

JANE JACOBS SYMPOSIUM

November 18-19, 2016
Charlottesville, Virginia

THE MODERNITY OF WORK AND PLACE: JANE JACOBS
AND THE DESIGN OF THE 21ST CENTURY CITY



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FOREWORD

On November 18-19, 2016, the Federal Reserve Bank of Richmond was honored to host a symposium on the work of Jane Jacobs, in partnership with the Jefferson School African American Heritage Center, the city of Charlottesville, Virginia, and the Schools of Law and Architecture as well as the Department of Architectural History and the Community Design Research Center at the University of Virginia.

Jacobs was not formally an urban planner nor an economist, but her writings — in particular, *The Death and Life of Great American Cities*, *The Economy of Cities*, and *Cities and the Wealth of Nations* — have profoundly affected the way many economists think about urban economic issues as well as economic growth. Indeed, Jacobs played a significant role in the development of “endogenous growth theory” through her influence on, among others, Robert Lucas, winner of the 1995 Nobel Prize in Economics.

Lucas’s work attempts to answer the fundamental question of where ideas come from and how they are dispersed. He noted that Jacobs had helped him understand that “much of economic life is ‘creative’ in much the same way as is ‘art’ and ‘science.’” The garment, financial, diamond, and advertising districts of New York City -- the city Jacobs called home for more than thirty years and that inspired much of her written work and her activism -- were just as much intellectual centers as the city’s universities, he argued. “The specific ideas exchanged in these centers differ, of course, from those exchanged in academic circles, but the process is much the same.”

Jacobs’s contributions during her long and productive life were many and varied. We hope that this volume will expand understanding of her work just as her work has helped expand many economists’ understanding of issues fundamental to their profession.

Kartik B. Athreya

Executive Vice President and Director of Research
Federal Reserve Bank of Richmond

INTRODUCTION

Despite having an undergraduate degree in economics, my first encounter with Jane Jacobs occurred in graduate school for urban studies and planning. I can remember thinking as I read *The Death and Life of Great American Cities* and *The Economy of Cities* for classes that this all sounds very similar to concepts discussed in my economics classes—like agglomeration versus specialization, etc.—minus the equations. When Professor Moomaw approached me in 2015 about collaborating on a symposium to commemorate the centennial of Jane Jacobs’s birth, I welcomed the opportunity. More than one-hundred people, including academics, students, policymakers, and citizens, gathered for two days in Charlottesville to explore the redesigned relationship of place, work, and making in cities and regions.

This volume contains a collection of prepared remarks, previously published work and papers presented at the symposium in November 2016. The works have been organized into three sections representing central themes. Section I, entitled “City Complexity,” explores the areas of regenerating urban economic life as well as urban ecology and the resilience of the modern city. The authors show the continued relevance of Jacobs’s “eyes on the street” mantra. Concepts of equity and exclusion are also highlighted.

“City Structure” is the title of Section II. Featuring works by urban planners, architects, and lawyers, this section highlights urban policy and urban resurgence from the seventeenth century in New Haven, Connecticut, to 2041 in Toronto, Ontario, Canada. Knowledge, scope, and scale are key elements of consideration.

The third section, “City and New Work,” brings the reader back to Jacobs’s perspectives on work and place with a reframing for the twenty-first century global city. Authors discuss local economies and their limits as well as the role of networks and the rise of credentialization. The volume also contains brief synopses of events related to the symposium, including the *Jane Jacobs on the Street* exhibit and the *Citizen Jane: Battle for the City* screening.

Given today’s relevance of Jacob’s ideas about cities and their need to “add new work to old” to build the twenty-first century economy, it seems only fitting to be releasing this publication on the fiftieth anniversary of Jane Jacobs’s *The Economy of Cities* (1969).

Shannon McKay

I. City Complexity

Cities of Strangers: What Jane Jacobs Saw

Roberta Brandes Gratz

Introduction: Our next speaker is Roberta Brandes Gratz. She is an award-winning journalist, urban critic, lecturer, and author. In 2003, in collaboration with Jane Jacobs and a small group of like-minded urbanists, Gratz founded the Center for the Living City to build on Jacobs's pioneering work. Among her books are *The Battle for Gotham: New York in the Shadow of Robert Moses and Jane Jacobs*, 2010, and *We're Still Here Ya Bastards: How the People of New Orleans Rebuilt Their City*, 2015. Please welcome Roberta Gratz.

— Dr. Andrea Douglas, executive director, Jefferson School African American Heritage Center, Charlottesville, Virginia

You are a very interesting crowd, and an enthusiastic one, so I am delighted to be here. I want to first offer some thoughts, and then I really hope we can get a little dialogue going in a question period. I am as much interested in the questions and ideas from you as I am in offering whatever thoughts I can give you.

It is time to stop talking about Jane Jacobs's "ballet of the sidewalk," that intricate movement among residents, shoppers, and visitors passing through Hudson Street that she observed and wrote about in 1961 in *The Death and Life of Great American Cities*. In the 1950s, Greenwich Village was an anomaly. Unique among city neighborhoods, filled as it was with artists, bohemians, dockworkers, shopkeepers, and daily passers-by. It was Jacobs's laboratory to observe urban life. But that ballet danced in urban neighborhoods everywhere with a different cast—not just in Greenwich Village. And it dances everywhere today so matter-of-factly that it has become perceived wisdom. It is no longer a new idea. The same is true of "eyes on the street." Everyone recognizes this concept. Even police departments use it in their training courses. There is no need any more to call attention to this, one of Jacobs's unique observations.

Most important, and what is relevant today, is that she provided us with the tools to understand the complexity of the seeming chaos that is the city. At the time she was writing *Death and Life*, the prevailing view was that the overcrowding of cities was the problem—to which the thinning out of the city or moving to the suburbs was the solution. The city supposedly represented anonymity, and the overcrowding was a sign of alienation and frustration. Safety was thought to come from police or private guards. She upended that view.

Jacobs observed and helped the world observe how people live in a city, how they interact, and how all of the components she observed add up to a successful city. Jacobs's work is as relevant today as it was in the 1960s. The fundamental challenge of applying her ideas to today is that she was dealing with a world that was moving glacially. Today, everything happens with speed. She recognized, for example, the potential of gentrification. She called it "over success." It was happening slowly then, but look at it now.

Today, the pace of change is dizzying. Some of her observations have to be reinterpreted and reexamined in today's context. The ideas are applicable, but the systems and the pace of change have accelerated to the degree that interrupting that change locally, from the ground up, is the most monumental of tasks.

And the manifestations of that accelerated change are not obviously just the killer highways or the supersized building projects. Change today comes in many different forms—some subtle and some not—but all much more challenging than any of us can really fathom easily.

Fox example, Jacobs observed the proliferation of suburban malls and even the emergence of urban malls. She and I talked about the ones that were smartly attached to a city's mass transit, like Eaton Center in Toronto or the old World Trade Center Mall in New York. That they were not car dependent was a good thing. But now we are seeing the proliferation of urban malls in New York, for example, at multiple transit centers, erroneously called transit hubs. Now, is that good, just because they are transit accessible? At the same time, stores on streets are closing everywhere, and it is not just because of online shopping. I fear what I see happening in New York is going to happen elsewhere, and I don't think it is a good thing. Urban malls pull life inside and away from the street or away from the city itself. And they are proliferating everywhere. This cannot be good for the future of shopping streets, especially with what's happening with online ordering. On-street stores are disappearing, eroding the street life that defines a city.

What makes it worse is that all these urban malls receive tax incentives that local businesses never qualify for. No chain store or urban mall anywhere should receive tax incentives from a city when, in fact, all their profits leave town for a home office somewhere else and local stores' profits feed the local economy.

The renewed success of cities was unimaginable to most people when Jacobs was writing *Death and Life*. Experts said that what was happening in the '70s, '80s, and into the '90s was too small, ad-hoc, and irrelevant—not enough to rebuild our cities. The experts were wrong. Nonexperts broke with and overcame the stubborn planning orthodoxies of the day. Experts were slow to acknowledge this bottom-up revival. Now, if we are not careful and vigilant, we could become victims of over success.

Jacobs was indeed a brilliant observer and interpreter of city life. But even more, she never hesitated to speak truth to power—to stand up and proclaim the emperor has no clothes, no matter how powerful that emperor was. This is the basic message of the film *Citizen Jane*. Just as important, Jacobs also offered a closet full of new and more effective garments for the emperor.

Many cities are now in trouble—victims of their own success. This is difficult to recognize amid the celebration of now-vibrant urban districts. The lament of gentrification is now heard more and more. Jacobs warned of the danger of over success in too many cities, where now developers

are essentially in charge more than ever. Some push the city to follow old patterns reminiscent of urban renewal. They receive tax breaks for building projects that are too big and too wrong and wind up replacing people, places, and things. In the process, they reshape the city in the image they choose.

Channel Jacobs, all of you—resist the big and the inappropriate. Do not be deceived by the allure of the public-private partnership that is increasingly more private with more public funding and not reflective of local preferences. Go further—recognize the potential of the blighted neighborhoods in your city that the experts claim are irredeemable and that they want to tear down, displacing even more people.

The people still living in those neighborhoods may be low income, but they know what their community needs. Jacobs learned an early significant lesson from public housing residents in East Harlem. They showed her what was lost when the old neighborhood was swept away for new high-rise buildings. Spotlight those people in your communities. Stand with them and tell truth to power. Those communities need help to advance their vision for the future and make it happen.

A lot of good things are happening in cities today that in some way camouflage the negative. The kind of diverse uses, mixes of people, daytime activity, and nighttime vibrancy that Jacobs celebrated is happening all over. But you all know too well that there are negatives that come with this positive change. Channel Jacobs, trust your instincts, challenge the experts, assert your vision, tell truth to power—and you will prevail.

Thank you.

Jacobs's Ideas at Work Today

Kathy Galvin

The request for the city of Charlottesville's support of the Jane Jacobs Symposium came from the Community Design Research Center at the University of Virginia's School of Architecture. As an architect, urbanist, educator, and Charlottesville city councilor, I have followed, both personally and through an urban design focus at the city, Jacobs's work and legacy. Would the city of Charlottesville support a session devoted to "City Work and Equity" at an upcoming symposium on Jane Jacobs and the Design of the 21st Century City? My immediate response was yes, but.

Any session the city funded had to go beyond Jacobs's general ideas on urbanism and grapple with the meaning of "equity" in American cities today. Development issues consume every locally elected official's time and energy nationwide, but in Charlottesville, the impacts of growth and economic change on our African American neighborhoods had to be met head on in light of our city's legacy of urban renewal and Jim Crow. For that reason, I invited Dr. Andrea Douglas, executive director of the African American Heritage Center, to join our conversation.

After several meetings, it became clear that the city's sponsorship had to be in partnership with the African American Heritage Center. This session also had to be public, free, and centrally located at the Jefferson School African American Heritage Center. City funds would be used for the travel and honorarium of speakers who would directly address the issue of equity. Those speakers turned out to be an acclaimed legal scholar on environmental justice, Sheila Foster, and an award-winning journalist on race, redlining, and renewal, Roberta Gratz.

After several more meetings, it became clear to a majority of my city council colleagues that Jane Jacobs's call for an equitable urban economy that supported living wages and small businesses rang just as true in the twenty-first century as it did in the 1960s. By September 6, 2016, the Charlottesville City Council voted to fund the "City Work and Equity" session at the African American Heritage Center. That one packed session on November 18, 2016, has catalyzed many critical conversations ever since.

Charlottesville has faced down many overt threats since then: from assaults by white supremacists on August 12, 2017, to escalating land values that threaten to displace our low-wealth residents in 2018 (caused in part by our own success as an attractive, innovative city). These threats, however, have only doubled our resolve to build even more equitable and sustainable systems of criminal justice, law, planning, zoning, development, economics, environment, and education. Jane Jacobs's call for an equitable urban economy remains relevant and her remedy of an economy that makes and innovates is still a valuable roadmap.

Remarks written on November 1, 2018.

Remarks on Jane Jacobs

June Manning Thomas

It is wonderful to participate in this symposium and to talk about Jane Jacobs. Basically, I am here because of Jane Jacobs, and surely I am not the only person. For my generation, one way we entered the planning profession was to read *The Death and Life of Great American Cities*; that is the only reason I am here. I was a directionless, rudderless undergrad student looking for a major. It was going to be philosophy or it was going to be physics or it was going to be math, I was not sure. It just so happened I took a course in urban sociology and one of the texts was *The Death and Life of Great American Cities*. I have shared my stories dozens of times about the effects of the class on my thinking about my future work on this earth. Therefore, I am standing here before [the photo of] my intellectual “mother,” but even though you love your mother, you may still have to say some hard things.

This talk will explore some of the things we need to consider about her contributions. One of the reasons I have been thinking about her is that two years ago I started using her text again in my undergraduate class, which is an introduction to urban and environmental planning. Before that, I had not actually used her books in several years. What was amazing to me was how she made the class come to life. We had readings from various standard textbooks, but it was her writing that had the vibrancy necessary to make students become interested in urban planning, which is all the more amazing because she was so critical of urban planning. The students actually boycotted the textbook and would only read Jane Jacobs. This reminded me of her power.

It is very interesting that on this panel we have different perspectives concerning her major contributions, offering alternative views of what we see as a summation of Jane Jacobs. We heard that she was really about how you discover things, how you examine the city, and how you examine any social phenomena, which is very true. We heard that she was essentially an urban ecologist, which was also true. But she also considered herself a geographer. This is one of her major contributions, that she can be read in several different ways.

I would like to mention more about her economic perspective. She wrote so much about economies, maybe more about that than about urban ecology, but she is big enough for all of us. I also should mention that some see her as the forerunner of other essential movements; for example, historian Robert Fishman suggests that she is the mother of what we now call smart growth or new urbanism.¹ He even went so far as to say that the foundation of new urbanism is the marriage between the concepts of Jane Jacobs and of Ebenezer Howard, which is particularly interesting because, as you know if you have read her writing, she actually dismissed Ebenezer Howard's theories, as she did everybody else's. But this idea of spatiality of the city and how you make it more livable, an alternative but complementary view of Howard's, is certainly one of her legacies.

So she has many contributions to different fields, but clearly she saw herself as contributing to a discussion of the economy and growth. The first book I read of hers was *The Death and Life of Great American Cities*, but then you had to read *The Economy of Cities*. And then of course you read *The Wealth of Nations*, which I read very early in my career. You realized, after reading these additional two books, that much of what she was talking about was trade. She was trying to help us understand the nature of trade, of imports, of exports; why do some cities and metropolitan areas succeed, whereas others do not. Some of her concepts about this were not new but may have been influenced by her undergraduate education. She studied at Columbia University for at least two years in economic geography, and apparently she read some of the main academics at that time who were writing about the nature of cities and how trade affects cities. And so it is not surprising that she would write something like *The Economy of Cities*. Why would she write that as her second book and then some years later write *The Wealth of Nations*? Because she was very interested in this whole idea of trade and commerce in a way that is consistent with an economic geographer.²

I have always had a couple of issues with Jane Jacobs's work, however. You love your mother, but . . . One of these issues is her critique of urban planning. I always find myself in lecture standing up and explaining to the students: “We are reading Jane Jacobs, and you will enjoy her. But realize that even though she is criticizing urban planning, the field is not all bad, and furthermore, it is very different than it was in 1961.” So I am the apologist. She equates urban planning with architecture, with engineering, and with whatever she sees as negative in city building. It all gets labeled urban planning, and that is a little difficult to deal with sometimes when you are teaching with her as your companion teacher. She is your co-instructor, but she is bashing your field. So that is one issue.

Here is another issue. I spent most of my professional life studying race and inequity, and I have always wished for more analysis of social justice from her work. I have no doubt that her heart was in the right place because, after reading all of those words, I would have probably caught whatever was not all right or was not genuine in terms of her feelings about issues related to social justice. But in her writings we find very little about what was really a glaring topic in her day, and continues to be one today, which is the existence of social injustice, particularly in terms of unequal opportunity based on race, ethnicity, and class. In preparation for today, I went back and thumbed through my old copies of several of her books. *The Economy of Cities* contained some content on the special challenges facing blacks in her discussion of economic development in cities, but this is a fairly contained exploration, and it is not present in her other books.³ So here is a glaring gap. Why is that?

Jacobs probably would have said that the greater good is the most important thing, and once we have the greater good, we can look at other issues. She did look at social injustice in terms of urban renewal; she certainly helped us understand that. This question of the nature of a perceived gap,

however, made me think about her background. What in her background may have contributed to this perspective? Why might Jacobs have offered little direct engagement with one of the obvious issues of social injustice that existed in her day?

In my book chapter in the edited work *Planning Ideas That Matter*, one of my tasks was to review planning thought in the 1950s, when she must have written *The Death and Life of Great American Cities*, which was published in 1961. For that book chapter project, I examined what was being published in journal articles relating to planning and redevelopment during the 1950s, and I also reviewed the conference proceedings of what were then the American Institute of Planners and the American Society of Planning Officials. I analyzed planners' dialogue in the 1940s and 1950s and compared that with their dialogue in the 1960s and 1970s. What I found, particularly in the 1950s, was very little awareness of broad issues of social justice among the people who were concerned about planning and development; and certainly there was very little awareness concerning the simpler issue of racial injustice. I argue in that chapter that it was the civil rights movement and the civil rebellions of the 1950s and 1960s that first led to the planners' consciousness or awareness of issues of racial inequality and oppression.⁴ But this period of elevated awareness, stoked by the burning and looting of cities as well as by civil rights demonstrations, occurred a few years after Jacobs wrote *The Death and Life of Great American Cities*. During the late 1950s, when she wrote this book, a U.S. civil rights movement existed, but it was focused mainly on desegregation of public facilities and education, which was the approach of the NAACP and of the early years of civil rights leaders such as Dr. Martin Luther King Jr. During the late 1950s, the cities had not yet erupted in the specific way they did in the 1960s. I have always wondered if the timing had been a little different, how that would have affected the writing of that book, such as if visible black protests in the North and civil rights demonstrations had taken place ten years earlier or if her book had been written ten years later.

