to get over the hump of having a patchwork of electric utility fiefdoms."[56]

- What explains the 98 percent drop in African American farm ownership over the past century? "Heir property" gridlock. Children inherit from parents. The number of heirs multiplies down through the generations. As people scatter across the country, family farms become impossible to manage. What happens next? Often, an outsider buys a share owned by a distant heir and forces a courthouse auction of the whole farm. As a result, the locus of family reunions and cohesion is lost for a pittance.[57]

THE FLIP SIDE OF GRIDLOCK

Every tragedy of the anticommons contains the seeds of opportunity. Individual entrepreneurial effort, cooperative engagement, and political advocacy are the paths to fixing gridlock.

Let's return to gridlock on the Rhine. In 1254, the baron of Reitberg went a little too far. He not only collected unjust tolls but also kidnapped the queen of Holland as she sailed by. This uncivil act prompted the burghers of Worms, a nearby city, to help bankroll the "Rhine League"—a private collective effort to revive trade on the river. The league hired knights, besieged Reitberg, rescued the queen, destroyed a dozen castles, and reopened the Rhine to traffic. But the effort proved hard to sustain. Freelance knights were costly. Neighboring towns, which benefited from trade, failed to chip in. When the league collapsed, the robber barons proliferated anew, and river traffic shrank. More than five hundred years passed with gridlock on the Rhine.[58] According to one boatman's plaintive song:

The Rhine can count more tolls than miles
And knight and priestling grind us down.
The toll-man's heavy hand falls first,
Behind him stands the greedy line:
Master of tolls, assayer, scribe ...

After the 1815 Congress of Vienna, the great European powers finally began removing the offending toll collectors. Then, in the mid-1800s, railroads emerged as a faster, cheaper, and more reliable substitute to river transport. Finally, gridlock eased.

This story illustrates the three distinct paths to overcoming robber-baron tolls: the creation of new markets, cooperation, and regulation. European railway markets eventually substituted for river transport. As a modern analogue, scientists may develop ways to work around patents that block biomedical research. The Rhine League's cooperation also has modern parallels: owners may create "patent pools" or "copyright collectives" to help assemble scattered rights. Finally, modern regulation can be seen as an analogue to the Congress of Vienna. Governments may modify industry regulations to make it more profitable to promote rather than block innovation, and advocacy groups may lobby for better-designed property rights.[60]

The point is that costly underuse can be fixed through individual, joint, and state effort. But first the problem must be identified and named. Because the harm that a tragedy of the anticommons causes is often invisible, we must train ourselves to spot a gridlock economy and then develop simple ways to assemble fragmented property. There is hidden treasure to uncover in business, politics, and even our daily lives.

Since I coined the term *tragedy of the anticommons,* the idea has taken root and started spreading. In 2001, Nobel Prize winner in economics James Buchanan and his colleague Yong Yoon demonstrated my anticommons hypothesis mathematically. They wrote that the concept helps explain "how and why potential economic value may disappear into the 'black hole' of resource underutilization."[61] In 2006, researchers discovered that people do worse negotiating anticommons dilemmas than identical tasks framed in tragedy of the commons terms.[62] Why? Perhaps because the dynamics of underuse are still so unfamiliar.

Now, business schools are starting to teach future MBAs how to recog-

A Window into Real Estate Gridlock

When the *New York Times* wanted a new headquarters a few years ago, it persuaded New York City to confiscate a site in Times Square.[1] The city displaced fourteen landowners and fifty-five businesses using what's called *eminent domain*. Eminent domain is the process through which a government condemns a resource, takes it for a public use, and pays *just compensation* to the private owner. This can be a fast way to assemble land, but it can be quite unfair to those whose land is taken—just compensation, as we shall see, is not always so just. Unfortunately, the more equitable alternative, buying the land on the open market, is costly and often fails. The United States lacks a good, fast way to assemble land for needed economic development.

When the *Times*'s confiscation was in the news, many people saw it as an example of a big, powerful corporation bullying the little guys. I thought, this is a "big-inch" dilemma. Here's a seedy block in Times Square consisting of many low-value parcels—parking lots, peep shows, novelty stores—not worthless, but a substantial underuse of some of the world's most valuable real estate. The *Times* imagined the fragments combined, with a sleek new skyscraper unlocking hidden value. Even if the way they combined the parcels was self-serving and unfair, the new value was real. Standing in Times Square, it is a short mental step to notice that cost of big-inch land fragmentation—the problem of *block parties*—is national and general.

