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Gridlock Economy: How Too Much Ownership Wrecks Markets, Stops Innovation, and Costs Lives (Introduction)

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How Too Much Ownership
Wrecks Markets, Stops Innovation,
and Costs Lives

MICHAEL HELLER

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Preface

A few years ago, a drug company executive presented me with an unsettling puzzle. His scientists had found a treatment for Alzheimer's disease, but they couldn't bring it to market unless the company bought access to dozens of patents. Any single patent owner could demand a huge payoff; some blocked the whole deal. This story does not have a happy ending. The drug sits on the shelf though it might have saved millions of lives and earned billions of dollars.

Here's a second high-stakes puzzle: What's the most underused natural resource in America? The answer may be a surprise: it's the airwaves. Over 90 percent of it is dead air because ownership of broadcast spectrum is so fragmented. As a result, our information economy is hobbled. Wireless broadband coverage in America lags far behind that in Japan and Korea. The cost of spectrum gridlock may be in the trillions of dollars.

And another: Why do we waste weeks of our lives stuck in airports? The answer here is real estate gridlock. Since air travel was deregulated thirty years ago, the number of fliers has tripled. But how many airports have been built in America since 1975? One: Denver. You can't build new airports, not anywhere, because multiple landowners can block every project. Twenty-five new runways at our busiest airports would end most routine air travel delays in America.

What caused the potato famine that resulted in a million people starving to death in Ireland in the mid-nineteenth century? Why is African-American

farm ownership 98 percent lower—98 percent lower—today than it was a hundred years ago? How come we can't get clean wind energy from Texas, where it's windy, to the coasts where people actually want green power?

All these puzzles share a common cause. Private ownership usually creates wealth. But too much ownership has the opposite effect—it creates gridlock. Gridlock is a free market paradox. When too many people own pieces of one thing, cooperation breaks down, wealth disappears, and everybody loses.

There has been an unnoticed revolution in how we create wealth. In the old economy—ten or twenty years ago—you invented a product and got a patent; you wrote a song and got a copyright; you subdivided land and built houses. Today, the leading edge of wealth creation requires assembly. From drugs to telecom, software to semiconductors, anything high tech demands the assembly of innumerable patents. And it's not just high tech that's changed. Cutting-edge art and music are about mashing up and remixing many separately owned bits of culture. Even with land, the most socially important projects, like new runways, require assembling multiple parcels. Innovation has moved on, but we are stuck with old-style ownership that's easy to fragment and hard to put together.

Fixing gridlock is a key challenge for our time. Some solutions are entrepreneurial; for example, people can profit from finding creative ways to bundle ownership. Philanthropists can assemble patents for disease cures. Political advocacy will also be necessary. But the first and most important step to solving gridlock is to name it and make it visible. With the right language, anyone can spot links among gridlock puzzles, and all can come together to fix them.



I first glimpsed the paradox of too many owners with my forehead frozen to a Moscow shop window and my mind desperately casting about for something halfway intelligent to report to Igor Gaidar, Russia's deputy prime minister for economic reform.

Back when the Soviet Union was crumbling, I flew to Moscow for the World Bank. Standing on a podium before billowing red bunting and an oversized statue of Lenin, I addressed Moscow's Supreme Soviet on how to create markets in land and housing. Destroying private property was simple; re-creating it from scratch, much trickier. As the joke went, anyone can turn an aquarium into fish soup, the challenge is turning soup back into an aquarium. First you define private ownership, then create owners, then. . . .

The transition from Marx to markets went quickly but not always well. At one point, Gaidar posed a puzzle to my team. A year after his government had privatized storefronts, shelves still remained bare. By contrast, on the freezing sidewalks, thousands of flimsy metal kiosks offered everything imaginable. Gaidar asked, "Why don't the merchants come in from the cold?"