Timing was not the only issue. If you look at her background, it becomes clear that much of Jane Jacobs's knowledge about the city and its proper evolution came through her particular jobs. One of her first jobs was as an editor for *Iron Age*, which was a publication about the iron metals industry. That industry had major venues in various places in Pennsylvania and New York. In that world, she may not have had much exposure to racial inequality or conflict. There, the iron industry was not like the auto industry in Detroit, where participants had to deal with issues of race and racial inequality because these were visible every day. One of the things that got her into trouble when she worked at *Iron Age* was that she organized the clerical workers to try to unionize them.⁵ This means she fought for the rights of women and was in that sense a social justice advocate, but she was not necessarily in a milieu that forced her to engage with racial injustice.

While these and related issues may be important, they do not negate the value of her work. When we consider the gifts Jane Jacobs gave to us and to the world, we also have to be aware of what was missing from her analysis and then, if possible, help provide what was missing. To understand the gaps does not mean we are denigrating what she did or what she said, but rather that we see other important issues that may have gained more visibility or urgency with the passage of years. We cannot expand books such as *The Economy of Cities*, for example, which is what it is. But we have to recognize that some issues not addressed extensively there have continued to fester, such as the fact that some people are excluded from mainstream labor markets, whether because of race or ethnicity or education, while others are privileged. In some parts of the city opportunities for basic necessities do not exist because of a systemic web of marginalization and denial. These issues deserve examination. We have to temper our continued admiration for Jane Jacobs's writings with our own analysis of the hard practicalities of contemporary life.

Endnotes

- 1 Robert Fishman, "New Urbanism," in *Planning Ideas that Matter*, ed. Bishwapriya Sanyal, Lawrence J. Vale, and Christina D. Rosan (Cambridge, Mass.: The MIT Press, 2012), 65-90.
- 2 Peter L. Laurence, "The Unknown Jane Jacobs: Geographer, Propagandist, City Planning Idealist," in *Reconsidering Jane Jacobs*, ed. Max Page and Timothy Mennel (Chicago: American Planning Association Press, 2011), 15-36.
- 3 Jane Jacobs, *The Economy of Cities* (New York: Random House, 1970), 223-28.
- 4 June Manning Thomas, "Social Justice as Responsible Practice: Influence of Race, Ethnicity, and the Civil Rights Era," in *Planning Ideas that Matter*, ed. Bishwapriya Sanyal, Lawrence J. Vale, and Christina D. Rosan (Cambridge, Mass.: The MIT Press, 2012), 359-86.
- 5 Laurence, "The Unknown Jane Jacobs."

Jane Jacobs and the New Century

George “Mac” McCarthy

Introduction: It is my pleasure to welcome Mac McCarthy, president and CEO of the Lincoln Institute of Land Policy in Cambridge, Massachusetts, as our keynote speaker tonight. The Lincoln Institute researches and recommends creative approaches to land as a solution to economic, social, and environmental challenges. Before joining the Lincoln Institute in 2014, Mac directed the Metropolitan Opportunity program at the Ford Foundation, which focused on poverty alleviation and its concentration in metropolitan areas in the U.S. and developing countries in Asia, Africa, and Latin America. More specifically, Mac has been a thought leader in the philanthropic and academic spheres for many years and has had the rare opportunity to examine Jacobs’s ideas in real time across the world. Mac, we are delighted you are here.

– Suzanne Morse Moomaw, associate professor of urban and environmental planning and director of the Community Design Research Center at the University of Virginia School of Architecture

Tonight, I want to talk a little bit about the legacy of Jane Jacobs and the future of cities. If you saw the film, *Citizen Jane*, today, it is an excellent retrospective on her work and impact. However, tonight I want to connect her legacy to the twenty-first century and how it is being played out in cities around the world.

As you probably know, this is the century of the city. In 2007, we passed the point where half of the people in the world live in cities. By 2050, that number will grow to 70 percent.

So let’s talk about the history of American cities and redevelopment, because I think that a major millennial challenge is the redevelopment of cities. Redevelopment of the already-built environment is harder than building on undeveloped land. Creating a new city is actually a lot easier than trying to maintain, manage, and regrow a city where people are rooted. This is where Jane Jacobs helped find ways to protect the integrity of cities and the people who live in them. So how do we think about Jacobs’s ideas in the twenty-first century context?

This is not a hypothetical question. It is a question that scholars, activists, policymakers, and community members are dealing with in real time. The United Nations’ Habitat III conference in Quito, Ecuador, in the fall of 2016 addressed housing and sustainable urban development and drew 45,000 people from the 193 member states of the United Nations to discuss and negotiate the New Urban Agenda. That agenda addresses how we will collectively manage the future growth of cities, which will add more than two billion residents in the next three decades. One issue that emerged at the conference was how we will pay for the infrastructure—highways,

bridges, gas lines, and the like—to accommodate this urban growth. Or will our cities of the future be choked with unplanned development, adding to the one billion people already living in slums? How are we going to do this? Who is part of that conversation?

This where we turn to Jane Jacobs. What can we learn from her experience about the redevelopment of cities and top-down planning? What can we learn about people’s attachment to place and the challenges that poses for redeveloping those places? An example is Dharavi, a locality in Mumbai, India, an exploding area with 700,000 people living in less than one square mile of land. Slum Dwellers International, an advocacy group, decided to “improve” the living conditions of the hundreds of thousands of people who lived in the Dharavi slums. They did what they thought would be the solution—built two high-rise developments and went about persuading people to move. Despite offering indoor plumbing, secure roofs, and the like, they were stunned that they had no takers. They were mystified as to why no one wanted to leave the slums—they had not done their homework. The targeted community produces 25 percent of the gross domestic product of Mumbai. The people don’t just live in Dharavi, they worked in Dharavi as well. They were accustomed to living where they worked; they did not want to be separated from that. The planners and developers had not asked the community what it needed or wanted. If they had, they would have learned that people were not willing to trade their shelters and their livelihoods for better shelters. Sound familiar?

The question for us as we move into this new urban agenda and welcome two billion new people into cities is: Can we do it while preserving the character and identities of our cities? Jane Jacobs would be interested in our answers. Are we going to find ways to engage citizens, or will we work as we did before—by fiat? Are we going to design policies and tools that make it possible to redevelop cities in different ways? Jane Jacobs ushered in a new way of thinking that opposed the really, really abusive top-down centralized planning called urban renewal. Planners told people and places what needed to be done, based on their judgment. This kind of planning remains with us. In a talk I gave earlier this year in Guangzhou, China, planners could not conceive of why Jacobs’s prevention of the highway across lower Manhattan was considered a success. They argued that achieving highest and best use was the planner’s job. Keeping old buildings and neighborhoods was not.

Jacobs’s work was informed by the story of Boston’s West End, which illustrated this contradiction. It was one of the first big urban renewal projects in the United States. Using eminent domain, the redevelopment authority obtained hundreds of homes that were owned by middle-class white families, citing their poor condition and the need for “higher and best use.” Neighborhood members tried to stop the redevelopment but failed. The neighborhood was replaced by market-driven development. Informed by this experience and the loss of New York’s original Penn Station, Jane Jacobs organized others to find ways to prevent the wholesale destruction of urban neighborhoods.

Organized resistance was only one tool she adopted. Coalition building was another. Her coalitions enlisted people such as Eleanor Roosevelt and Lady Bird Johnson, who saw not only the human toll of urban renewal, but also the lost culture and history. By 1964, more than 18,000 historic buildings had been lost to urban renewal. This motivated both mobilization and action. Mobilizing is what you do to protect. But what do you do to act? You need tools—carrots and sticks. The Historic Preservation Act was the stick, requiring reviews of historic structures before demolishing them to redevelop neighborhoods.

The Historic Tax Credit was the carrot. Because it might be more costly to redevelop historic buildings and adapt them for new uses, we sweetened the pot—paying for the public good that was preserved in the historic structures to make redevelopment feasible. Through historic tax credits, more than \$120 billion was invested from 1966 to 2015. When mobilization meets strategy and action, you get scaled results. Thirty-one states have followed suit with their own historic tax credit programs.

So what are the challenges of urban redevelopment today? They are twofold. First is the challenge of vacant land in older industrial cities like Detroit or Buffalo. Second is the influx of foreign capital that finds its way into real estate in hot cities across the globe and makes living in them less and less affordable. One of the consequences of global inequities is that you get piles and piles of liquidity flowing to places looking for a yield. If we look at the one hundred largest cities in the world, they have 10 percent of the world's population, 30 percent of the world's gross domestic product, and an astounding 76 percent of the property investment. This capital completely distorts housing markets and makes many urban areas, from New York to San Francisco to Hong Kong, unaffordable for the people who live there. For example, more Chinese investors are now coming to Seattle because Vancouver has begun to put the clamps on foreign investment coming into the city. What was the trigger for this change in attitude in Vancouver? The realization that the median housing price in the city was upward of \$1.4 million. Can we tolerate allowing a large share of our housing stock to float as investment instruments and bid away shelter from our citizens? Vancouver decided the answer was no.

So what is the answer? What would Jacobs say? I am not sure on either front, but we are getting clarity on the power of land control and the ability to provide housing as a commodity. Maybe it is time to have a conversation, as the Ford and Kresge Foundations did in Detroit, on how we make choices about our communities with our communities. What is important for those who live there, and who gets to live in them? Do we want housing in our communities bought and sold like a commodity?

We do not have great redevelopment models; we have made lots of mistakes from Jacobs's time until now. But we must do two things: find more effective ways to engage and mobilize people and find the policies and tools to work at scale. Part of mobilizing is to get people to the table. As a friend of mine once said, "If you don't have a seat at the table, there is a good chance you are on the menu." And we need new tools to engage citizens in urban planning and new incentives to motivate developers. This is not about the buildings but about the community. Can we find new ways to be socially responsible and manage our cities to a human scale? Countries around the world are looking to us for answers. So this is a time, in closing, to ask, "What would Jane do?" While she did not get it all just right every time, she did compel us to find creative ways to make cities work. Cities that were more welcoming, that could provide both shelter and work. Cities that facilitated social interaction, not just commerce. That is a tall agenda but one that we should aspire to achieve. It is critical for the twenty-first century of the city.

Cities of Equity: Environmental Justice & the City

Sheila Foster

Introduction: My name is Kathy Galvin, a city councilor in Charlottesville and an urban designer. I am here to welcome you and introduce Andrea Douglas, who is our caretaker of this wonderful facility, the Jefferson School Heritage Center, and, of course, our distinguished speaker, Sheila Foster. Andrea will be introducing her. The issues we will be addressing through the Jane Jacobs Symposium are challenges for Charlottesville and most cities in America.

As we try to revitalize our cities, there is a higher demand for our cities. As we try to make our cities more walkable, livable, and sustainable, they are becoming more expensive because they are healthier and more desirable.

Where we are situated for these sessions is actually an area that was part of the urban renewal program in Charlottesville in the 1960s. It was once called Vinegar Hill, which was an African American neighborhood. It was the core of the business district for that African American community. It was renewed, and what you see today in this building, which was thankfully retained, is an important and lasting reminder of the process that displaced hundreds of people and businesses. Vinegar Hill went from about seven or eight blocks to now two megablocks, just to give you an idea of the magnitude and spatial changes. And the social, economic, and racial impacts are still being felt. As we turn our attention to environmental justice, we must ensure that everybody can live in healthy, safe, and beautiful places. So with that, I would like to bring up Andrea Douglas, who will introduce our speaker.

Thank you, Kathy. I would also like to add words of welcome. It has been my privilege to be a part of the project that brought the Jefferson School back to life. And I hope that as you all spend time here you will take note of certain things, because this project is not just a restoration or renovation project. This is the original 1926 high school. So these are the original floors, the original lights, and the original windows.

We are generally interested in hosting events such as this because of the kinds of conversations you had this morning and the kinds of discussions we will have this afternoon. This is at the heart of what you want to do here. We think a lot about community. We think a lot about space. We live with this space.

It is my privilege this afternoon to introduce our speaker, Sheila Foster. She is a university professor and the Albert A. Walsh Professor of Real Estate, Land Use, and Property Law at Fordham University. She is also the faculty codirector of the Fordham Urban Law Center and served as vice dean of the law school from 2011 to 2014 and associate dean for academic affairs from 2008 to 2011. [Currently, professor of law, professor of public policy, Georgetown Law.]

Among her books are *The Law of Environmental Justice—Theories and Procedures to Address Disproportionate Risks*, coedited with Michael B. Help in 2008; *From the Ground Up—Environmental Racism and the Rise of the Environmental Justice Movement*, which was published in 2001; and the forthcoming book, *Co-City*, from MIT Press.

Finally, I asked her when we first met if there was one additional thing out of this bio that she would like me to note. And it is that the kinds of things that we will talk about at this symposium are at the heart of her work. She has worked with Harlem, Camden, New Jersey, and local and federal government agencies. She considers urban spaces and how those spaces change over time, but also what the urban commons mean and to whom. Please join me in welcoming Sheila Foster.

- Kathy Galvin, urban designer and architect, Charlottesville City Council member; Dr. Andrea Douglas, executive director, Jefferson School African American Heritage Center, Charlottesville, Virginia

Thank you, Andrea. It is such a pleasure to be here. I'm a fan of diverse neighborhoods in no small part because I live in New York City, and I live at least near the West Village, not in the West Village. And so one can see the footprint and the handiwork of gentrification in that city.

It is also not hard to see the inequality in a city like New York City as well as, as we heard earlier today, Jane Jacobs's adopted hometown, Toronto, and other cities around the world. This inequality is partly what I am going to talk about today. How do we think about that inequality, which spans a lot of sectors—housing, employment—and a lot of other kinds of social goods. Everywhere we look in urban America, we see persistent racial and ethnic disparities in the distribution of social goods. And this has been fairly persistent even though we are fifty years past the enactment of historic civil rights laws.

I teach property law, land use law, environmental law, and civil rights law. And at first glance, you might think those things have absolutely not much to do with each other, but, in fact, this area is what we call environmental justice. They all come together in interesting ways through this lens. And so partly this is what I am going to talk about, having spent about the last twenty years or so working on this issue not only from a scholarly perspective, but also working and consulting with community-based groups from Harlem to Camden to Chester, Pennsylvania, working with state agencies like the New Jersey Department of Environmental Protection, the federal Environmental Protection Agency (EPA), and also the Department of Justice on civil rights. I am going to give a bit of a retrospective on what this experience has been like and where we are.

I am currently serving on the mayor's panel for climate change in New York City. We are looking, in part, at climate change through the lens of inequality, in a new iteration of environmental justice that some call climate justice. I'm going to try to bring all these together and to do it through a

somewhat legal lens—though I will try not to bore you with that detail—and to think about how we get at this thing called injustice or inequality in the areas of environmental protection and climate change.

As you may know, empirical evidence in many studies has long documented—not just in the United States but, in fact, in other parts of the world—that there is a very high correlation between where people live, what their socioeconomic status is, whether it is their race, ethnicity, indigenous status, or income, and their rates of exposure to environmental pollution and toxins. In the United States, poor ethnic and minority communities are significantly more likely to live either in or near multiple polluting sources and contaminated land.

Now, these disparities didn't just come about naturally. It is not just a matter of choice where people tend to live or even, frankly, what they can afford. A large part of the story has to be and is historic zoning and land use practices that go all the way back to the early twentieth century. During this time, urban planners and public officials separated immigrants and African Americans from white communities by building tenements and other low-income housing in industrial parts of the urban environment. And these practices continued throughout the twentieth century as African American communities were zoned as mixed, residential and industrial, which allowed for the placement of mixed land uses—ironically that included industrial uses, not necessarily commercial—in close proximity to residents and schools. Over time, this pattern of zoning and land use resulted in many of these neighborhoods being overexposed to pollution.

Today, one might ask, now that we are fifty or so years past this history, what accounts for the continuing placement of polluting facilities, the continuing proximity of poor ethnic and minority populations to contaminated land, or their overexposure to contaminated water? I would argue that the processes that result in the continuing placement of polluting facilities in these communities and their overexposure to lead and water contamination are largely mutually reinforcing processes.

Our zoning and land use laws are governed by local administrative processes. Local officials are too often not attentive to racial bias, but rather to strong special interests like developers and homeowners who push hard to get the kind of land use and zoning accommodations that suit their interests. And so part of the debate among scholars writing about environmental justice has been whether racial factors actually are at play, versus other more neutral factors driving the phenomenon of environmental racism or injustice. And some say that they are if you take into account the history that I mentioned.