I identified the second form of gridlock in land when a student spoke up in a law school class I was teaching on co-ownership and partition law. My student told the class how gridlock caused her family to lose its farm. As land passes down through the generations, ownership can become quite fragmented. Once there are too many owners, cooperation fails, and the farm is sold. The big-inch image makes my student's dilemma clear. When ownership is fragmented to a small scale (such as a fractional co-ownership interest) and ordinary use is on a larger scale (such as a farm), then you have a *share chopper* dilemma.[2]

Later I saw Native American families facing this dilemma, and Irish Americans with the same story deep in their family histories. Much Native American–owned land sits idle because of how the government broke up tribal reservations a century ago. A recent Supreme Court decision noted that on the Sisseton-Wahpeton Lake Traverse Reservation in North and South Dakotas, "an average tract [of forty acres] has 196 owners and the average owner undivided interests in 14 tracts."[3] Often, fractionated land cannot be sold, mortgaged, or put to any productive use. When bad law creates gridlock in land, people suffer brutal cultural, social, and economic harms.

Block parties and share choppers are core examples of tragedies of the anticommons: multiple owners blocking one another from putting resources to their most valuable uses. The third form of gridlocked land arises in the real estate development business, and extends the anticommons concept into the regulatory arena. As a property law professor, I often talk with developers. I ask them how many regulators stand between their initial ideas and breaking ground. Many developers go bankrupt waiting for an endless list of regulatory approvals. They complain that the hurdles add up to a legal environment in which they can "build *a*bsolutely *n*othing *a*nywhere *n*ear *a*nyone"—that is, a *BANANA republic*.[4]

Across America, BANANA republics have ratcheted up the cost of buying housing and doing business. In the highest-cost cities, people worry about building "affordable housing," but the real problem is too much bad and uncoordinated regulation that drives up housing prices for everyone. When the gauntlet of regulators resembles robber barons on the Rhine, then you have a BANANA republic. BANANA republics don't involve fragmented ownership as such. Instead, they are a nice example of fragmented and gridlocked decision making: too many cooks spoil the broth.

Gridlock matters. Block parties, share choppers, and BANANA republics are an unnecessary drag on the economy and a major source of tragedy for so many families. But there is good news, too. Value can flow again if we can free up land stuck in gridlock.

Block Parties

Let's take a closer look at the economic, political, and moral stakes in real estate gridlock, starting with *block parties*.[5] In the late 1990s, the *New York Times* told New York City that land on Eighth Avenue between Fortieth and

Forty-first Streets would be a good spot for a new headquarters—or else the paper might move 750 employees to New Jersey (as if!). Mayor Rudy Giuliani and Governor George Pataki agreed to hand the land right over, even though the city did not own the site. So it used eminent domain to take the real estate. When *60 Minutes* came to investigate, *Times* executives ducked its cameras and refused to comment.[6]

New York gave the site to the *Times* (and to developer Bruce Ratner, an important Giuliani fund-raiser) for the "fair market value" of about $85 million, a figure reached by adding up the separately appraised values of the underlying parcels and leases. But the real market value of the assembled land could have been up to three times higher, as much as $250 million.[7] The discrepancy in values for part of one Times Square block suggests how much value is frozen in gridlocked land.

Eminent domain is one way to unlock that value. But it's a crude solution. No one ever explained to Sydney Orbach, the owner of a well-kept sixteen-story building on the site, or his neighbors, why their land should be so capriciously sacrificed for a "public use" (fig. 5.1). Orbach was willing to sell, but the *Times* did not negotiate with him. Why bother with voluntary market transactions when you can get the state to take the land you want? In addition, the *Times* asked that the long-term leases in Orbach's building be broken. One tenant, Scot Cohen, had run his family's well-known business, B&J Fabrics, from the building since 1958. Cohen says, "You just don't think things like that can happen in this country. . . . You work hard to build something up, and then someone who is bigger than you can take it away."[9] Under U.S. law, compensation of tenants after confiscation is often negligible.