Moscow was cold that winter: it reached minus forty degrees, the only temperature at which the Fahrenheit and Celsius scales converge. Still, Muscovites lined up at kiosks for bread and flowers while I peered into empty stores and talked with merchants. I learned it was easy to set up a kiosk. Just bribe a few officials and pay a Mafia gang for protection. In contrast, opening a store was far more difficult. When Russia privatized commercial enterprises, it split ownership among too many parties, any one of whom could block use—and did. One new owner was given the right to sell the store; a second, the right to lease the same store; a third, the right to occupy it. Looking into those empty stores was my first glimpse, quite literally, of a gridlock economy.

In the years since I discovered this market dynamic, a thousand scholars have tested, verified, and extended the concept. The gridlock paradox is a simple idea that explains a lot. Empty Moscow stores may seem far away, but missing drugs, slow wireless, air travel delays, and a near-infinity of everyday puzzles share this common cause—one whose solutions could jump-start innovation, release trillions in productivity, and help revive our slumping economy.

For example, as this book goes to press in the spring of 2008, the subprime mortgage crisis is in the news. The big investment bank Bear Stearns

has collapsed. Falling real estate prices may tip the economy into recession. The gridlock angle hasn't been reported.

Not long ago, mortgage bankers sized up borrowers before making loans; lenders were a phone call away if home owners had trouble repaying. Not anymore. Investment banks engineered new mortgage instruments that gave larger loans on riskier terms to people with weaker credit. Banks pooled these new mortgages together, then split the pools into bonds with varying risk levels. The details were complex, but the results were magical: financial engineering seemed to transform dodgy mortgages into safe bonds. So long as interest rates stayed low and house values high, everyone made money.

But not for long. Fragmenting mortgage ownership broke the link between borrower and lender. When rates rose and prices dropped, the gridlock features of the new financial instruments came to the fore. There were so many partial owners of pooled mortgages that no one cared to act like an old-fashioned mortgage banker with careful underwriting and loan servicing. Until recently, foreclosure had been the banker's last resort because it's costly for everyone, including the lender. But in the new world of too many owners, widespread foreclosures became inevitable. Scattered owners of pooled mortgages could not easily reach agreement to restructure troubled loans. Today, there's no one for a borrower to talk to at the other end of the phone.

There's a regulatory gridlock story here as well. Mortgage regulation is still based on the old one-mortgage, one-banker model. (It's the real estate analogue to the one-product, one-patent model that makes high-tech innovation so difficult.) New financial instruments fall between multiple federal and state regulators. No single agency can protect the integrity of the financial system as a whole, but each is powerful enough to block the others from stepping on its bureaucratic turf. Regulatory gridlock meant that no one checked as hundreds of billions in dangerous mortgage bonds were created and sold.

By the time you read this, the mortgage crisis may have been sorted out. My point is not to focus on yesterday's story but to say that what is in the news often has a surprising gridlock angle. Too many owners mean too little prosperity.



In the following chapters, I'll take you on a tour of gridlock battlegrounds—from medieval robber barons to modern broadcast spectrum squatters; from Mississippi courts selling African-American family farms to troubling New York City land confiscations; and from Chesapeake Bay oyster pirates to today's gene patent and music mash-up outlaws. Each tale offers insights into how to spot gridlock in operation and how to overcome it.

This book is for anyone who wants to assemble resources for positive change, get a jump on next-generation innovation, or simply understand the hidden workings of everyday life. Nothing is inevitable about gridlock. Every example results from choices we make, and can change, about how to control the resources we value most. We can unlock the grid once we know where to start.

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 wasteful overuse is a *tragedy of the commons*. How do we solve such a

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.