Housing markets are dynamic. People move all the time. Those who can buy out of a neighborhood and leave the older neighborhood with poor housing stock and industrial facilities move away to the suburbs or to better inner-city locations. But other people get trapped in the communities that are left behind—think about Detroit, Camden, or Flint. A lot of people in these cities are trapped there not because of racism necessarily—or,

rather, not solely due to racism—but because of a combination of housing discrimination and the pretty complicated housing market dynamics that keep people trapped in these communities.

I think there is a complex story of causation, you might say, that accounts for the disproportionate distribution of environmental pollution and the ways environmental racism has manifested in different kinds of communities. Civil rights laws and environmental regulators have tried to tackle this issue, but bringing relief to these communities is very difficult. While appreciating the complex causes for why some communities and why some populations are overexposed to pollution and contamination, environmental justice advocates and regulators have tried their best to bring to bear the legal tools that we have to address this. I want to talk about why this has been so difficult and how we might find a way out of it not through law but through social science research.

Let me start by talking about the limits of antidiscrimination and civil rights law. And again, not getting into the weeds, but I will say this—the U.S. Supreme Court has increasingly interpreted constitutional and legislative civil rights norms to embrace a very narrow conception of discrimination. In other words, as the Supreme Court ruled in a famous case called *Washington v. Davis*, simply pointing to a pattern in practice or a history of discriminatory outcomes, whether it is housing or employment or the environment, does not suffice to infer that racial discrimination is the motive driving these outcomes, even if there is no other credible explanation for the disparities. And, in fact, the court has said that constitutional discrimination can exist only if we can prove that a decision maker selected a course of action “because of, not simply in spite of” its discriminatory consequences.

In statutory (versus constitutional) civil rights claims, a claim of disparate impact exists, which allows a finding of discrimination upon proof that a particular course of action results in disproportionate harm to a particular group. However, these claims have really done no better in courts than claims based on intentional discrimination. In a very famous case in 1971, the Supreme Court explained that disparate impact, in the 1964 Civil Rights Act, is supposed to reach, in part, not just overt discrimination, but also practices that are “fair in form but discriminatory in operation.” For many years, and in fact many decades, federal courts ruled as such when confronted with a pattern of disproportionate or racial disparities in housing or employment. In those cases they were willing to infer, based upon that disparity, that perhaps there was racial bias at work.

In more recent cases, the Supreme Court has made clear that that is not enough even to support a finding of disparate impact discrimination. Instead, a claimant must identify a specific cause of those disparities—that is, that one particular policy or one particular decision maker brought about the disparate impact. And as I have said already, when we look at some of the reasons why our urban metropolitan areas continue to be segregated, it is a complex causation story—a result of historical segregation, not just

in the environmental arena, but also in regards to other social goods, which are unevenly distributed. You can't point to one policy or one decision maker responsible for a particular disparate or unequal outcome.

So, this is all to say that the specific intent and causation requirements in the Supreme Court's civil rights and constitutional law jurisprudence have really flipped historical assumptions about discrimination on their heads. One assumption that courts held onto in the '70s, '80s, and '90s was that if there exist stark disparities in a particular area (education, housing, etc.), then we need to scrutinize them and look closely at what's behind them because it is rational to suspect racial discrimination may be at play. Today, the assumption is just the opposite. We no longer presume that unexplained disparities are potentially racially discriminatory; rather, we assume that they are part of a neutral and properly functioning economic market.

So, one can imagine that when advocates, including myself, brought civil rights cases in federal courts against environmental agencies and developers who propose building new polluting facilities in communities of color, and to permit them under environmental laws, we quickly ran into the limits of this jurisprudence. Consistently, federal courts have ruled, even when there is a pattern of permitting polluting facilities in minority neighborhoods, that there are neutral, nondiscriminatory reasons for placing these facilities in already-polluted neighborhoods, including, for instance, that these neighborhoods were zoned partly industrial and partly residential. The problem with this "neutral" explanation, as I have argued in my work, is that it has its roots in the history of twentieth century zoning and land use practices that resulted in the creation and maintenance of racial minority neighborhoods close to transportation routes and highways. This made it easier for dump trucks to bring trash to local polluting facilities, and, in the case of Camden, a big cement grinding facility was built on a nearby port where ships could bring fine dust that aggravates preexisting respiratory illnesses in a community already suffering from those and other ailments and overburdened with environmental contamination.

Rarely is it the case that courts consider the kind of history that I referenced earlier to understand the racially disparate outcomes in pollution exposure. There is, however, one outlier case that I want to describe that illustrates how courts might reason with this history in the context of environmental justice. This is a case that comes out of Dallas, Texas, and in which a federal court, at least for a moment, credited the history of racial zoning and ruled that disproportionate levels of environmental pollution in minority neighborhoods actually could be the result of intentional race discrimination. There, residents of a predominantly African American and Hispanic community in Dallas alleged that the city maintained a pattern of inferior zoning and inferior flood protection, failed to protect them from industrial nuisances, including active landfills, and had tolerated poor streets and drainage in minority neighborhoods.

The federal court refused to grant a motion to dismiss the lawsuit and allowed the lawsuit to proceed to trial based on the history of this area in Texas. Specifically, the court found that the effect of the city's otherwise neutral practices, along with its sordid history of racially segregated zoning and related discriminatory policies, constituted substantial circumstantial evidence of discriminatory intent. The court found the following facts significant: zoning for the neighborhood is residential, but the area immediately around the minority neighborhood is zoned for heavy industrial uses. The city considered overt racial segregation to be a legitimate policy goal through the 1940s, and the city knew that this particular neighborhood, Cadillac Heights, would be industrial when it designated the area a "Negro development" at that time. Although the lawsuit ultimately was unsuccessful, the court's reasoning at an earlier procedural point in the case is indicative of how the history of racial zoning and racist land use policies can shape what our communities look like today.

So many of our communities have this kind of history, and so many courts do not consider it. Yet, the potential for the kind of reasoning engaged in by the Texas court is, I think, why environmental justice advocates continue to use civil rights laws to try and press their cases in court, albeit largely without success.

I am going to now shift to environmental regulation. What happened when, instead of using civil rights laws, environmental justice advocates asked environmental regulators at the EPA and at state environmental agencies to stop granting pollution permits to facilities in overburdened low-income, minority neighborhoods? They did so, interestingly, by bringing civil rights concepts into the decision-making process of environmental agencies in the following way.

I am certain that some of you do not know that in 1994 President Clinton signed an executive order on environmental justice. This executive order required every federal agency to avoid policies and practices that would result in disparate impact on poor and minority communities. Of course, this is not enforceable in court, but it does constrain the agencies.

In addition, one of the provisions of the 1964 Civil Rights Act is Title VI, which provides for an antidiscrimination guarantee or prohibition that is tied to federal money. So if you are a state or local agency, or any other entity, that receives federal money, the 1964 Civil Rights Act says that you cannot discriminate. Every federal agency after the passage of this act passed implementing regulations, which remain on their books and which require the agency to avoid actions that result in disparate impact discrimination.

Over and over again at the EPA and other federal agencies, including the Department of Transportation, environmental justice advocates sought to

enforce Title VI's protections in order to force state agencies to stop issuing permits or putting additional bus routes or industrial waste in areas that were already overexposed to environmental hazards and pollution. What happened at these agencies is instructive. Although the EPA has an Office of Civil Rights, an Office of Environmental Justice, and a policy and procedure in which communities can file a Title VI complaint to try to stop a state agency from permitting additional facilities in their neighborhoods, in each of these cases, the EPA has consistently ruled that although there are polluting sources in neighborhoods that would result in a disparate impact, those communities do not suffer.

You might wonder, how could they possibly rule this way? Partly what is going on is that the EPA has a limited scientific mode of decision-making when they set pollution standards, and this mode of decision-making is very much in conflict with most of our understanding of environmental risk or harm. Allow me to offer one story that illustrates this.

You might recall when the EPA's then-Administrator Christine Todd Whitman, on the heels of 9/11, went down to Ground Zero to determine if workers were being exposed to dangerous levels of hazards or toxins emanating from the site. Her conclusion was that Ground Zero was safe. Now we know it wasn't safe. Many people were exposed and got sick.

But she could say that with a straight face because, in fact, what the EPA and our environmental legal regime does is measure every particular pollutant, whether it is lead or benzene, that is coming out of a smokestack or, in this case, the ground and determine whether it is being emitted into the environment at a certain level predetermined to be the lowest risk of exposure feasible. For each of those pollutants, the EPA deemed the amount in the air and surrounding environment was safe at Ground Zero. This was true. However, what we cannot capture yet is the synergistic effect of twenty-five or fifty pollutants coming together, as they did at Ground Zero. We don't have the science, actually, to determine the synergistic effects of many toxins interacting in the environment.

Therefore, there is some risk and harm that we can't regulate for in a precautionary way. As such, in communities that have suffered from exposure to a variety of hazards both large and small and that are located near freeways, the agency cannot say, scientifically, that this coming together of pollutants has an "adverse" impact on those communities and cannot regulate synergistic effects by reference to the harms they pose. Environmental regulation is conducted by media—i.e., by air, by water—and by individual hazard or pollutant.

So when the agency is looking through the lens of disparate impact analysis and is asking whether putting or permitting another facility, or having a community live on top of a waste dump, creates a potential civil rights violation, they are able to determine that a disparate impact of these exposures exists if you look at increased exposure to noise, odor, traffic, poor housing stock, and the like. However, they are often not able to

determine if that impact is in fact "adverse" because our standards cannot measure the harm from synergistic interaction of various pollutants and different kinds of sources (both regulated and unregulated) that affect a community. As a result, despite the filing of hundreds of complaints alleging racial discrimination in the permitting of new facilities, the EPA's Office of Civil Rights has not made a formal finding of disparate impact discrimination in twenty-two years.

So this is the failure of the EPA and the failure of the courts to provide relief to the most impacted communities that suffer gravely from environmental injustices. And really—I say this as a lawyer who believes in law—the failure of law. So what do we do? Well, one way to answer this question is to consider what scholars have indicated is a fundamental mismatch between environmental law and civil rights law and between the languages of these two legal regimes. It is almost as if they are speaking in two kinds of universes and two types of languages, and they are speaking past one another.

In large part, this is true. We don't yet have the conceptual or discursive or scientific tools to really measure and to evaluate why there is environmental injustice in particular places and what we can do about it, at least not in the way that environmental agencies measure harm and justice. Therefore, in my view, one way forward is through the discursive and conceptual and scientific realm of vulnerability analysis. Climate scientists have for a long time, and in particular through the work of Susan Cutter at the University of North Carolina, been working on this idea of social vulnerability in the climate area.

The idea is that communities are both ecologically and socially vulnerable. One is concerned primarily with the science of climate change impacts and the other with the ways in which communities are identified as lacking access to social goods that would make them resilient. I sit on the New York City Panel on Climate Change with climate scientists from Princeton University and the Columbia Earth Institute who are mapping out the kinds of hurricanes and the kinds of events or hazards that are expected to hit New York and how we should prepare. But there's another kind of science that we're also using. It's the social science of mapping social vulnerability.

And so what is this the science of? It is a science that tries to assess the risk of particular areas where the population is being hit in different ways when there is a particular climate event. For instance, the social vulnerability analysis or index (SOVI) describes a number of metrics from which we can capture and measure vulnerable communities in the context of climate impacts. Some of these metrics are demographic characteristics, such as race, income, resource access, political access, social capital, disability, housing stock, infrastructure, etc. They suggest that when climate impacts reach these socially vulnerable areas, these communities are less able to absorb those impacts and will be worse off than other, less socially vulnerable areas.

When social vulnerability researchers analyzed what would happen if Hurricane Katrina hit New Orleans, they captured perfectly what happened. They identified the factors that would have predicted the distribution of some of the worst impacts on parts of New Orleans, like the Ninth Ward, including the geography of the city, which contained higher- and lower-lying areas, the location of its public housing stock in the most undesirable, lower-lying areas of the city, the history of racial segregation, the natural risk of flooding in lower-lying areas, and the inaccessibility of the goods, services, and emergency response personnel that would allow these populations to escape. When researchers put this social vulnerability index on top of New Orleans and mapped it, it predicted exactly what would happen.

It is interesting that from both a social science and a legal perspective, scholars have been suggesting vulnerability analysis as an alternative to the narrow ways that we think about discrimination and disadvantage. It is one response to the narrowing of the equal protection intent-based analysis and also the disparate impact analysis that allow us to capture the structural aspects of modern-day racial segregation—what legal scholar Kim Crenshaw calls “intersectionality analysis.” The idea is that it’s not just race that predicts where bad things will be put and what kinds of neighborhoods can sustain structural disadvantages. Rather, it is some combination of race and class and, some social scientists have also said, low levels of social capital.

When a neighborhood is transitioning from Hispanic to Asian, for instance, and social ties are fraying, researchers have found that it is easier to place polluting facilities. So there’s a confluence of factors that shape the geography in certain neighborhoods and their vulnerability to not only climate hazards, but to the kinds of assault that we’ve seen in the environmental justice field.

Let me end by saying this about the application of the vulnerability analysis to the pollution control context in which it is not just a single hazard event as in the climate area, but rather an assessment of the vulnerability of a neighborhood based on the historical factors that I’ve talked about. Environmental justice includes what we know about the housing stock, about infrastructure, about the geography, about the demographics, and about the access to health and other services in those neighborhoods that impact the quality of life for the community members. I’m emboldened by the fact that some researchers, and even the EPA itself, are starting to do this.

In a recent internal guidance, the EPA has said that it wants to move away from disproportionate impact to a more contextual analysis of environmental justice concerns that provides a broader basis for protecting minority and low-income neighborhoods. These include, it says, proximity and exposure to emission sources, evolving from mixed-use land patterns, unique and nontraditional exposure pathways linked to cultural background or socioeconomic status, the presence of legacy pollutants such as lead, multiple stressors’ accumulative impacts, and the inability to participate fully in environmental decision-making processes. By looking at a more contextual analysis, we’ll be able to identify vulnerable neighborhoods without having to fit these claims into a model of civil rights or even environmental law that is ill-suited to capture them.

So I’m hopeful. Vulnerability analysis is not a panacea for the failure of courts or environmental agencies to enforce civil rights norms. And particularly postelection, there’s a real question about the ability of the agency to do this kind of analysis and have it stick and about the kinds of accountability we need to hold agencies and decision makers to this kind of analysis and to actually prioritize policy in line with this analysis. But I am hopeful that we are getting to a more contextual analysis that takes into account the history, the land use, and other factors like race when determining who’s vulnerable to what.

Thank you very much.

Saving Our Parks: The Grassroots Movement that Brought Jane Jacobs’s Vision into Law

Margaret Haltom

The Supreme Court case *Citizens to Preserve Overton Park v. Volpe*, 401 U.S. 402 (1971), is often cited, well-studied, and easily identifiable by conservationists, land use attorneys, and administrative policymakers alike. Known for three primary precedents, the preservation of public green spaces, the judicial review of administrative agencies, and the agency of citizen groups to curtail government action, the case remains a landmark decision for environmental law. But the background of the case remains untold—nationally unknown and locally misunderstood—despite nearly fifty years of citation and enduring significance. And the story of *Citizens to Preserve Overton Park v. Volpe*, while studied from a legal perspective, has not yet been examined through the lens of urban planning as a case of citizen advocacy and historic landscape preservation.

Citizens to Preserve Overton Park—the highway juggernaut it obstructed, diverse citizen groups that took the case to the Supreme Court, tactics of local leadership to suppress the citizen groups, and judicial reasoning that overturned the Department of Transportation’s decision—played an integral role in shaping the future of American interstate development. This is the story of the thirty-year social movement that surged to a Supreme Court victory, bringing Jane Jacobs’s “eyes on the street” into law. Today, the efforts of a small, diverse group of women continue to protect our parks, preventing interstate developers from building freeways through cherished public landscapes.

Common Ground and Controversy in Memphis

On July 25, 1964, the front page of the *Memphis World* reported: “A ‘Save Overton Park’ rally will be held Sunday, July 26, at 3:30 p.m. in Overton Park at Rainbow Lake, just southeast of the zoo.”¹ The publication encouraged its predominately African American readership to join the group of citizens uniting to preserve Overton Park, an old growth forest in Memphis, Tennessee, slated for demolition by U.S. Interstate 40. “The expressway, if built, would take twenty-eight acres of the park and hundreds of trees from one of the few virgin stands left in the Midsouth.”² The article purposefully emphasizes, “An interracial committee of Citizens to Preserve Overton Park, Mrs. Ralph Handy, chairman, is planning the program.”³

An interracial committee, while not unheard of in 1964, was uncommon, especially in Memphis. Public spaces like Overton Park were desegregated just one year prior with the Supreme Court case *Watson v. City of Memphis*.⁴ Central to the ruling was the immediacy of segregation: while the city argued that “partial desegregation” was underway and proceeding slowly was a precaution against violence or civil unrest, the Supreme Court ruled that a plan for full integration must be put in place within six months.⁵ The decision addressed the “deliberate speed” that purposefully delayed the

racial barriers *Brown v. Board of Education* sought to overcome and went a step further by explicitly ordering desegregation of all publicly owned recreational facilities.^{6,7}

Just one year after integration, the discourse emerging in the most prominent public space in Memphis was not one of race-based violence or unrest, but rather of integrated civic pride. The unrest leading up to integration proved more unsettling than integration itself, according to Tennessee state Rep. Johnnie Rodgers Turner.⁸ Turner was arrested and spent the night in prison for attempting to integrate a Youth for Christ Rally at the park’s outdoor concert arena. “They told me they kept me because I was a criminal. And they interrogated me to find out why I [participated in sit-ins] . . . I was petrified. I was scared to death. But I never said a word.”⁹

Even after the integration of 1963, many black activists, as Turner explained, were hesitant to go to newly integrated spaces. “Just because they said it was integrated didn’t mean I was going to go right away,” Turner told Overton Park historian Brooks Lamb.¹⁰ Overton Park, off limits to African Americans just one year before, became a public space on which local residents found common ground.