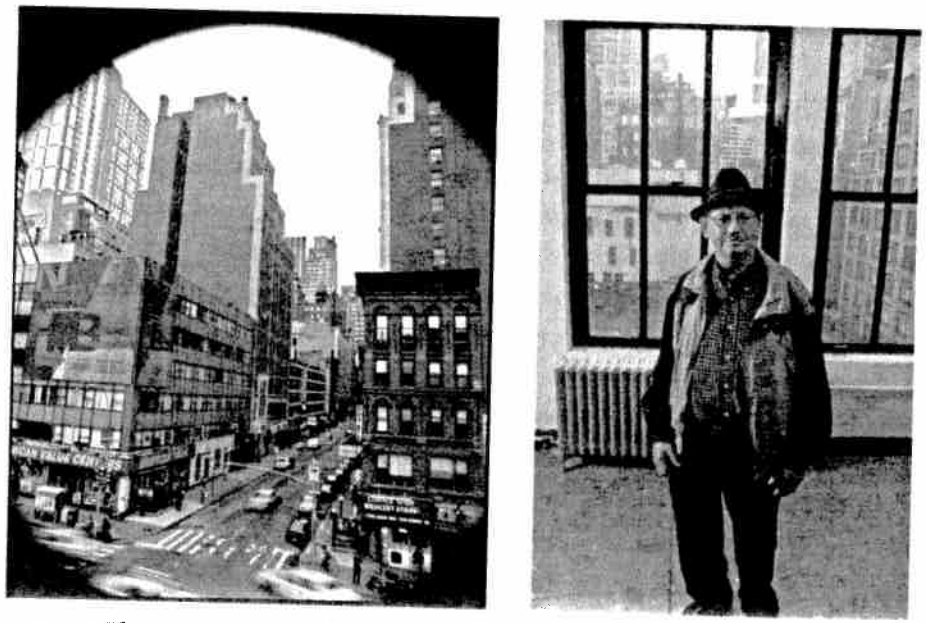


FIGURE 5.1: *The Times Square site (left) and Sydney Orbach (right) in his building taken by the* New York Times.[8]

Stratford Wallace's family had owned another building on the site for more than a century. The city justified the condemnation on the grounds that Wallace's building was "blighted," but as far as I can tell that was just a legal fig leaf with no real content. "I challenge them," Wallace told *60 Minutes*. "This is not blighted property."[10] Challenging a "blight" designation, however, is a losing game, as I teach my law students. In this case, the "blight" designation was created after the *Times* had already struck its deal with the city.

The city slowly ground down the former occupants' remaining legal challenges.[11] Meanwhile, the new *Times* building went up. Today, the *Times* headquarters is an architectural delight. Staffers occupy a lovely and convenient new workplace. Up to $165 million in real estate assembly value was created as if by magic and generously transferred, off the books, from the city to the *Times* and to Ratner.[12]

The One-Way Ratchet

Land is much easier to break up than to put back together—land transactions work like a one-way ratchet. Land becomes more and more fragmented, times change, and the scale of ownership no longer matches the optimal scale of use. Imagine an ordinary residential community in decline. The city eyes the area for much-needed economic redevelopment. A private developer is willing to build on behalf of a shopping mall or auto factory (or the *Times*). But these engines of economic growth work on a fast timetable. They need assembled, available land right away. In my hypothetical (and all too common) neighborhood, the parcels are small and the buildings run-down, or "blighted" in development lingo. How is the investor going to bundle the land together?

Assembling the land through tax forfeitures, the solution to the origina Quaker Oats Big Inches, is not the answer. Generally, people don't fail tc

pay taxes on contiguous valuable parcels. In parts of the Bronx or Flint, Michigan, mass forfeiture left a checkerboard of city-owned sites interspersed with failing private ones—the worst of all possible outcomes from an urban-development perspective. Even if the parcels were contiguous, run-down areas dominated by tax forfeitures are often unattractive sites for shopping malls, stadiums, factories, or residential subdivisions. Cities can't wait for large valuable parcels to be forfeited back.

How about prohibiting fragmentation? Outright prohibition on subdivision makes little sense. Usually an owner's decision to break up land creates value, at least for a while. That's the genius of individual decision making in markets. Regulating subdivision, however, can make sense. Cities have created "exaction schemes" that require developers to pay the added costs that fragmentation and development impose on the public—for example, extra policing, schools, infrastructure, roads, utilities, and environmental degradation. But in many cities, exactions have multiplied. For a politician, why not demand concessions far beyond the costs created by the subdivision? The high price of new housing falls on newcomers who don't yet vote in the area; the benefits accrue to existing home owners and voters. When subdivision and other land-use regulations become onerous enough, the result is fewer subdivisions and less construction, which in turn means less affordable housing. We can easily mistake overcrowding in existing units and illegal subdivisions for a housing-affordability crisis, but these social ills are just artifacts of overregulation.