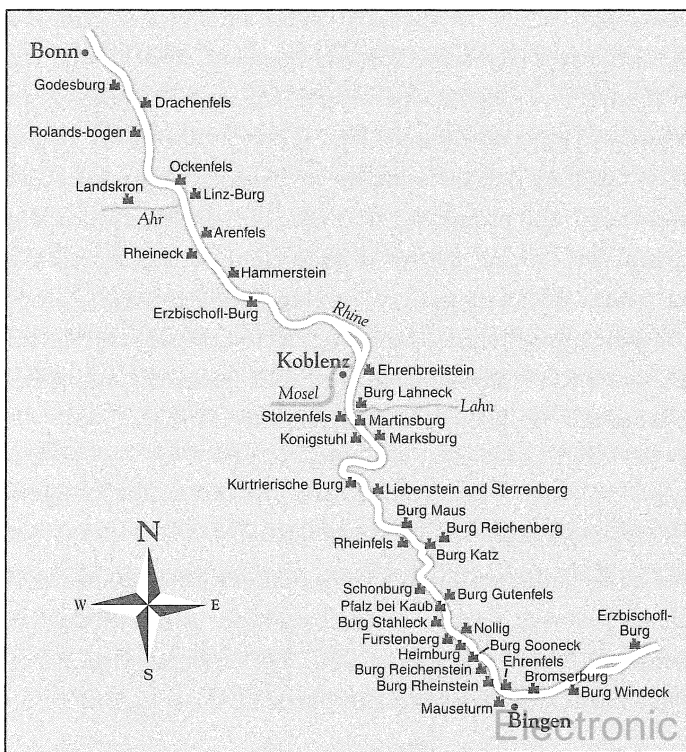
Gridlock is a paradox. Private ownership usually increases wealth, but too much ownership has the opposite effect: it wrecks markets, stops innovation, and costs lives. Savvy companies such as IBM, Celera, and Bristol-Myers Squibb already understand some of the hidden costs of gridlock. Rather than waste 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 assembling ownership. But it takes tools to unlock a grid.

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 that his lab scientists 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 details of Compound X. He still hopes to assemble the needed intellectual

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 twenty acres of scrubland in the Klondike and subdivided it into twenty-

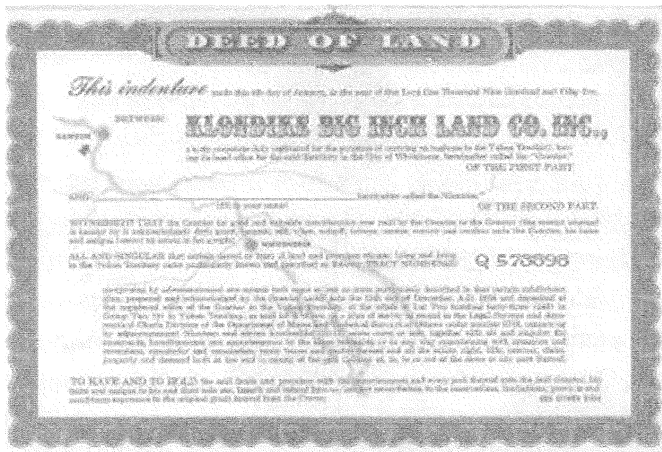


FIGURE 1.2: My Quaker Oats Klondike Big Inch deed.¹⁶

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 dreamed by generations of law students) all have an unappreciated role in overcoming or preventing gridlock.¹⁷ These rules may run counter to our intuitions about individual liberty

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. It's the same in New York City, Seattle, Dallas-Fort Worth, and Los Ange-

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 the 20th century.”²⁴ To make this fourteen-hour documentary, filmmaker



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 Prize* out of the vault. The Ford Foundation donated six hundred thousand

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 vast, unseen world of art and information.

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 all the expensive Motown music used in the show. Same with the late-1970s television show *WKRP in Cincinnati*—its owners have not been able

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 anybody’s because we were taking thousands of sounds. If you separated the

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 or hip-hop music may not be your passion,

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 anticommons perspective shows that the *content* of property rights matters as

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,—
Four men deep they tap the wine.*⁵⁹

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 recognize and resolve gridlock.⁶³ Policymakers are picking up the idea as well: both conservatives focused on misregulation and liberals concerned with

excessive privatization. No matter where you stand, all can agree that gridlock is a losing game.

How could such a fundamental law of economic and social life have escaped our notice until now? There is a joke about two economists who are walking down the street when they see some hundred-dollar bills scattered on the sidewalk. As one of them bends down to pick up the money, the other says, "Leave them alone! If those bills were real, someone would have picked them up already." At times, simple truths are quite real, but we overlook them because they don't fit with our theories. Gridlock is such a truth, a feature of our everyday world that nobody stops to notice.