The Decision Has Been Made: Constructing I-40

Despite local resistance, plans for the interstate progressed. “After the Federal-Aid Highway Act, virtually every city in the country hired consultants to draw up a circle of freeways around the circumference of the city,” said Charlie Newman, lead counsel for the plaintiff in *Citizens to Preserve Overton Park v. Volpe*.¹¹ The 1956 act allocated \$25 billion to fund 41,000 miles of freeway, crisscrossing rural landscapes and urban centers across the nation.¹² It pledged 90 percent of all state construction costs.¹³ Newman described how planners would map out which areas to bisect throughout the city. In Memphis, consultants outlined six potential routes, which the city eventually narrowed down to three approved highways: one to circle the city, a north-south route to cut across, and an east-west route to bisect Overton Park.¹⁴ The east-west route proposed the destruction of 300 acres of forest, later modified to twenty-six, and was directly incentivized by the Federal-Aid Highway Act and the Highway Trust Fund.¹⁵

The citizens rallying in 1964 responded to the consultant plans outlined in the public report: “Interstate Highway Routes, Memphis and Shelby County, Tennessee.” The report detailed the approved Overton Park freeway, alongside five alternate routes that the consultants considered unviable. The study identified the “geographic limitations,” including the Wolf River, the river’s flood plains, and the proposed greenbelt that would only further impact the natural landscape.¹⁶ The only alternative routes further cut through the central business districts and uprooted residential neighborhoods: Overton Park and the surrounding neighborhoods were unanimously agreed upon as the only path for the freeway.

The Federal Bureau of Public Roads, unbeknownst to community members, approved the construction of Interstate 40 through Overton Park in 1956.¹⁷ State highway planners made the decision to destroy the park long before local voices could dissent. At a 1964 public hearing, the city engineer emphasized how local officials had little say in the freeway. Residents were left unsure of how to resist the decision: Who could they turn their questions, their protests, toward? The city engineer offered his response: “I think you’re at a serious disadvantage, if you ask me.”¹⁸

Planning Theory: Resisting the Auto-centric City

Advocates of the freeway, among them many local business leaders, argued the interstate would support economic growth. The freeway would allow for increased flow of capital between downtown Memphis and the rapidly expanding suburbs.¹⁹ Lewis Mumford and Jane Jacobs lambasted these notions of the well-intentioned developers seeking to impose their order upon the city. They maintained that the top-down developer was at best, to Mumford, “absurdly imbalanced,” and at worst, to Jacobs, seized by arrogance, attempting to create only a “dishonest mask of pretended order.”^{20,21}

Mumford warned that the flow of the freeways—and no available aid for public transit—would result in the ease of suburbanization and the subsequent depletion of vibrancy for city centers across the nation. A straight shot from East Memphis to downtown, the Overton Park freeway could offer Memphians working within the city limits a quick escape to the rapidly expanding suburbs.²² As the traffic flowed east, Mumford’s logic asserts that it would take with it investments in the businesses and residential areas of downtown and Midtown Memphis.

History found Mumford’s predictions to be true. The Department of Housing and Urban Development’s 1998 study, “The Causes of Inner-City Poverty” directly links the construction of freeways through downtowns with the “middle-class exodus” that occurred in urban areas, resulting in the economic stagnation of downtowns.²³ “The interstate has become one of the great destroyers of our city. . . they relocate thousands of homes, they bring noise and high traffic through a neighborhood. They bring blight—that’s what happened in Memphis,” said George Cates, founder of the Overton Park Conservancy.²⁴

Community Destruction

With no legal defense against the freeway available, demolition began along the path of the anticipated expressway. Businesses relocated, hundreds of homes were destroyed, and the property was condemned.²⁵ Some previous activists resigned, pointing to the demolished homes as a reason for the freeway.²⁶ “They said it would be a disservice to the people whose homes were torn down to not build the freeway,” explained Newman.²⁷ The citizens, perceived as fighting a losing battle, dwindled to a small group of women who faced mockery from the local press, derided as “little old ladies in their tennis shoes.”²⁸ Still, they held on, committed to their cause and prepared to defend what would become one of the only incomplete sections of I-40 in the nation.

Screening and Student Discussion

—*Citizen Jane: Battle for the City*

Margaret Haltom

On Friday, November 18, planners, film writers, students, and community members gathered for a screening of *Citizen Jane: Battle for the City* in the Culbreth Theater. Students introduced the film, extending a welcome to the director, Matt Tyrnauer, and emphasizing the legacy of Jacobs in their education as future planners and community advocates. Matt Tyrnauer’s documentary shares the story of Jacobs’s battle to preserve Washington Square Park through historic footage of interviews with Jacobs, Robert Moses, and New York citizens impacted by the urban renewal projects of the 1960s. With quotations from *Death and Life of Great American Cities*, the film contrasts Jacobs’s vision for preserving local communities with the modernist, development-oriented goals of Moses.

The documentary generated an ongoing dialogue on the necessity for planners and policymakers to deeply engage with the people they intend to serve. Following the screening, viewers were invited to attend a roundtable with Mr. Tyrnauer. Urban planning and political and social thought students moderated the discussion between the filmmaker and twenty undergraduates. Students had a rare opportunity to learn about Mr. Tyrnauer’s vision for the documentary and his methods for finding historic footage. They also discussed at length the modern implications of Jacobs’s movement and the danger of people in power exercising control without community collaboration. Recalling testimonies shared by the residents who lost their homes to the construction of freeways, the group considered the weight of Jacobs’s words: “Cities have the capability of providing something for everybody, only because, and only when, they are created by everybody.”

Parkland Statutes: the “Feasible and Prudent” Stipulation

The 1966 Department of Transportation (DOT) Act included the parkland statutes for which the citizens were waiting. Section 4(f) stipulated the DOT could not approve the use of “land from publicly owned parks, recreational areas, wildlife, and waterfowl areas” unless there was no “feasible or prudent” alternative.²⁹ In 1968, Secretary of Transportation John Volpe’s final approval of the freeway and proposed destruction of twenty-six acres set the stage for the citizens’ defense.³⁰ One year later, national environmental councils including the Sierra Club and the Audubon Society helped the citizens receive representation and try their case under the claim that the secretary had not satisfied the provisions of Federal-Aid Highway Act of 1968, 23 U.S.C. 138 and 49 U.S.C. 1653(f)—that is, that he sought no *feasible or prudent* alternatives to the route.³¹ The citizens sought an injunction to cease the construction of I-40 and were first heard in the district courts of Memphis.³²

Judicial Proceedings: Judge Celebrezze’s Crucial Dissent

At the local level, the district judge quickly dismissed the case, holding that the matter was for the secretary of transportation, not the courts, to decide. No possible alternative routes were discussed.³³ Central to this judicial reasoning was the assumption that federal agencies had an authority that surpassed the courts’—the secretary’s decision was presumed to have considered all possible alternatives, though no such case was proven. The Court of Appeals similarly ruled in favor of the defendants, declaring that the secretary’s advisement should not be overturned.³⁴

But one dissenting judge rejected the assumption that the secretary had sought feasible and prudent alternatives. The secretary, Judge Celebrezze contended, should have kept a “clear and complete” record of all possible routes for the expressway so that the court could examine whether there was a feasible or prudent alternative. His opinion is one Mumford and Jacobs would certainly have agreed on: “Public parklands are the only remaining weekend sanctuaries for a vast number of city dwellers from the polluted urban sprawl. A threat to a neighborhood parkland is a threat to the health, happiness and peace of mind for all neighborhood people.”³⁵ The plaintiff petitioned for a rehearing and a stay to block the bulldozers at the edge of the park; oral arguments were scheduled before the Supreme Court on January 11, 1971.³⁶

The Supreme Court: Preserving the Nation’s Parks

“We didn’t think we had a strong chance of having the success we had,” said Newman. “The Supreme Court, somewhat to our surprise and to the surprise of everyone else, read into the words feasible and prudent more strictly than they could have. They put some meat in the language to say the secretary could not reject an alternative route unless it was just an impossible feat of engineering.”³⁷ A *prudent* alternative was interpreted as more than a less expensive alternative—construction through a park would always be cheaper, given no businesses or residences would have to be relocated. The secretary, according to the Court, would have to identify

“uniquely difficult problems” present in alternative routes.³⁸ The opinion set a clear precedent that highways should avoid destruction to parklands at all costs.

But the opinion also fortified the strength of judicial review. It empowered the courts to review the decisions of the secretary of transportation and pass judgment on whether his actions were “arbitrary, capricious, an abuse of direction, and otherwise not in accordance with the law,” and it went so far as to detail: “Congress has specified only a small range of choices that the [s]ecretary can make.”³⁹ Judges were capable of reviewing, and overturning, the previously untouchable decisions of federal agencies.

Final Proceedings and Grassroots Advocacy to Preserve the Park

The Supreme Court opinion did not end the judicial proceedings for the Citizens to Preserve Overton Park. The freeway approval was sent back to the secretary for a decision with the new interpretation of the statutes, and the secretary decided that feasible and prudent alternatives had to first be exhausted by the State Highway Department before his final approval.⁴⁰ With the National Environmental Policy Act and the strict parkland stipulations, the burden was on the state to demonstrate all of the environmental consequences and prove that no alternative routes existed to achieve the same purpose.⁴¹ The state, eager to prove that its original approvals were correct, brought forth a series of straw-man alternatives—routes that demolished churches, a senior citizen home, elementary schools, a federal judge’s house, even a local university.⁴² With no serious attempt to find an alternative and describe all environmental consequences, the Citizens to Preserve Overton Park won the case in 1974.

For five more years, state highway engineers and local leaders continued to propose alternative designs, while the Citizens to Preserve Overton Park still met. “The highway was declared dead (by the courts), but there was a lot of suspicion,” remembered activist Janis Richardson. “People were wondering: what if it was not Interstate 40, but still another really big road?”⁴³ The citizens devised a strategy: quietly adding the park to the National Register of Historic Places to further protect the space through the Department of the Interior. A local architect submitted the application independent of city leadership.⁴⁴ In 1979, the national debate over the future of the Overton Park freeway finally came to an end when Memphis Mayor Wyeth Chandler, a longtime proponent of the freeway, received a congratulations letter from the Department of the Interior. The park was declared a historic national landscape and space of community planning.⁴⁵ In the following years, the Overton Park interchange was formally withdrawn from the federal highway system. The state finally deeded the freeway acreage back to the city in 1987, thirty years after the grassroots movement began.⁴⁶

Discussion: The Citizens as the Ultimate Preserves of the Park

Today, over forty years after the Supreme Court ruled in favor of the Citizens of Overton Park, the legacy of the landmark decision is still seen in public spaces across the nation. Its invocation of Section 4(f) of the Department

of Transportation Act of 1966 held the “feasible and prudent” clause to a standard that would protect public parks from relocation. The DOT had to demonstrate extensive inquiry into alternative routes before demolishing a public space for a freeway—an approval of the local city council would not suffice. But the case is also noteworthy for the groundwork it laid in the realm of judicial review: the opinion set precedent as the first case to restrain the authority of a government agency.

Most importantly, *Citizens to Preserve Overton Park* serves as a testament to the ability of grassroots movements to override the decisions of federal agencies, to assert ownership over their most valued spaces. It was the tireless advocacy of community members—who quietly sought for the listing on the National Register of Historic Places—that ultimately protected the park. The designation of the park as a space of momentous community planning is crucial to its enduring preservation and indicates when independent citizens at last reclaimed the space from the hands of developers.

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II. City Structure

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Jane Jacobs, Modernity and Knowledge

Sonia Hirt

If we imagine the philosophical discussion of the modern period reconstructed as a judicial hearing, it would be deciding a single question: how is reliable knowledge (Erkenntnis) possible.

– Jürgen Habermas

Although best known as a theorist of urbanism and a critic of urban planning, Jane Jacobs made important contributions to economics, politics, and philosophy. Out of her eight books, only the second but most popular one, *The Death and Life of Great American Cities*, is specifically about urbanism and urban planning. Of the others, three (*The Economy of Cities*, *Cities and the Wealth of Nations*, and *The Nature of Economies*) are explicitly on economics (admittedly, with emphasis on cities and economics), three can be said to be political (*Constitutional Chaff*, *The Question of Separatism*, and *Dark Age Ahead*), and one is clearly on ethics (*Systems of Survival*). Jacobs is not, however, normally considered an epistemologist, a philosopher of knowledge. Yet, we can perhaps infer from the fact that *The Death and Life's* synthesis chapter is dedicated not to the social or spatial features of the city but, rather, to The Kind of a Problem a City Is, that she was deeply interested in the problems of knowledge and how it is generated.¹ In this chapter, I explore Jacobs's take on knowledge and knowledge-building. I argue that Jacobs's writings are an exemplary critique of the epistemological premises of technocratic 'high modernism' – a philosophical paradigm which reached its culmination in the middle of the twentieth century (Scott, 1998). I base my argument mainly on a read of *The Death and Life* and the other two books from Jacobs's urban trilogy, *The Economy of Cities* and *Cities and the Wealth of Nations*, lighter references to some of her other publications, and some archival materials available at Boston College's Jane Jacobs Papers collection.

Epistemology is of course a complex subject which has been debated, at least in Western thought, since the times of Plato and Aristotle. A typical definition refers to the 'study or theory of the nature and grounds of knowledge especially in reference to its limits and validity'.² The definition is deceptively simple: it is pretty difficult to grasp the 'nature and grounds of knowledge'. One way to organize the debate is to pose three related questions – what, how and who: What about the world can be known? How can we know it? and Who can know it? (e.g. White, 1982). For the purposes of this chapter, I take these questions to relate to extent, evidence and expertise: 1. What can be the extent of our knowledge of the world? 2. What constitutes sufficient evidence for knowing? and 3. Who has the capacity to know?

From the Enlightenment all the way to the era of mid-twentieth-century high modernism, these questions in Western thought tended to be answered in a particular way: 1. reality, natural and social, operates under objective and universal laws that can be fully known and applied for the purposes of human betterment; 2. knowledge building occurs through the construction and verification of logical hypotheses pertaining to the laws of reality, hypotheses which can be tested through formal empirical observation; and 3. a cadre of highly trained individuals possess superior capacity to attain knowledge (e.g., Reiss, 1982; Harvey, 1989; Havel, 1992; Healey, 1997; Scott, 1998). This specific way of answering the questions, which forms the core of Enlightenment modernist thought, has been under heavy fire since the 1960s with the advent of postpositivist and post-modern thinking. The critique of modern epistemology is central to broader critiques of modernity – one good reason why Jean-François Lyotard (1984) wrote about the 'postmodern condition' as a 'report on knowledge' and why Jürgen Habermas chose to open his *Knowledge and Human Interests* with a depiction of an imaginary judicial hearing on the achievements (and failures) of modernity focused on a single question: How is reliable knowledge possible? (1972, p. 3).

What and how does Jacobs know? To what extent does she think the world can be known? How does she think she gets to know what she claims to know? And, who does she think can know? What would she have said at the Habermasian judicial hearing? My argument is that although Jacobs criticizes modernist epistemology, she also works to improve it instead of rejecting it (which in fact makes her a potential, if implicit, early ally of Habermas, who defends the 'modern project'³ and an opponent of Lyotard, who denounces it). Clarifying Jacobs's take on 'how is reliable knowledge possible' is important in order to better understand what Jacobs claims and why she claims it. It also allows us to find her rightful place in the line of twentieth-century philosophers of knowledge.

Jacobs and the Question of Extent: What Can Be Known About the (Urban) World? It perhaps goes without saying that Jacobs believed reality, urban or other, can be generally known and understood.⁴ Despite common charges that she was a commonplace observer and not a 'real' scientist (i.e. one that is interested in law discovery and theory-building), Jacobs was in fact deeply driven by poignant scholarly questions which aimed to uncover fundamental issues pertaining to the 'nature of things' (cities in her case)⁵ such as the factors that explain how cities grow or what makes them successful (see also Harris, 2011).⁶ In Jacobs's view, urban reality operates as a coherent, if complex 'system' guided by a set of immanent and logical principles or laws that can and should be grasped through human reasoning and observation – an utterly modern proposition. The second paragraph of *The Death and Life* (1961, pp. 3–4) conveys this point clearly: Jacobs writes that her principal intent in the book is to generate theory from facts (Harris, 2011): specifically, to discover the causal mechanisms that drive urban spaces to behave the way they do in real life (e.g. 'why some parks are marvelous and others are vice traps and death traps; why some slums

stay slums and other slums regenerate themselves', etc.). She posits that once the causal factors are discovered, they can be applied directly towards practical progress:⁷ e.g. to 'promote the social and economic vitality of cities' – again, an utterly modern idea. Had she not believed that these factors can be derived and well-understood, it would have been impossible for her to spend most of the book discussing them under the headings of 'conditions of diversity' and 'forces of decline and regeneration'. But any further, even superficial reading reveals that Jacobs's views of what can be known are not fully within the high modernist epistemological tradition, which dominated her time.