You may be surprised to learn that up to half a million people across the United States (mostly in Texas, New Mexico, Arizona, and California) live in illegally subdivided *colonias*—substandard shantytown neighborhoods much like those found in parts of Latin America.[13] While working in Venezuela, Honduras, and elsewhere, I found that poor residents often tried valiantly to conform to the law, but subdivision rules and other urban regulations made it impossible.[14] Subdivision should be easier and more affordable to accomplish, not harder and more costly. The solution to fragmentation isn't to burden subdivision.

What's left for the investor who wants to redevelop run-down real estate? How *should* we assemble land and overcome block parties? As I'll discuss below, the best approach would be to offer people a simple land-assembly tool that they could use when they choose. Many countries offer versions of this tool. The United States, by contrast, has traditionally had only two routes for assembling large sites: private voluntary contracting and eminent domain. Neither does the job well.

Voluntary Assembly versus Eminent Domain

On the voluntary market side, developers try to buy land secretly over the course of years and even decades using dummy buyers and "shill" corporations.[15] Why the secrecy? Negotiations frequently collapse when owners discover that an assembly is in process. Each owner (much like a patent owner in the biotech industry) may try to capture all the gains from assembly, even though there is only one surplus available. If just a few neighbors ask too high a price or refuse to sell, the result is a block party—a minority of landowners with low- or medium-value parcels blocks the majority from benefiting from the sale of land into a high-value assembly.

Voluntary agreements are not impossible, but they rarely work in America and elsewhere in the world (fig. 5.2).[16] In the Times Square example, a few of the fourteen landowners had been trying for decades to assemble the block. But others held out. And the assemblers held out against each other. Block parties are a form of minority tyranny. In deciding whether to hold out, each lot owner does not have to take account of the costs imposed on others or on society at large.

If voluntary assembly risks failure because of minority tyranny (those holdouts), then eminent domain risks success through majority tyranny. That's what the city's

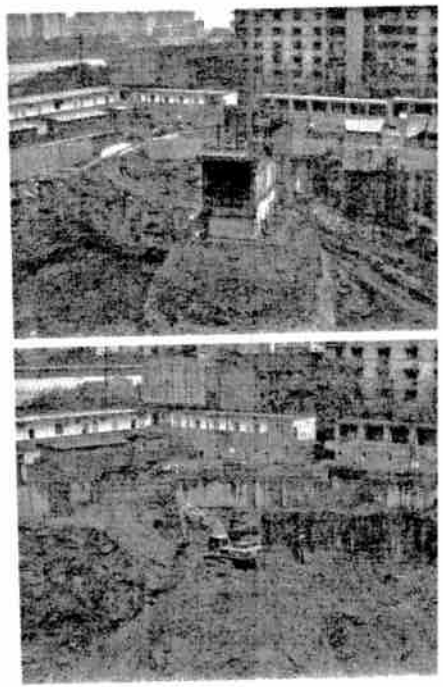


FIGURE 5.2: *A lone holdout in a Chinese real es project, March 2007 (top). The holdout, bull April 2007 (bottom).*[17]

confiscation for the *Times* looks like. Developers now specialize in persuading politicians to condemn real estate on their behalf. For example, Bruce Ratner, the *Times*'s partner in Times Square, also organized Atlantic Yards, a seventy-three-parcel, twenty-two-acre project that has cut through local opposition in downtown Brooklyn. To assemble the site, New York will designate the area as "blighted" and condemn the holdout landowners, including some lovely old blocks where houses routinely sell for more than $1 million.[18] Then Ratner plans to knock down existing buildings and (eventually) build a $4.2 billion project with perhaps sixteen skyscrapers and more than six thousand apartments, a twenty thousand–seat arena for the (presently New Jersey) Nets, and much else besides.[19]