Vaclav Havel (1992) claims that modernist epistemology can be summed up as the belief in a 'wholly knowable system governed by a finite number of universal laws that man can grasp'. If so, I would argue that Jacobs's view of what we can know about the world allows way too much room for doubt and for contingency to fit comfortably in this definition. True, in each of her urban books, Jacobs speaks of discoverable 'universal laws' that apply to cities, development, or even more generally to all 'systems': natural, urban, economic, etc. For example, in the last chapter of *The Death and Life*, she argues that cities like other 'systems of organized complexity' (e.g. human bodies, natural habitats) are governed by a 'number of factors which are interrelated in an organic whole' and that the interconnected working of these factors is an 'essential feature of [any] organization' (1961, pp. 432–433). In *The Economy of Cities*, she makes a similar attempt to extract universal tenets of development common to all 'systems' (e.g. 'We find reciprocating systems all about us, in nature as well as in man-made contrivances'; 1969, p. 126). And in *Cities and the Wealth of Nations*, she posits that certain economic principles are universal ('[although] history does not repeat itself in details, but patterns of economic history are so repetitious as to suggest they are almost laws'; 1984, p. 206). She also quite often makes the case for natural-human systems crossover: 'Many of the root processes at work and in human and natural ecologies are amazingly similar' (1984, p. 224); e.g. cataclysmic events ('transactions of decline') that shake human and natural systems in fairly similar ways.

In nature, for example, stresses and instabilities gradually build up in various portions of the earth's crust. When the accumulating stresses reach a certain point they are abruptly disposed of by a discontinuity. The same phenomenon is at work in human affairs. A city enterprise that moves out because of accumulating stresses – say, congestion, makeshift space, rising costs – is experiencing an abrupt discontinuity (1984, pp. 206–208)⁸.

Such statements can potentially be taken as illustration of her viewpoint that the world consists of fully 'knowable systems' governed by universal laws that 'man can grasp'. But, this is true only to an extent. Where Jacobs deviates from the modernist tradition – a fact she herself emphasizes consistently – is the extent to which she believes that the 'systems' are so complex as to make it impossible for humans to grasp all the factors that affect them in all their interconnections, thus rendering futile any human attempts to master fully the causal combinations and thus design

wholly new systems successfully. This in fact seems to be the chief lesson from *The Death and Life's* last chapter, in which she famously lambasts the knowledge-seeking approach of her predecessors and contemporaries. Knowledge of the urban world, she argues, cannot be achieved by taking it either as a bivariate problem or even as a multivariate problem that includes many unrelated independent variables. So even though the urban world could theoretically be fully known if we choose to study it as the 'problem of organized complexity' that it is, any effort to derive anything but the broadest possible principles of what makes cities (and other types of systems) successful or not is doomed to fail. So, yes, diversity is a common trait of all successful systems; thus, we can call it a rule that, say, mono-functional arrangements do not work (e.g. cities where residences and commerce are far apart) and multi-functional ones do seem to work better (e.g. cities where residences and commerce are more integrated), but it is impossible to calculate the 'proper' level of land-use mix because this would depend on a vast variety of factors that we can only understand in very unique, particular (rather than widely generalizable) contexts. Hence a statement like: 'I have generalized about these forces and processes considerably but let no one be misled that these generalizations can be used routinely to declare what the particulars, in this or that place, ought to be' (1961, p. 441) – is a sort of a general law against generalizability, which she rehearses throughout her writings. And hence another Jacobs's 'general law': that small-scale, incremental adjustment, dynamic flexibility, innovation and experimentation are the hallmarks of a successful system; and that disallowing such innovation and sticking to pre-emptively determined, rigid rules of how a system should work are the hallmark of bad policy.

Although these perpetual trial-and-error adjustments of the urban realm were misconstrued as chaotic by some of her contemporaries, whom she heavily criticized, for Jacobs they were examples of the creative but not wholly knowable and predictable internal forces that allowed a complex system perpetually to evolve and self-correct. This appreciation of the relative 'unknowability' of systems is the root of Jacobs's passionate assertion that the 'city is not art' (i.e. it cannot be successfully created from blueprints, with a stroke of a pen or a paintbrush) and her adamant opposition to static, preordained programmes of how to create new systems of any kind, which permeates all of her writings. Here is a lesser known but very clear example from a draft speech entitled *The Failure and Future of American Housing Programs*,⁹ in which she ridicules efforts to design neighbourhoods from scratch: 'First a plan has to be made for the whole, in advance. Second, it has to be executed in its entirety, in unity. Third, once executed it has to be protected ever after from changes at cross purposes to it'. Pointing to the absurdity of this method, she then argues for a 'careful filling-in approach', in which '[t]he end result cannot be worked out at the beginning'. She reiterated this view in an especially vivid way in one of her last media interviews.

I love New York so much still. . . Like all cities, it's self-organizing. . . The most properly designed place cannot compete. Everything is provided

which is the worst thing that we can provide. There's a joke that the father of an old friend used to tell, about a preacher who warns children, 'In Hell there will be wailing and weeping and gnashing of teeth'. 'What if you don't have teeth?' one of the children asks. 'Then teeth will be provided', he says sternly. That's it – the spirit of the designed city: Teeth Will Be Provided for You. (cited by Gopnik, 2007) In short then, while Jacobs searched for and claimed to have attained knowledge of certain broad laws and principles that operate within the urban realm and, potentially, of laws and principles that work across systems, she also recognized the limited capacity of human reason to conquer reality's complexity in full.

Jacobs and the Question of Evidence: How to Know?

Now, what kind of evidence allows us to claim reliable, even if incomplete, knowledge of the world around us? Jacobs lays out the cornerstone of her philosophy of how to know the urban realm in the same second paragraph of *The Death and Life* that I already quoted. She starts this paragraph with: 'In setting forth different principles, I shall mainly be writing about common, ordinary things' and ends it with 'In short, I shall be writing about how cities work in real life because this is the only way to learn [my italics] what principles of planning and what practices in rebuilding can work to improve cities and what will work to 'deaden' them' (1961, pp. 3–4). In other words, she proposes that reliable knowledge is possible only through direct observation of everyday, actually occurring phenomena (as opposed to through abstract models of how reality ought to work according to 'pure reason'). In this sense, her thought fits in the empiricist and inductive, Darwinian school of modern knowledge-building rather than, say, in the Descartes's wing of deductive reasoning.¹⁰ Not surprisingly, one of her favourite mottoes, which she borrowed from Deng Xiaoping, was 'Seek truth from facts' (Hospers, 2006). Perhaps needless to say, Jacobs carries on this method consistently throughout *The Death and Life*. In the last chapter, she summarizes her knowledge-building philosophy, or what she calls 'habits of thought', in the following terms:

1. To think about processes;
2. To work inductively, reasoning from particulars to the general, rather than the reverse;
3. To seek for the 'unaverage' clues involving very small quantities, which reveal the way larger and more 'average' quantities are operating. (1961, p. 440)

Jacobs's favourite example of the wrong way of gathering knowledge, the wrong 'habits of thought', comes alive in the introductory chapter of *The Death and Life*, where she recounts a conversation with a Boston planner who had been educated to think of cities according to academic theories and models. The planner was shocked that Boston's North End seemed like a rather vital place, even though its formal attributes – population densities, land-use ratios, street measurements, etc. – were all 'wrong' according to the theories the planner had learned (1961, pp. 8–11). The planner's education must have been in line with the philosophy of, say, Le Corbusier – perhaps the most rigid of the high-modernist architect-

planners (Scott, 1998), whom Jacobs especially detested. In his 1929 book *The City of To-morrow and Its Planning*, Le Corbusier offers a version of epistemology that runs exactly contrary to that of Jacobs: he thought that cities can be modelled to resemble highly idealized versions of eternal urban order and that they should be planned once and for all in 'search for perfection' (1987, p. xxii). He also thought that statistics give an 'exact picture of our present state' and even of some 'eternal verities' to the point that 'statistics is the Pegasus of the town planner' and 'jumping-off ground for poetry' (1987, pp. 107–126).¹¹ Jacobs ridicules this school of thought for being a priori and normative; i.e. for assuming knowledge before the fact; for being independent of real-life, empirical evidence; and for being based on irrelevant abstract models and false analogies.

Cities are an immense laboratory of trial and error, failure and success, in city planning and design. This is the laboratory in which city planning should have been learning and forming and testing its theories. Instead the practitioners and teachers of this discipline (if such it can be called) have ignored the study of success and failure in real life, have been incurious about the reasons of unexpected success, and are guided instead by principles derived from the behavior and appearance of towns, suburbs, tuberculosis sanatoria, fairs and imaginary dream cities – from anything but cities themselves. (1961, p. 6).

Planners, architects of city design . . . have gone to great pain to learn what the saints and sages of modern orthodox planning have said about how cities ought to work and what ought to be good for people and businesses in them. They take this with such devotion that when contradictory reality intrudes, threatening to shatter their dearly won learning, they must shrug reality altogether. (1961, p. 8)

She returns to the failure of abstract and normative reason in the last chapter of the book bringing up once again the example of the bewildered Boston planner torn between his learned theories and his lived experiences:

Why reason inductively? Because to reason, instead, from generalizations ultimately drives us into absurdities – as in the case of the Boston planner who knew (against all the real-life evidence he had) that the North End had to be a slum because the generalizations that make him an expert say it is. . . This is an obvious pitfall because the generalizations on which the planner was depending were themselves nonsensical. However, inductive reasoning is just as important for identifying, understanding and constructively using the forces and processes that are actually relevant to cities, and therefore are not nonsensical. (1961, p. 441)

She continued to champion empirical knowledge versus normative, a priori knowledge with the same vigorous rhetoric two decades later in *Cities and the Wealth of Nations*. The book's opening chapter, 'Fool's Paradise' (1984, pp. 3–28), is preoccupied with the 'dismal science of economics' which managed to reduce the complexity of the world to neat graphs and curves. Her second chapter is called, perhaps not surprisingly, 'Back to Reality'. Clearly, Jacobs's idea of knowledge-formation heavily favours a posteriori knowledge: 'The way to get at what goes in the seemingly mysterious

and perverse behavior of cities, I think, is to look closely, and with as little previous expectation as possible (my italics), at the most ordinary scenes and events. . . ' (1961, p. 13). This statement comes quite close to what, some half a dozen years after *The Death and Life* was written, Barney Glaser and Anselm Strauss (1967) called 'grounded' theorymaking.

Keeping in mind Jacobs's insistence on studying real-life, factual evidence on the ground, it is peculiar that one of the most persistent critiques against her – a critique dating back to Robert Moses's assessment of her work as 'sloppy' and 'inaccurate' – has been precisely the one that she lacks this type of evidence and, thus, cannot claim that her findings are generalizable. This view was well articulated in a recent piece in *The Wall Street Journal*, which stated that 'Jacobs had a tendency toward sweeping conclusions based on anecdotal information, and some of them were overblown and/ or oblivious to the facts' (Manshel, 2010).

The charge does not appear to imply that Jacobs distorted facts but, rather, that she chose them in an unsystematic way to support her pre-conceived theories (in this sense, the statement accuses Jacobs of doing exactly what she accused her adversaries – constructing a priori theory). In a positivist world, Jacobs is quite vulnerable to the charge. Indeed, observing everyday people going about their everyday activities in the city (as she does in *The Death and Life*) without explaining how these people (which social scientists like to call 'subjects') were selected to achieve representation is dubious. If selection is haphazard, can Jacobs claim to make generalizable conclusions? (If asked, Le Corbusier's followers would likely expect random statistical selection to ensure generalizability.) Furthermore, even in the urban books in which she does not focus on the experiences of everyday people but rather on the behaviour of cities as basic units of analysis, Jacobs does not articulate how 'subject' or case selection was made. I would argue, though, that even without explicit articulation of sampling method, Jacobs actually followed what today is considered a perfectly mainstream methodology: casestudy research. Take for example *The Economy of Cities*. Does Jacobs have a method? She moves from city to city with the same ease and seeming frivolousness as she moves from person to person and from neighbourhood to neighbourhood in *The Death and Life*. On just two pages (1969, pp. 130–131), we find references to some dozen cities, old and new, spread all over the world: Venice, London, Paris, Hamburg, Osaka, Chicago, Dinant, Mohenjo-daro, Harappa. Is there research logic behind these case choices? Is this scientific selection or some sloppy, rambling sequence? I would argue that far from rambling, Jacobs is perhaps subconsciously following the research logic of the classic qualitative methodologies that Robert Yin (1984) outlined some 15 years after Jacobs wrote *The Economy of Cities*. Her analytic tactic is in fact commonly used in multiple case-study research design: the researcher makes case selection expecting similar results from a series of cases – a method Yin (1984, p. 46) calls 'literal replication'. (In this particular instance, Jacobs is using multiple case-study design to extract a particular theoretical proposition for the importance of export-oriented growth in urban development – something which she believed her contemporary urban theorists had neglected.)

Now, one can argue that the evidence she accumulated and presented on cities as diverse as Harappa and Hamburg may have been superficial and, in contrast to the evidence used in *The Death and Life*, certainly based entirely on secondary sources. But her research logic – selecting cases in which a number of circumstances (i.e. independent variables) are quite different (hence the value of the diverse selection across time and space), yet outcomes (in this case, explosive urban development) are common, thus pointing to the significance of at least one shared independent variable – falls quite in line with case-study technique. A more substantially researched example – this time of the second major logic underlying multiple case studies, that of 'theoretical replication' based on analysis of contrasting cases (Yin, 1984, p. 46) – can be found on the preceding pages of *The Economy of Cities*. There, Jacobs contrasts industrial-era Birmingham and Manchester – two cases in which almost all pertinent independent variables seem quite similar, yet one – the extent to which the urban economy was diversified – was different. Hence, as Birmingham and Manchester follow contrasting trajectories (the former ultimately falters, the latter prospers), they speak to the importance of urban economic diversity as an explanatory factor (1969, pp. 86–93).

One can find many similar examples in *The Death and Life* too. In comparing Boston's thriving and untouched-by-planning North End versus various not-sovibrant planner-produced districts as extreme and contrasting examples, Jacobs was again employing textbook case-study research logic. No wonder that she explicitly searched for precisely what statistics do not offer: 'unaverages'. Indeed, qualitative methodology, and the case study method especially, involve analytical instead of statistical generalization; they extract knowledge from the workings of non-average, non-typical cases that best illustrate a theory (Yin, 1984). In short then, Jacobs seems to have clearly sided with the empiricist tradition of knowledge-building. Furthermore, even when she lacked in-depth access to primary sources (as is in *The Economy of Cities*), she worked using what we now would consider legitimate ways of extracting theories about reality from observation.

Jacobs and the Question of Expertise: Who Can Know

From the three aspects of knowledge-formation discussed in this chapter, Jacobs's view on experts and expertise has been the most widely discussed. Her views on that matter are closely related to her views on how knowledge can be generated, which I addressed in the previous section of this chapter. In a nutshell, Jacobs was the 'nonexpert expert' (Kinkela, 2009): she lacked formal education or an official title, professorial or other, in the disciplines to which she ultimately contributed. Indeed, she often scoffed at academic credentials, refused to be referred to as an 'expert' in print, and rebuffed the universities which sought to give her honorary degrees, as all of her recent biographies have emphasized (Alexiou, 2006; Flint, 2009; Gratz, 2010). Jacobs's lack of official training was commonly used as a source of sneer by her decorated adversaries. Robert Moses referred to *The Death and Life* as 'junk'. In a 1961 letter, Lewis Mumford declined to comment on the book since this would amount to 'an old surgeon giving public judgment on

the work of a confident but sloppy novice'. A year later he wrote his famous scathing book review ridiculing 'Mother Jacobs' for her 'schoolgirl howlers' and her 'homemade poultice for the cure of (urban) cancer' (Mumford, 1962). The then-President of the American Institute of Planning Officials was equally dismissive: 'Mrs. Jacobs clearly knows so little about planning' (still he feared the impact of the book enough as to call: 'So batten down the hatches, boys, we are in for a big blow!'; cited by Alexiou, 2006). The patriarchal overtones of such statements directed at Jacobs's ostensible ignorance are quite obvious (and strong enough to warrant a separate article) but not surprising. As earlier said, Jacobs consistently praised practical, everyday knowledge over theory-led, propositional knowledge – an approach which has been historically associated with women and has thus been routinely degraded as knowledge of a lower rank.¹²

A closer scrutiny of Jacobs's life and writings, however, hardly suggests aversion to either experts or expertise per se. As a matter of fact, Jacobs received a rather rigorous training at Columbia University even though she was not granted a degree (since the university would only issue diplomas to males); read obsessively on various scientific subjects; engaged closely with many of the best-known experts of her time (e.g. William Whyte); and while being unafraid to critique scholars of the magnitude of Marx and Keynes (she does so in *Cities and the Wealth of Nations*), relied heavily on the theories of rising scholars to advance her own assertions (e.g. Kevin Lynch in *The Death and Life*; see Klemek, 2007; Harris, 2011). True, a book like *Cities and the Wealth of Nations* starts with a brutal critique of science and expertise and the theme occurs repeatedly in *The Death and Life*. (The above-cited story of the Boston planner, obviously misled by his schooling, is one among many obvious examples.) But Jacobs's opposition only targets science and expertise that misrepresent how reality works. Jacobs is opposed to nonsensical 'expertise' much as any sane person would be opposed to, say, the medieval science of healing through bloodletting – one of Jacobs's favourite examples of harmful expertise. She has no problem with science and the search for expertise per se. In *The Kind of a Problem a City Is* Jacobs puts forward a consistent argument for understanding cities as a scientific problem, as long as the problem is correctly defined (i.e. as long as cities are seen as problems of 'organized complexity'). She speaks passionately of the need for scientific progress and advocates learning specifically from the life sciences, which she views as most advanced. Jacobs thus attacks not expertise, but false expertise, not training, but bad training:

Planners have been trained and disciplined in deductive thinking, like the Boston planner who learned his lessons only too well. Possibly because of this bad training, planners frequently seem to be less equipped intellectually for respecting particulars than ordinary people, untrained in expertise, who are attached to the neighborhood, accustomed to using it, and so are not accustomed to thinking of it in a generalized or abstract fashion. (1961, p. 441)

Expertise is quite necessary in Jacobs's view because it has the unique capacity to inform action (e.g. '... we need desperately to learn and apply as much knowledge as it is true and useful to cities as fast as possible'; 1961, p. 16) – a position quite in line with modern epistemology, as I mentioned earlier. But Jacobs deviates from modern epistemology in that she does not believe that the formal training of 'enlightened' elites makes them better experts than people going about their daily lives in the city. To Jacobs, anyone armed with the powers of observation and reflection can know. In fact, people who have been spared indoctrination into certain false theoretical constructs and rely on their common sense would be positioned to know much better. As other critics of modernity, Jacobs eradicates the distance between 'high' and 'low' knowledge, between learned expertise and experiential expertise. Not only does she put trained experts and common-sense experts on the same footing but, in fact, she often switches their hierarchical positions, as the previous quote demonstrates. *The Death and Life* includes many other citations to that effect, yet I find one of Jacobs's last letters, from 2005, written to New York's Mayor Michael Bloomberg, as the most artful example. Jacobs, by that time 88 years old and widely considered an Olympian authority on cities, starts by framing her expertise in terms of studentship (not scholarship): 'My name is Jane Jacobs. I am a student of cities, interested in learning why some cities persist in prospering while others persistently decline. ...'. The letter addresses two competing plans which were put forward for New York's Greenpoint- Williamsburg waterfront: the first was prepared by 'experts' and included proposals for large redevelopment projects, and the second was the product of grassroots activism and focused on small-industry retention and the provision of affordable housing. Jacobs briefly examines the arguments of each side and ends in a truly Jacobsonian manner: 'Dear Mayor Bloomberg. ... Come on, do the right thing. The community really does know best' (Jacobs, 2005).

Conclusion

If Lyotard was correct in that post-modernism is 'incredulity toward meta-narratives' (Lyotard, 1984, p. xxiv), then Jane Jacobs wrote the textbook on how to challenge the prevailing urban meta-narrative of her time. Lacking Lyotard's unbounded relativism, however, Jacobs did not seem to think of all meta-narratives as flawed at inception. She did in fact search to discover some immanent, general principles that guide urban development (shall we call them meta-narratives?), even though she was wise enough to recognize the imperfect capacity of humans to grasp these principles and their interconnections in full. Thus, the most important meta-narrative that Jacobs contributed may be that urban systems are so complex as to permit only modest interventions, interventions that leave sufficient room for ongoing adjustments and experimentation.

In her belief that urban reality can be known (at least to an extent) and that this knowledge can and should be applied to facilitate human progress (that is, to build better, more vibrant, just and efficient cities in her case), Jacobs appears to have carried on what Habermas called the 'extravagant

expectation' of Enlightenment-modern thinkers to use knowledge for 'understanding of the world and of the self, for moral progress, the justice of institutions and even the happiness of human beings' (1997, p. 9). In this pursuit, Jacobs does not aim to negate the role of science and expertise but rather to expand their realms in ways to include knowledge that builds on the stories of 'small', common people. If 'science has always been in conflict with narratives' (Lyotard, 1984, p. xxiii), Jacobs brings narrative back into science. And while searching for the broad patterns that may make a meta-narrative, she tells, especially in *The Death and Life*, many diverse and delightful human, everyday mini-narratives that captured the imagination of several generations of readers. In so doing, Jacobs shifts the basic units of analysis used by the urban sciences of her time – ratios, populations, jobs, land uses, housing – back to people. 'A store', she said while addressing an urban design conference at Harvard, 'is also a storekeeper' (1956, p. 102) – a statement which suggests that in addition to her legacy in epistemology, Jane Jacobs also contributed to ontology, the study of what kinds of entities and categories exist and are worth knowing. But that should be the subject of another essay.

Notes

- In fact, I would posit that *The Death and Life* is more a critique of the epistemology of urban planning than of any other of its aspects.
- According to the Merriam-Webster Dictionary.
- I refer, of course, to Habermas's *Modernity: An Unfinished Project* (1997 [1980]).
- This may sound like a very commonplace observation. However, many important philosophers, from René Descartes to George Berkeley, have doubted that the world can be known, thus expressing various degrees of scepticism and agnosticism (this is true even if we put aside the question whether the world exists at all; that is, outside our minds – a solipsistic position that can be traced to the Roman thinker Sextus Empiricus).
- In my view, Harris (2011) finally puts to rest the myth that Jacobs was antagonistic towards theory-building.
- The point that Jacobs believed in discovering and then applying the 'laws of reality' directly towards the systematic betterment of human conditions (as obvious as the idea may seem to most of us today) is not entirely trivial. The idea of using systematically derived knowledge for the widespread improvement of society emerged in Western thought only during the Enlightenment (Scott, 1998).
- According to Lyotard (1984, p. 12), this type of modernist assumption spans from Comte to Luhman. Lyotard gives the following example from Talcott Parsons: 'The most essential condition of successful dynamic analysis is a continual and systematic reference of every problem to the state of the system as a whole... A process or set of conditions either 'contributes' to the maintenance (or development) of the system or it is 'dysfunctional' in that it detracts from the integration, effectiveness, etc, of the system'.
- In another example, Jacobs argued that despite differences between cultures and even between types of systems (human, natural, etc.), 'cities obey the same basic laws of life'. This is according to the typewritten draft of the foreword to the Japanese edition of *Cities and the Wealth of Nations* dated April 1986 and available in the Jane Jacobs Collection at Boston College (file # MS 02- 13[1/4]).
- From the Jane Jacobs Collection at Boston College (file # MS 95-29 [525-29]).
- For example, Achinstein (2011) on 'kinds of knowledge'.
- For a fuller account of Le Corbusier's ideas on this subject, see Guiton (1981).
- For a good account of the intersection of gender politics and types of knowledge see, for example, Tanesini (2011).

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JANE JACOBS | TORONTO | 2041

Mona El Khafif and Shannon Wright

ABSTRACT

“Cities can provide something for everybody when they are created by everybody.”

[Jane Jacobs, Eaton Centre, 1977]

Jane Jacobs spent the second half of her life in Toronto, impacting the city’s development in a unique way by encouraging citizen activism—largely considered her fundamental legacy. Major infrastructure projects, such as the Spadina Expressway, were aborted due to her resistance, while citizen-oriented projects advanced by Jacobs—such as the St. Lawrence neighborhood, designed in the late 1970s—remain a radical alternative to the modernist planning attitude dominant at that time. That neighborhood, which served to transform a postindustrial environment into an active part of the city, consists of a highly contextual assemblage of residential typologies supporting mixed use and demographics, punctuated by green space, and it serves to connect the St. Lawrence Market and the Distillery District—two of the most critical historic sites in the core of the city. It is heralded as one of the most successful urban development schemes in Toronto.¹

Today, more than thirty years later, the city can’t be imagined without reference to Jane Jacobs’s legacy. Yet, the stress of the city’s increasing population—predicted to grow from 2.77 million to 3.64 million by 2041,² and the intense development following in its wake—is producing challenges to this heritage. Occurring primarily through the construction of high-density condominiums tailored to young professionals, these developments produce vertical communities that, in some ways, lack the neighborhood characteristics that Jacobs advocated for as Toronto’s unique heritage. The city’s current investment in building density is eclipsing the need for complex neighborhood development at the urban scale.

As a response, we will analyze the mechanisms currently driving the rapid increase of the city’s building density, while using Jane Jacobs’s legacy as a touchstone to rethink how urban complexity might be reintegrated into this density through strategically developed vertical neighborhoods. Against the backdrop of Jacobs’s achievements, and with the largest growth cycles yet to come, this paper serves as a call to action for raising the urban and civic ambitions for the city.

1. JANE JACOBS’S LEGACY IN TORONTO

1.1. Jacobs’s impact on critical urban projects

In 1968, Jane Jacobs moved from New York to Toronto, where she spent the second half of her life. When we discuss Jacobs’s impact on urban design and development, Toronto is of particular interest. Toronto had the physical and social-political attributes so admired by Jacobs. A series of

urban renewal projects, including the infamous Spadina Expressway, had already generated a local activist following—having Jacobs at the helm led to the expressway’s ultimate demise. In addition, Toronto neighborhoods suffered less from the white flight that led to the neglect of some American downtowns, and the quality of the city’s Victorian building stock—carrying spatial merits identified in her first book—made Toronto the perfect “test bed” for Jacobs’s agenda. The ideas originally articulated in *The Death and Life of Great American Cities* finally found an urban setting in which to unfold.

Jacobs’s impact, however, was primarily due to the influence her writings had on setting local processes in motion. In this context, it is important to recognize the research of Richard White,³ who conducted a detailed analysis of Jacobs’s legacy by interviewing more than twenty Toronto designers, planners, politicians, and activists of that time.

The interviews revealed that Jacobs is best known for the cancellation of the Spadina Expressway in 1971. The Toronto regional expressway system, proposed in the late 1950s, included several expressways for Toronto, with most of the inner-city components not realized, with the exception of the Gardiner Expressway, Don Valley Parkway, and Allen Road. When Jacobs arrived in Toronto, public opposition to these projects was already well-established, and for Jacobs—who had opposed the Lower Manhattan Expressway while living in New York—this was the first opportunity to get involved. In 1969, she gave a well-publicized YMCA-sponsored speech, and that November she wrote a powerful piece in the *Globe and Mail* opposing the project—specifically the expense and consequences for public transit investments. The project was cancelled in 1971; however, according to White’s research, Jacobs was not responsible for “leading the crusade against Spadina.” The opposition was a political movement, fueled by the New Democratic Party and emerging environmentalism, which existed before Jacobs arrived in Toronto.

Jacobs is also associated with protecting older housing and hindering the development of downtown residential high-rise buildings.⁴ Large-scale urban renewal, like the Tower in the Park projects, started in Toronto after World War II. Superblocks of high-rise housing like Regent Park (1947–1957) faced little resistance; however, this changed around 1964 when the province started to finance urban renewal projects. Community organizers, inspired by radicals like Tom Hayden, became advocates for the low-income community, inadequately expropriated and unable to buy or rent new homes in a booming market. According to White, local response was fueled by “deep rooted communitarianism, radicalism, and early gentrification.”

Jane Jacobs’s resistance to modernist urban renewal is clearly articulated in *The Death and Life of Great American Cities*. However, as with the Spadina Expressway, her impact was made less through direct involvement and more through her writings that inspired Torontonians activists. Individuals like John Sewell, a young lawyer, were the driving forces behind the cancellation of the Trefann Court project and—together with Mayor

David Crombie—the Dundas-Sherbourne resistance. While Jacobs was an observer, her true impact was on young activists who carried her book *The Death and Life of Great American Cities*⁵ in their pockets. With its arguments against urban renewal and ideas supporting healthy neighborhoods that are vibrant and diverse, the book strengthened local opposition.⁶

Though much of her impact was made through her written works, Jacobs was directly involved in the development of the St. Lawrence masterplan from 1975-1981. In 1972—a political turning point—Crombie initiated two major reforms: creation of the City Housing Department to foster and protect low-income housing and a new bylaw to restrict development in the core.⁷ The St. Lawrence neighborhood is one of the largest and most successful projects by the City Housing Department. Built for 7,000 to 9,000 low-income residents, the project reflects Jacobs's principles and remains a radical alternative to the modernist planning attitude dominant at the time. The project served to transform a postindustrial environment into an active neighborhood. Consisting of residential typologies supporting mixed uses and demographics, it was punctuated by green space and connected the St. Lawrence Market and Distillery District—two critical historic sites in the city's core. It is heralded as one of the most successful urban developments in Toronto.⁸

Short block sizes over the superblock, porous and accessible interior public spaces, adjacent parks, private green spaces, wide sidewalks, and adequate density all nurtured the development of a successful neighborhood. Klemek⁹ – associate professor of history at George Washington University, who traces political and intellectual shifts affecting urban policy and city life — described Jacobs's involvement as a close advisor to the project, but interviews show her biggest impact was through her book *The Death and Life of Great American Cities*, by this time one of the guiding textbooks for the project's architects, politicians, and planners.¹⁰

The last important project that needs to be highlighted in the context of Jacobs's legacy and current developments in Toronto is the Central Area Plan Review, realized between 1974 and 1978. In the wake of Crombie's election, and criticism that the core areas were being developed too quickly, a series of important and—for their time—far-reaching bylaws were introduced to redirect Toronto's downtown intensification. Officials and residents identified problems with public transit capacity, public infrastructure, and the relocation of low-income residents. As a first step, Crombie implemented a new bylaw that limited building height in the inner city to forty-five feet and maximum gross floor area to 40,000 square feet. Developers whose landholdings were devalued fought this bylaw, but the city won with the promise that a comprehensive plan would be developed within a year.¹¹

Being radical and innovative for its time, the plan limited office development to 50 percent and supported downtown living. Social infrastructure, hospitals, and university programs were coordinated, historic buildings were preserved, and public spaces were incorporated. After a yearlong battle, the provincial board approved the plan in 1978.¹² Raymond

Spaxman, senior planner for the city and project lead, was educated in Europe. He created a special division and, instead of hiring planners, decided to staff his team with new urban designers educated abroad.¹³

The plan—and today's downtown—demonstrated principles identified in *The Death and Life of Great American Cities*. However, White's interviews showed that Jacobs was not directly involved with reviewing the plan or with advising. As in earlier cases, her biggest impact was through writings that influenced a new generation of urban designers.¹⁴

1.2. Jacobs's principles of neighborhood qualities

Toronto is often described as a “city of neighborhoods.” Jacobs's written works helped to mobilize the urban realm and its people by promoting healthy neighborhoods and bottom-up design methods in support of this notion. Following the theories articulated in *The Death and Life of Great American Cities*, there are three scales of neighborhoods evident in Toronto's fabric: the street, the district, and the city.

Jacobs's principles, described below, act as urban design guidelines emphasizing diversity, density, socialization, and public-private mixing to provide the foundation for healthy and vibrant neighborhoods.

• There must be eyes on the street¹⁵

One of Jacobs's most fundamental principles—“eyes on the street”—works hand-in-hand with several of her other pillars of successful cities, districts and neighborhoods. The principle relies on density and the people who reside there—a well-used city is safer than its deserted counterpart. Surveillance of public thresholds by the residents ensures safer urban spaces.

• Diversity of public spaces along streets and sidewalks¹⁶

Streets and sidewalks have the ability to foster social resilience in communities, while simultaneously self-policing the neighborhoods and providing a dynamic street atmosphere. These public thresholds serve as a demarcation between public and private uses within the urban realm and work hand-in-hand with fostering porous and vibrant communities. The effectiveness of the street or sidewalk, however, relies on the diversity of these public spaces to ensure they are utilized by different people throughout different times of the day.

• The district must serve multiple primary functions¹⁷

Diversity, as previously stated, is key—resulting in the presence of people throughout the day across a variety of facilities. Functions such as residential, commercial, institutional, office, and recreational use—both private and public—in a variety of scales, ensure a healthy influx of residents and nonresidents, and they produce a level of porosity within neighborhoods.

- **Emphasize sidewalks as a public amenity for socialization¹⁸**

Diverse city sidewalks are essential for fostering life within cities and acting as the central nervous system of the urban realm. Jacobs describes the romantic notion of children’s play extending to sidewalks and streets, painting the picture of these pedestrian networks full of activity and life.

- **Provide parks in populated urban centers¹⁹**

Adding parks to lower-density neighborhoods, in an attempt to reinvigorate and attract activity, is unsuccessful in ensuring their use. The opposite is in fact true; existing urban density is required for success. Dense neighborhoods redeem the value of parks and green spaces in that they are able to provide consistent activity in and adequate use of these public spaces.

- **The city should be divided into districts with individualized identity²⁰**

Once again, Jacob emphasizes diversity—where varied districts with their own rich character attract diverse populations. As a functional component, appropriately sized districts better serve the individuals who reside there and the city as a whole. Cities are much too vast and complex to appropriately serve the people’s needs. Districts reduce the gap and help to distribute resources provided by the city to the neighborhoods that need them.

- **Foster interconnectivity between—and within—districts²¹**

Functionally, the continuous movement of people and zones within cities is essential. This connectivity supports the porosity within—and between—neighboring districts.