Columbia University, where I teach, is in a similar position as Ratner and the *Times*. Space per student is low. Not a tragedy perhaps, but the school needs new classrooms, science buildings, and dorms. Where to put them? For years, the school quietly bought land a few blocks north of the existing campus in Manhattanville (or "West Harlem"). But Columbia ended up with "checkerboarded" parcels, like big inches in the magical parking lot (and like the Native American lands I discuss below). Voluntary deals went only so far. So Columbia called on New York to condemn the Manhattanville holdouts. The university wants to fill in the checkerboard and create a contiguous, buildable site for a new campus. To disarm local opposition, Columbia has offered millions in inducements to Harlem neighbors and the city—jobs, schools, and other benefits.[20] So far, the university has jumped through the initial regulatory hoops, including approvals from key city and state agencies, but even eminent domain places many phantom tollbooths ahead of development.

Eminent domain can overcome the minority tyranny of holdouts, but it routinely leads to lengthy political fights, corruption, and unfair redistributions of property. Why do people fight eminent domain so vociferously? When their land is taken, owners get paid "fair market value." What's wrong with that? The answer is that anytime you say your property is not for sale, you are valuing it above fair market value. Otherwise, you'd have a "for sale" sign out front. You may have private subjective value in the location of your home, the strength of your community, or the local goodwill you've created for your business. Although these values are real, they are hard to measure and none are compensable on condemnation. Nor are you entitled to any of the gains resulting from the assembly itself. Even if you could be fully compensated in a financial sense, you may still object if you are forced to leave on someone else's say-so—this is a harm to your sense of personal dignity and autonomy.[21] These financial and nonfinancial harms lead wealthier landowners to invest in deflecting condemnations to less politically organized areas—often lower-income and minority neighborhoods. The most vulnerable communities cannot push confiscations further down the road. The bulldozer stops with them.

Not surprisingly, these coercive transfers have become a controversy magnet. A modern, dynamic economy really needs to assemble land for economic development. Eminent domain, though, accomplishes this task through a frankly political process. To increase their tax base, local governments are essentially transferring land from private party A to private party B and driving off politically powerless citizens—all without serious legal constraint. Offering developers confiscated land becomes part of city-suburb competition for growth and creates a spiral of interstate giveaways. Conveniently, none of these transfers shows up in any public budget.

The pace of condemnation waxes and wanes, but it has been an important part of state power since the earliest days of the American republic. We love it when government assembles someone else's too fragmented land, especially when redevelopment spurs economic growth, creates jobs, and boosts tax revenue for our benefit. But we get furious when people we care about are expropriated for dubious redevelopment projects. Until we come up with a better solution, eminent domain is the best answer cities have to the costly problem of block parties.

Susette Kelo's Home

Maybe courts can police against eminent domain abuses. I doubt it. Consider Susette Kelo's story:

> In 1997, I searched all over for a house and finally found this perfect little Victorian cottage with beautiful views of the water. . . . I spent every spare moment fixing it up and creating the kind of home I always dreamed of. I painted it salmon pink, because that is my favorite color.

FIGURE 5.3: *Susette Kelo (left) and her home in New London, Connecticut (right).*[23]

> In 1998, a real estate agent came by and made me an offer on the house on behalf of an unnamed buyer. I explained to her that I was not interested in selling, but she said that my home would be taken by eminent domain if I refused to sell. . . . Her advice? Give up. The government always wins.[22]

In 1998, the City of New London, Connecticut, condemned Kelo's house and transferred it to a private developer (fig. 5.3). The Institute for Justice, a libertarian public interest law firm, chose Kelo as a good plaintiff for its test case on eminent domain. It filed suit on her behalf to stop the city's development plans and managed to assemble an unlikely array of litigation allies, including the NAACP, AARP, and the Cato Institute. Such an alliance is a testament to the muddled politics of gridlock.

Kelo v. City of New London went to the U.S. Supreme Court, which ruled five to four against Kelo in 2005, concluding that this condemnation was permissible.[24] Although unremarkable from a constitutional perspective, the decision created a political storm. "We lost the Supreme Court case, but we're ultimately going to win in changing the way that eminent domain is going to be used in this country," says Dana Berliner, a senior lawyer for the institute.[25] Since the Court's ruling, there have been dozens of state legislative initiatives to curtail eminent domain for economic development.[26] Kelo's house was not demolished. Instead, New London agreed to move it to a nearby site, where it should have a plaque memorializing the institute's creative litigation (and fund-raising) strategy.

As a matter of routine constitutional law, the Supreme Court decided *Kelo* correctly even if the underlying facts may seem troubling. In every generation, a case like *Kelo* has come to the Court, and every time the Court has ruled that the Constitution allows states to decide how to use their eminent domain power. There is little room for federal or judicial supervision.[27] This is as it should be. State and local legislatures, not federal judges, are the experts in discerning the interests of local voters and promoting their general welfare. If people are unhappy with how eminent domain is being used, the right place to complain is at the legislative level.

Despite the hullabaloo raised by *Kelo*, eminent domain is little used these days compared with decades past. Think back to the heyday of highway construction in the 1950s. Large amounts of land were confiscated, but this was often justified as necessary for fighting communism. (President Eisenhower sold the interstate highway system in part as a national defense project.) Building networks such as highways and railways usually does not raise intense opposition to eminent domain as such, even if those directly affected fight to shift the route. People accept that networks are legitimate "public uses." It's hard to imagine how basic infrastructure such as highways and railways could get built without condemning land. But the 1950s '60s, and '70s also saw less justifiable, massive "urban renewal" projects that condemned and bulldozed mostly poor, urban minority communities.

If it's not new, why has *Kelo* become a cause célèbre? By framing the issue as "eminent domain abuse," the case touched a cultural nerve. However, cutting down on eminent domain by increasing federal and judicial policing is not the answer. There must be a better way to respect the interests of the politically powerless and still assemble land.

A Solution: Land Assembly Districts

Despite what the anti-eminent domain activists would have you believe, there is far too *little* land assembly for economic development in the United States today, not too much. The enormous premium paid for assembled parcels—up to a $165 million markup for the *Times*'s land assembly—attests to the acute shortage of large buildable sites in this country. To rephrase the public policy dilemma: must we choose between voluntary contracting with its holdouts and eminent domain with its capricious destruction? No. This is a false choice. Our anticommons lexicon can help us get past the old debate.

The key to solving the puzzle is to notice that land assembly involves gridlock. Once you see that, you can begin to imagine alternative solutions that combine the best of voluntary assembly and eminent domain. Recall the hybrid solutions to "limited access" commons and anticommons dilemmas that I've shown you throughout the book. When fish were being overharvested, Australia created "tradable fishing quotas"—a new form of private property that gave fishermen reason to conserve scarce fish stocks. We also have patent pools, copyright collectives, and spectrum packing.

Even in a tradition-bound area such as land, sometimes we create new forms of property if we spot gridlock.[28] When the new forms stick, they let people overcome gridlock with minimal government intrusion. For example, fifty years ago, condos and residential associations were a novelty—they hopped from European law through Puerto Rico and across the rest of the United States, and they eventually revolutionized how we live. It was unimaginable in 1960 that condos would become the dominant form of new housing in America. Yet we went from less than 1 percent of Americans living in "common interest communities" in 1970 to almost 20 percent of the total U.S. population—more than fifty-seven million people—living that way in 2006.[29]

The meteoric rise in condo living reflects how powerfully this ownership solution unlocks hidden value. Condos permit dense, overlapping ownership in areas needing housing—with easy-to-administer tools for fixing tragedies of the commons and anticommons. Today, home buyers demand, and developers supply, condo boards or residential associations for most new housing in the United States. People want to control their neighbors even if they must suffer oversight in return.

Condos are not the only new gridlock buster for land. Have you ever wondered why some downtown blocks have extra-nice garbage cans, street benches, trees, and have their own security and maintenance staffs? Look closely at the garbage cans, and you'll see a plaque like "Provided by the Main Street Business Improvement District." Business Improvement Districts (BIDs) are a new property form that bounced from Canada to New Orleans in the 1970s. They were adopted by New York in the 1980s. Now, more than a thousand BIDs exist nationwide.[30]

In a sense, BIDs are like condos retrofitted onto a commercial area to create amenities beyond those publicly provided. After a majority of adjoining business owners vote to create a BID, it becomes mandatory for all owners in the district. No free riders here; everyone has to chip in to pay for the amenities. The BID collects and spends money to create a nicer shopping experience. Before BIDs, cities underprovided local public goods, but the loss was hard to see: a steady trickle of consumers deserting the area for suburban malls that had ample parking and a safe, clean environment. BIDs gave merchants a tool to solve invisible gridlock in provision of urban shopping amenities. Old downtowns can now compete with new shopping malls.