- **Urban blocks must be short and permeable for pedestrian traffic²²**

In this sense, the ability to turn corners must be frequent. Long, impenetrable streets are self-isolating, while shorter blocks breaking up the monotonous repetition of city buildings allow for an easy flow of pedestrians. Breaks within the block allow for a natural convergence of people and commercial shops or spaces for social interaction due to the increased street frontage. This core principle works hand-in-hand with Jacobs’s principles of eyes of the street, diversity of public spaces, and the emphases of sidewalks as the extension of public amenity.

- **Buildings should range in age and diversity²³**

Cities that provide a range of building types and ages are able to offer a multitude of housing options at different affordability levels. Equally important, though often overlooked, the diversity of buildings helps to prevent the monotony of the city skyline. Buildings built rapidly within the same period often look similar to each other, producing sameness within the city limits.

- **A large density of people who live, work, or play there²⁴**

Lastly, all of Jacobs’s principles rely wholly on a large population to support the city. Suburban neighborhoods or towns do not function like cities. The efficiency, safety, and diversity of programs and commercial amenities are reliant on large densities to support their viability.

Cities are like living organisms; each piece working in support of the other. Jacobs advocated for these diverse environments, a sentiment that she learned to appreciate in Toronto’s old neighborhoods that exhibited many of her core concepts. The rapid boom that has occurred within Toronto’s downtown core has rejected many of Jacobs’s principles, including ensuring that buildings range in age and diversity. The increasing population and rapidity of development continue to threaten the stability of the city’s growth.

2. TORONTO’S RAPID REGIONAL GROWTH

Fueled by immigration, migration within Canada, and low interest rates for real estate investments, Toronto has surpassed the population of Chicago to become the forth-largest city in North America.²⁵ This increasing population—predicted to grow from 2.77 million to 3.64 million by 2041²⁶—and the intense development following in its wake is challenging the city’s heritage.

Toronto’s growth and downtown intensification can’t be explained without looking at the regional context. The following three major provincial acts guide the growth in the Golden Horseshoe and, more specifically, in the greater Toronto area as a top-down framework:

- The Greenbelt Act (2005)
- The Greater Toronto Transportation Act (2006)
- The Places to Grow Act (2005) — this was updated and republished as the Places to Grow Act (2017) after initial research was conducted

The Greenbelt Act enables the government to designate and protect green lands, including those that are vital for agricultural use, from development as part of the greenbelt. The legislation is a key pillar for controlling further urban sprawl within the Golden Horseshoe. Similarly, the Greater Toronto Transportation Act provides a second layer to the ongoing development by requiring a strategic long-term plan for transit investment. Finally, the Places to Grow Act attempts to shape and coordinate the growth within the Golden Horseshoe. Together, these acts outline policies for compact and vibrant networked centers, the establishment of employment centers, preservation of natural resources, optimization of infrastructures, support of bottom-up frameworks to preserve diversity, and collaboration among stakeholders.²⁷

The most important act guiding Toronto’s intensification is the Places to Grow Act, which directs urban growth in the Golden Horseshoe, whose population is predicted to increase from 9.693 million to 13.476 million by 2041.²⁸

The Places to Grow Act is a growth plan that guides where and how urbanization should occur and an economic land use plan that sets a framework for development. The plan defines twenty-five existing downtowns and emerging growth centers, with a minimum gross density target of 150 to 400 people and jobs per hectare. The plan supports a transformation of the edge, promoting the development of compact, mixed-use, and transit-supported communities.

While these plans are considered successful frameworks on the provincial level, it matters where and *how* growth will occur on the municipal level and *how* these acts will be integrated and connected.

The following Toronto structural plans identify four zones for internalized future growth:

- Brownfield development in the Don Lands, Port Lands, and Liberty Lands
- Intensification of the downtown center through residential high-rise infill
- Polycentric development of employment centers
- The Avenue Plan, supporting midscale development along commercial streets

Toronto's Official Plan (2002, approved 2010) and the Growth Plan for the Greater Golden Horseshoe (in the 2017 version) reflect the need to limit sprawl and address density concerns, while leaving Jacobs-advocated neighborhoods protected.

This balancing act has put enormous strain on the city, primarily within Toronto's core. Without the ability to evenly distribute city density, Toronto is currently experiencing extreme vertical intensification and innovative frameworks are lacking to accommodate this phenomenon.

In 2014, Toronto was leading high-rise development in North America, with 130 high-rise projects²⁹ accounting for 75 percent of construction in Toronto over the last ten years.³⁰ The downtown population nearly doubled between 1976 and 2011,³¹ and future pipeline proposals foreshadow a crisis, as the aggressive production of towers precede the necessary public and social infrastructure required to support this density (Figure 1).

Toronto ranks last among Canadian cities for green space, with an average of 12.5m² of green space per person and only 10.5m² of green space per person in the downtown area. Once the current building permits for high-rise infill are completed, this ratio will lower to 6.5m². This reduction to 6.5m² will drop Toronto below the World Health Organization's (WHO) recommended minimum of 9m² per person, with an ideal of 10 to 15m².³² In comparison, New York City, often the comparison for built urbanity, sits well above the WHO ideal at 23.1m² per person.³³ Toronto must invest in public green spaces to ensure the livability and future health of the city (Figure 2).

Toronto, however, is the first North American city with a green roof bylaw, requiring that up to 60 percent of residential and commercial footprints

consist of green roof area. This law added a green footprint of 200,000m² in the downtown area since 2011—an area larger than Trinity Bellwoods Park—but since the policy doesn't require public access, these areas are lost as potential networked parks (Figure 3).³⁴

This downtown development has introduced a new neighborhood vernacular—condominium towers. Many streets in Toronto were not designed to accommodate the existing population, let alone future intensity,³⁵ calling into question the resilience of high-rise developments and their ability to support healthy and sustainable social environments.

3. MECHANISMS OF INTENSIFICATION

In response, this paper will focus on the mechanisms driving the intensification of the city's fabric, while using Jacobs's legacy as a touchstone for rethinking how urban complexity might be reintegrated through strategically developed vertical neighborhoods.

The current condo climate is a result of several factors, including government policies like the Places to Grow Act, Toronto Tall Building Guidelines, and Section 37 negotiations. The Tall Building Guidelines (2013) establish minimum requirements for high-rise development, giving the Toronto City Council authority over the Ontario Municipal Board to prevent unsuitable tower development.

Advocating for diversity, the design-based guidelines are meant to prevent over-shading of city streets, to maintain the human scale of the built environment, and to support an active and vibrant street atmosphere.³⁶

In reality, however, the market produces a different scenario. In *Rise and Sprawl*,³⁷ the authors identify the specific steps of the development process: developers buy property and consolidate parcels for profit. Access defines the ground plan, and design is driven by guidelines suggesting podiums and setbacks. Since the provincial plan allows for higher density, rezoning is always occurring and is followed by extrusions. Section 37 funds and "public art" try to compensate for the higher density but fail to improve diversity and neighborhood quality. While the guideline does advocate for "mixed-use" tower developments, these are often large-scale commercial-retail units without public programs or social environments. While not to imply that the solution is for municipal governments to dictate public programs and requirements within neighborhoods, a framework or clarification of "mixed use" is required to ensure tower developments provide true diversity within cities from the typical commercial trend.

A material study conducted in *Rise and Sprawl*—based on photographs taken from recent developments—show a further lack of diversity, fostered through the fact that only a small group of architects work on these massive intensification projects. Repetitive private amenities generate vertical gated communities tailored to a young demographic.

Section 37 of the Planning Act was introduced to offset tension imposed by increased traffic, population density, or changes to the existing street atmosphere. One of the main criticisms of the act is that its efficacy relies on the creativity of local councillors to determine how funds will be utilized. There is a lack of clarity and consistency due to confusion from both provincial legislation and planning policies. Still, this municipal act plays an important role in securing funds for the city; it is responsible for \$112 million between 2013 and 2014,³⁸ a direct reflection of the massive development occurring within the city.

These funds could be invested into programmatic and spatial diversity. Vertical neighborhoods can foster the type of public porosity, programmatic diversity, and connective street systems emphasized by Jacobs through the integration of public programs and social infrastructure within future high-rise developments.

4. JACOBS | TORONTO | 2041: A NETWORKED PUBLIC REALM

The current parcel-by-parcel development process is one of the most fundamental problems with the tower-planning process. A more holistic approach, which looks at neighborhood blocks or districts, is essential to determine the true impact these high-rise towers have on their surroundings. Only when we begin to think of towers as part of a larger neighborhood block can we begin to understand the impact their density and form have on the city (Figure 4). A strategic master planning approach that treats high-rise developments as vertical neighborhoods that must be interconnected, diverse, and porous is essential to maintaining Toronto's identity as a city of neighborhoods (Figure 5).

By looking at a single tower proposal in isolation, the true population density lacks context; within the next twenty-five years the existing core population will double, and yet the city is already struggling to provide public infrastructure.³⁹ As an alternative, we must establish a strategic master plan that acknowledges this increased density. Jacobs's principles, outlined within documents like *The Death and Life of Great American Cities*, provide a qualitative perspective on healthy neighborhoods but lack the quantitative structure required to facilitate a true change in Toronto's development.

For this, we can borrow from scholars like Clarence Perry, who defined the "neighborhood unit" in the 1920s, based on ideal population densities, to provide a mixture of residential, commercial, public, and social infrastructure spaces. Perry, like Jacobs, believed in dense neighborhoods, which act both independently and in support of the city as a whole.

The city requires a minimum of 4m²/unit of amenities for residential developments of twenty units or more. This is insufficient for the population and does not specify what types of amenities should be provided to support

healthy social neighborhoods. This typically results in privately accessible lounges, party rooms, and rooftop patios duplicated among neighboring towers, not the additional primary schools needed for a population increase of 2,500 to 4,500.

Perry instead suggests amenity requirements fall closer to approximately 4.21m² *per person*, highlighting a large discrepancy in high-rise developments when we consider that couples and their children are often occupying studio and one-bedroom units. Perry, like Jacobs, supports porosity and diversity of public programs essential to healthy neighborhoods, and he provides a breakdown of these public amenities to prioritize public parks, schools, community centers, and athletic fields over the private luxury spaces that current towers provide.

If we consider Perry's quantitative principles in the framework of Jacobs, we can begin to see the discrepancy between provided and needed amenity space. If high-rise towers were treated as porous vertical neighborhoods, interconnected and accessible, the types of programs offered by them would be inherently more diverse and public.

Let's imagine a community center facility, which residents and neighbors can utilize for public and private functions, or large public parks and recreational spaces instead of repetitive small patios that are unable to facilitate athletic programs (Figure 6).

By requiring public amenity areas to accommodate population increases and enforcing the incorporation of porosity and infrastructure within developments, towers will be understood as a network of vertical neighborhoods (Figure 7).

A strategic master plan is urgently needed that:

1. Includes social and public infrastructure, such as schools, parks, playgrounds, and community facilities, using similar ratios Perry advocated for in *The Neighborhood Unit*. The increase of public amenities would remove the ambiguity from Section 37, as community space would be incorporated into the development itself.
2. Requires that public amenities are accessible to the surrounding community.
3. Provides, on a per person basis, a sufficient amount of public space within the city.
4. Encourages global competitions to foster creative new approaches to urban design, while preventing a monopoly of residential construction.
5. Requires neighborhood spaces to be interconnected, porous, diverse, and social, extending the public ground plane into a 3-D volumetric space.

A research project by Montgomery de Luna entitled "N dimensional City"⁴⁰ looks into the possibility of a parametric script to test and iterate vertical

conditions. This tool generates a model city that applies Jacobs's principles, not only at the ground plane, but also in the section, creating an urban plan that is designed volumetrically in all three dimensions.

This project is attempting to achieve a vibrant and diverse urban fabric, as defined by Jacobs, at all locations within the three-dimensional space of the city by implementing parametric representations of the principles described in *The Death and Life of Great American Cities*, especially the four generators of diversity. By increasing the diversity throughout this three-dimensional field of urban fabric, the ultimate goal is to improve the quality of life for the city's inhabitants, including improved access to residences, offices, and amenities and an invigorated street life. As a tool, the model can simulate sectional conditions and iterate massing scenarios based on district and building attributes. Extensions of this application can be used to study radical zoning guidelines to seek innovative zoning regulations for our vertical neighborhoods.

5. CONCLUSIONS

Growth is not just a question of floor area ratio and built density; it needs to advocate for green spaces, public spaces, social infrastructure, and public transit. Against the backdrop of Jacobs's achievements, and with the largest growth cycles yet to come, this is a call for action to raise the urban and civic ambitions for the city.

In this context, Jacobs's legacy is multifold. While initiatives like Jane's Walks embolden residents to actively participate, her books continue to impact the next generation of planners, designers, and architects. Ken Greenberg's work, for example, aligns with Jane Jacobs's principles. His impact as the former director of urban design and architecture for the city of Toronto materialized in the Saint Lawrence neighborhood plan. As author of *Walking Home: The Life and Lessons of a City Builder* and as the principal of Greenberg Consultants Inc., he has played a pivotal role in public and private assignments in Toronto, focusing on the rejuvenation of downtowns, neighborhoods and regional growth management, and new community planning.

As Toronto's former planning director, Jennifer Keesmaat reminded us "a city isn't something that happens to you. You make choices every day that shape and make your city."⁴¹ Keesmaat, like other city administrators, was hugely impacted by Jane Jacobs and decided to pursue a career in urban planning after reading Jane Jacobs's 1961 book *The Death and Life of Great American Cities*. Under her leadership, the city started TOcore. Founded in 2014, TOcore consists of an interdisciplinary team of city planners that are trying to prepare downtown Toronto for its upcoming growth. The Proposed Downtown Plan,⁴² published in 2017, is a twenty-five-year vision to guide the development of the city core as not only a place to live, but also the cultural, civic, retail, and economic center of Toronto. The plan consists of guiding principles that link the opportunities of intensification with the challenges associated with growth. Further, Toronto's recent successful attempt to replace the Ontario Municipal Board with a Local Planning Appeal Tribunal to include citizen participation is an important step to secure the city's interests, which are often in conflict with provincial plans.

While these recent initiatives are much-needed improvements, the pace of development and the lack of an overarching downtown plan with strict and binding bylaws is still problematic. As one of the emerging alpha cities of North America, Toronto must strive to become a driver of new urban agendas, offering best practice precedents for sustainability and the support of the public realm. We should be reminded of the Central Area Plan Review (1974-78), which was a revolutionary document in its time. Toronto again needs new innovative tools and methods to guarantee a vibrant urban future for generations to come.

Figure 1: Toronto Green Space Analysis and Upcoming Development, Credits: UWSA DATAlab, Mona El Khaffif.



Figure 2: Toronto Green Roof Analysis. Credits: UWSA DATAlab, Mona El Khaffif.

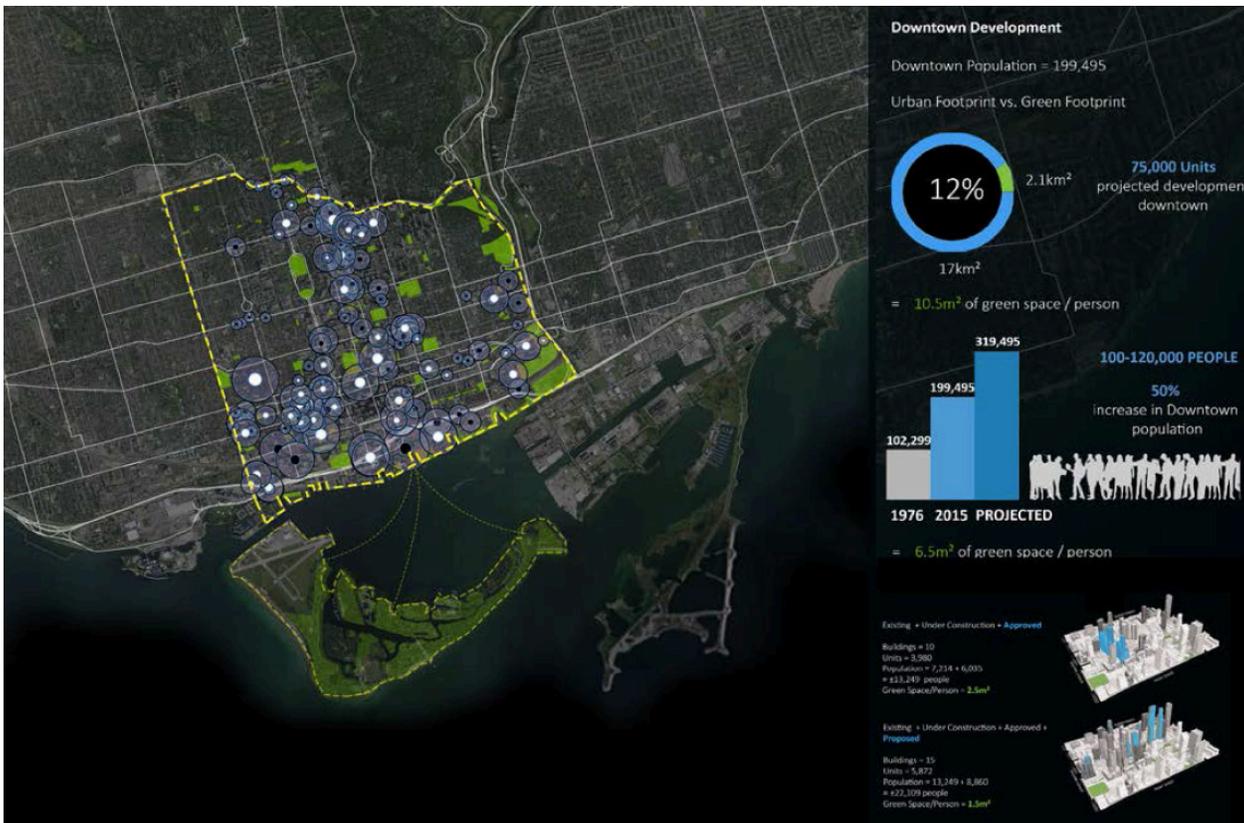


Figure 3: Toronto Recent and New Pipeline Development. Credits: Shannon Wright. Data Source: Urban Planning Division, Pipeline 2016.