Can a similar strategy of property-form creation help us solve gridlock in land assembly? Yes. The best reading of *Kelo* is that the Supreme Court is telling states that land assembly is their problem, and they should experiment with solutions. Here is one experiment that states could venture.

In a recent *Harvard Law Review* article, my colleague Rick Hills and I proposed creation of Land Assembly Districts (LADs) that could be retrofitted onto existing neighborhoods.[31] The key to LADs is that they fix gridlock by giving neighbors a say in whether their land is assembled for economic development. Governments could authorize LADs just as they passed laws enabling condominiums and BIDs to spring up. LADs would then be available to neighbors who want a quick and easy tool for joining together, negotiating for a share of land-assembly profits, and selling their community. If LADs were handy, neighbors in "blighted" areas could decide for themselves whether to assemble their own land, and government would have

no reason to confiscate their property. By ending gridlock, LADs would make eminent domain for economic development obsolete. (Eminent domain for highways and other networks would continue, but that practice has been less controversial.)

LADs solve the problem of block parties by giving decision-making power directly to those most affected. Neighbors would have a reason to support cost-justified development instead of only nay-saying and deflecting change. In a LAD, neighbors would create a board—organized like a condo board—to negotiate a neighborhood buyout with potential developers. If neighbors value staying put more than they value the assembly premium, they would vote against the proposed deal, and development would go elsewhere. But if the requisite majority accepts the proposed deal, then all are governed by it. Everyone would get a pro rata share of the assembly surplus. With LADs, most people would be better off, particularly those in poor and minority communities. No one whose land is assembled would be worse off than under the current system: dissenters could opt for ordinary condemnation (bulldozing them today and paying fair market value later on).

The details of LADs are messy, as is any new legal form in the moment of its creation, but they are designed to prevent rip-offs by insiders, developers, or the city; to ensure fair treatment of every neighbor in the LAD; and to respect local political variation. Many details of LAD design are lifted from solutions to gridlock found elsewhere. For example, LADs borrow from a complex legal tool called "land adjustment" that partly solves the problem of land assembly in Germany, Taiwan, Japan, Korea, and other countries.[12] We also take elements from corporate-takeover law, bankruptcy law, and class-action litigation—all legal tools that people have created to overcome other forms of gridlock. LADs are not one-size-fits-all but can be tailored to the needs of the cities that adopt them. For example, cities with large numbers of poor renters may want to give them extra protection in their LAD statutes—perhaps a vote on the proposed deal and a share in the assembly surplus.

Let's give neighbors the legal tools they need so they can decide what's best for themselves and for their communities. In time, LADs could become just another ordinary property form, like condos or BIDs, with many of the same features and limitations. Missing law can be fixed inexpensively—but only if you know what to look for. With block parties, half the battle is spotting the gridlock dilemma. The other half is having the confidence to try experiments on the anticommons side of the property spectrum. Condo law was missing before 1960, BID law before 1980; perhaps we will see LAD law that solves yet another tragedy of the anticommons.

Share Choppers

Share choppers are a second costly type of gridlocked land.[13] We risk creating a share chopper dilemma whenever we give landowners strong reasons to divide land down to the big-inch level and provide no countervailing mechanism to bundle the pieces back into productive use. There are share choppers in every corner of the world where I've worked—rural Bangladeshi villages, burned-out Jamaican slums, struggling Venezuelan shantytowns, and postearthquake zones in Armenia. They are a global phenomenon.

The End of Black Farm Ownership

As a law professor, I often hear insightful stories from students who link their personal experiences with pressing legal debates. A few years ago, when I was teaching the law of partition of co-owned land—a dry subject—one of my African American students told the class the tale of her family's farm. As a child, she had attended wonderful reunions that brought together relatives from all over the United States. They would return to an old farmstead in Mississippi presided over by an elderly aunt who had never left the land. At one point, a distant cousin with a fractional ownership share in the farm wanted cash, so he sold his share. The buyer then forced a sale of the whole farm. The family farm was sold on the county courthouse steps to a local white lawyer. Since the sale, my student's family has not held another reunion.

This story brought co-ownership law to life for me. Several other black students later recounted similar experiences of southern farms that had been in their families for generations and were lost to "partition sales." These stories were one of my earliest encounters with the social costs of