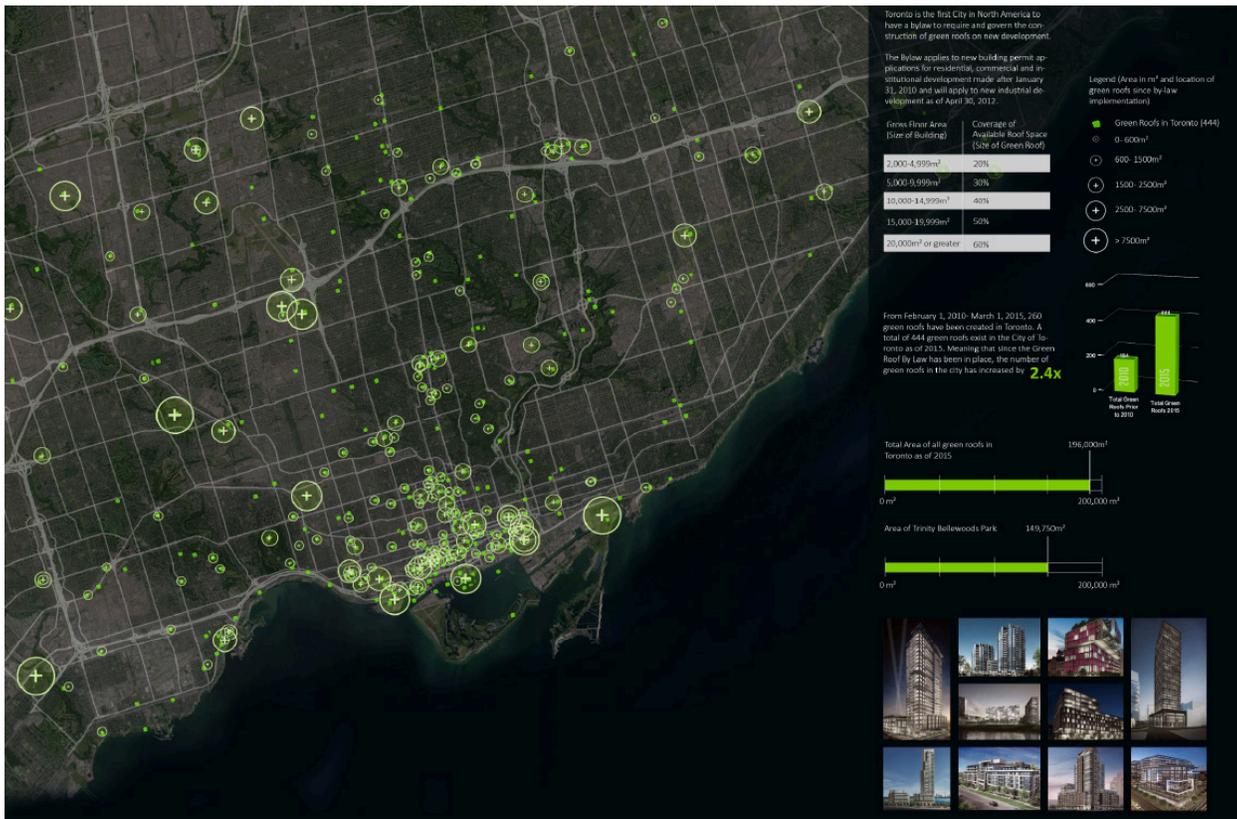
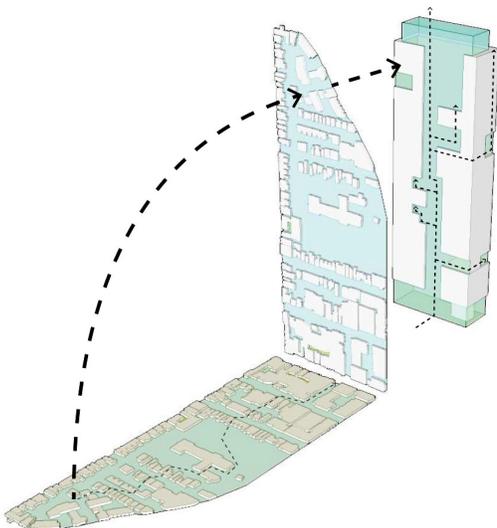


Figure 4: 3-D Public Realm. Translating the Horizontal Street into a Vertical 3-D Space. Credits: Shannon Wright. Original diagram: Yeang, Ken. "Ecoskyscrapers and Ecomimesis: New tall building typologies." Council on Tall Buildings and Urban Habitat 8th World Congress, Dubai, March 2008.

CONCEPT DIAGRAM



3D CONTINUOUS SPACE

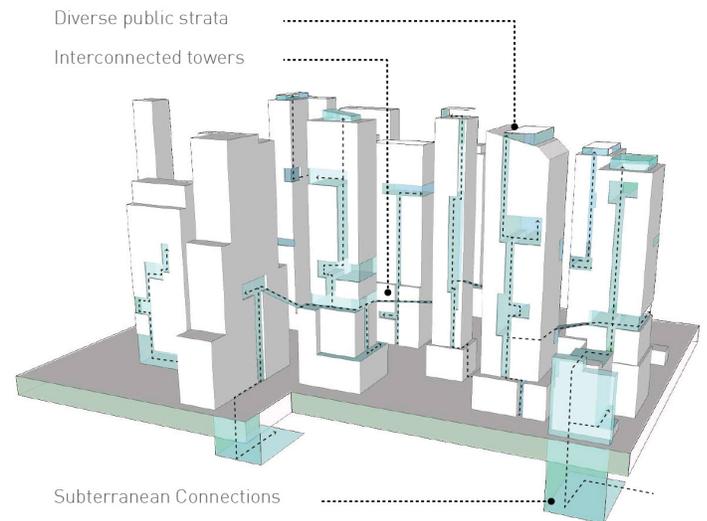
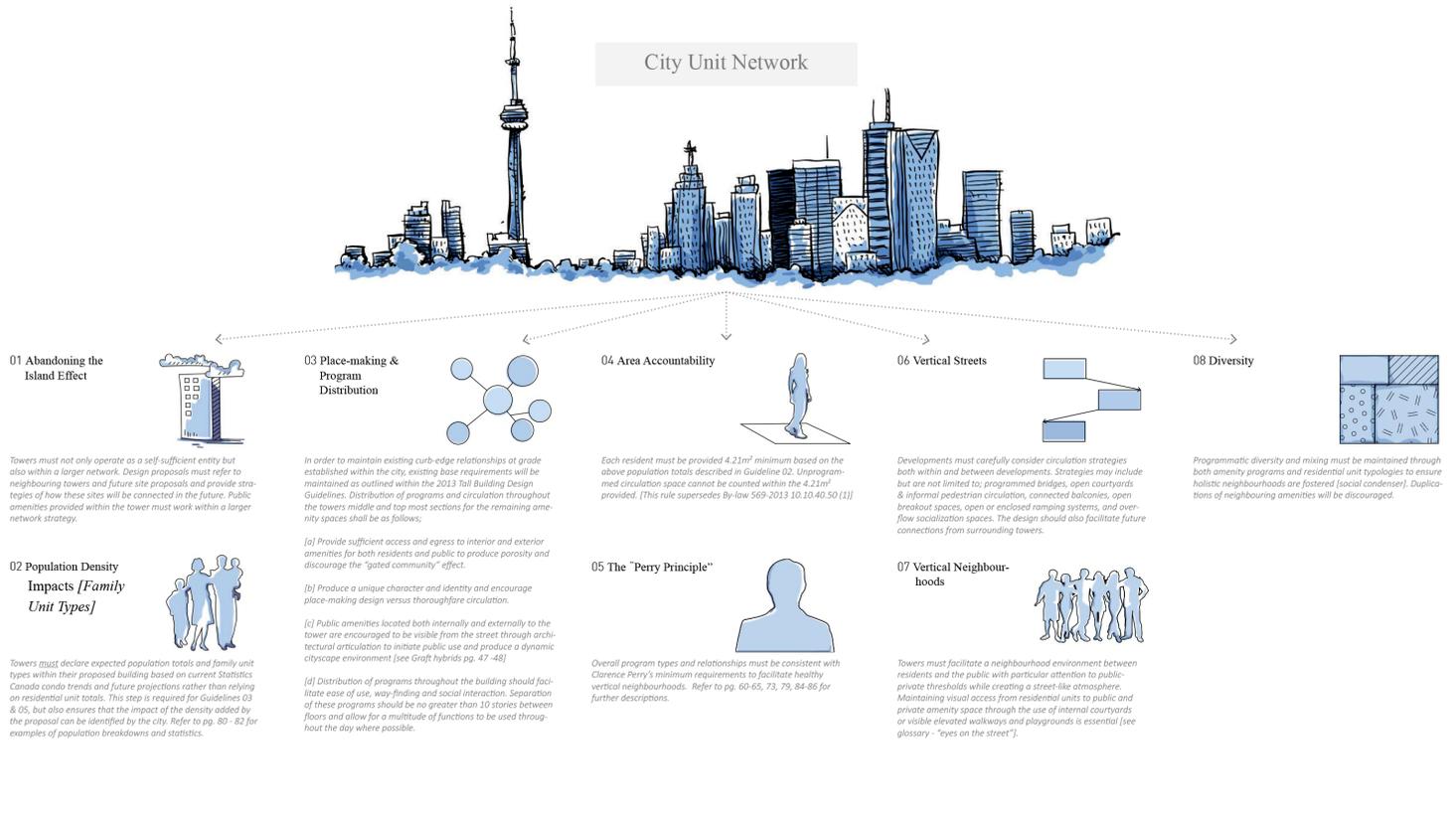


Figure 7: Vertical Gardens and Public Spaces. Credits: Shannon Wright.



Endnotes

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The Failure of America's First City Plan

Maureen E. Brady*

Many legal scholars and urban planners extol the virtues of the great American downtown grid: the uniform blocks and parallel streets that dominate cities from New York to San Francisco. Against this precision, the serpentine roads of many early American towns are viewed derisively, as an undesirable consequence of disorganized colonization. The history of America's first planned city offers a natural experiment for examining the legal and economic consequences of both types of layouts—and evidence about when the conventional wisdom on grids is wrong.

This Article tells the story of the failure of America's first city plan: the Nine Squares grid in New Haven, Connecticut. The Squares were problematic from their inception because they were too large and improvidently located. To adapt to land conditions and a commercial future far from what the town's founders anticipated, eighteenth-century civic leaders resorted to a variety of processes to revise the layout, including a major subdivision that required use of the eminent domain power without payment of compensation in the 1780s. Town planning within the grid contrasted sharply with planning in areas surrounding the grid during the same time frame. In other parts of New Haven, incremental street decisions, legal mechanisms for resident involvement, and laws permitting in-kind compensation for new roadways allowed the town responsively to plan streets suited to changing land and settlement conditions.

This Article advances a new theory of street planning drawn from the New Haven case study, aiming to surface the virtues piecemeal planning can bring during some points in a city's development. Streets can be thought of in market terms, and comprehensive grid plans may act as market distortions, preventing settlement forces from organically producing more effective street layouts. Particularly where information about land is dispersed among members of a small population, bottom-up street plans may be desirable because they reflect residents' preferences and harness dispersed knowledge about land conditions and uses.

"[T]owns newly founded may be established according to plan without difficulty. If not started with form, they will never attain it."

— King Ferdinand of Spain, 1513¹

Introduction

If given the opportunity to design a new town, how would you plan the streets? This is not as far-fetched a question as it might seem: this sort of advance planning happens frequently in our midst. In China, for example, urban planners have set up street grids, interlocking cul-de-sacs, and rings

of streets populated with buildings where no one yet lives.² The same process is underway in India.³ In selecting a city layout, planners of new cities are making judgments not just about what future residents will prefer, but also about how the street plan will facilitate the economic and social life of new villages, towns, and cities.⁴ New work by Robert Ellickson suggests that for most downtown areas, rectangular layouts are best because they are likely to maximize land values on the resulting blocks.⁵ In a play on words inspired by the iconic 1987 movie *Wall Street*,⁶ Ellickson posits that when designing street plans, "grid is good."⁷

The first grid plan in the United States was the Nine Squares of New Haven, New Haven's three-block by three-block downtown city plan.⁸ New Haven's plan served as inspiration for William Penn when he designed Philadelphia.⁹ The New Haven plan has been hailed as a triumph of colonial planning; scholars have praised the Squares' "neat precision" as a "rarity"¹⁰ when compared with some of the more irregular New England settlements with winding roads and confusing street patterns, like Boston, Cambridge, or Salem.¹¹ Where the irregular road patterns of many cities have been criticized, New Haven's Nine Squares, have been revered. New Haveners take great pride in the plan; city historian Elizabeth Mills Brown has stated that the Nine

Squares "plan proved a good one. . . . It has long been cherished by its own citizens."¹² Most recently, the Nine Squares have been designated a National Historic Planning Landmark by the American Institute of Certified Planners.¹³ But this praise and admiration is not deserved.

This paper demonstrates that New Haven's Nine Squares—the first comprehensively planned grid in the American colonies,¹⁴ and hence one of America's famous urban spaces—ultimately failed its residents and stunted New Haven's growth.¹⁵ The failure of the original New Haven plan was writ large during a second planning event: the subdivision of the Nine Squares by new streets, which began in 1784. The subdivision took nearly sixty years to complete, and cost time, land, and money, all to correct the flaws of the original town plan. Using the history of the plan, I argue that comprehensively planned grids are not always normatively desirable and present a theory of street planning based on the conception of city streets in market terms. The original town plan left New Haven's infrastructure inflexible in a time of changing economic and social circumstances during the seventeenth and eighteenth centuries, the most important of which was the rise of New Haven as a commercial center as opposed to a closed agrarian religious community. Within the Nine Squares, the supply of streets did not reflect or keep up with the demand for them, either in number or in terms of their location. I argue that the history of New Haven and other early colonial town plans demonstrates that piecemeal planning—planning done incrementally—better served new wilderness towns and their residents, because piecemeal planning harnessed the expressed preferences of settlers as an informational resource and facilitated streets that best nurtured otherwise unpredictable colony needs. In short, my aim is to complicate the theory that "grid is good."

This Article makes a secondary contribution. It contains unprecedented research into early use of eminent domain in the trenches, away from the models in the statutes. Colonial highway statutes are ubiquitously cited as the predecessors to the Takings Clause of the Fifth Amendment, yet no one has looked into the practical use of eminent domain on the ground in eighteenth century towns and cities and how it shaped urban space.¹⁶ This Article uses over two hundred unpublished documents from the New Haven Land Records in which the town government acquired land from the residents of New Haven for highway construction. I use these documents to explore how early legal procedures—like rules permitting in-kind compensation—facilitated piecemeal development and created street plans that left cities responsive to changes in the landscape and economy.

Some background on New Haven may be useful. New Haven Colony, at first separate from its colony to the north, Connecticut, was founded in the spring of 1638, when a group of about two hundred and fifty settlers arrived from Massachusetts into New Haven harbor.¹⁷ One of the group's leaders—Theophilus Eaton, a wealthy merchant—had come to the site beforehand, in the fall of 1637, and chose it for its suitability as both a harbor and a site of fertile land.¹⁸

The origins of New Haven's Nine Squares plan are obscure and speculative. One scholar has gone as far as to suggest that the idea for the Nine Squares originated in the layout of an ideal city proposed by the Roman engineer Vitruvius.¹⁹ The only map which portrays New Haven at the time of its founding—the so-called "Brockett Map" (named for the alleged surveyor)—was drawn sometime in the nineteenth century, painstakingly reconstructed from the New Haven Land Records.²⁰ Fortunately, it does not much matter for this study what the exact history of the Nine Squares plan is. The town's form probably did not change much between the first settlement and the first reliable contemporary maps, produced in 1724 and 1748, although it is plausible that it took several years to actually settle all of the squares.

The plan for the new town consisted of a perfect square divided into nine nearly identical blocks by eight streets. The square was tilted at an angle, not arranged perfectly North-South. This appears to have been done so that the bottom and right sides of the square would be aligned with two impermanent creeks coming in from New Haven harbor, respectively called East and West Creeks. It seems likely that this type of plan could not have been designed ad hoc at the time of the first settlement. John W. Reps, a historian of urban planning, has advanced the hypothesis that Eaton or other leaders of the New Haven group may have drafted a plan in the time between their first visit and the arrival of the first group of settlers.²¹

The sheer size of the squares is stunning: as the blocks were originally laid out, they were fifty-two rods, or roughly eight hundred and fifty feet, on each side.²² Each square thus contained over sixteen acres of land.²³ While eight of the blocks were reserved for house lots, the center block was designated a public space or town green, rendering it the largest open

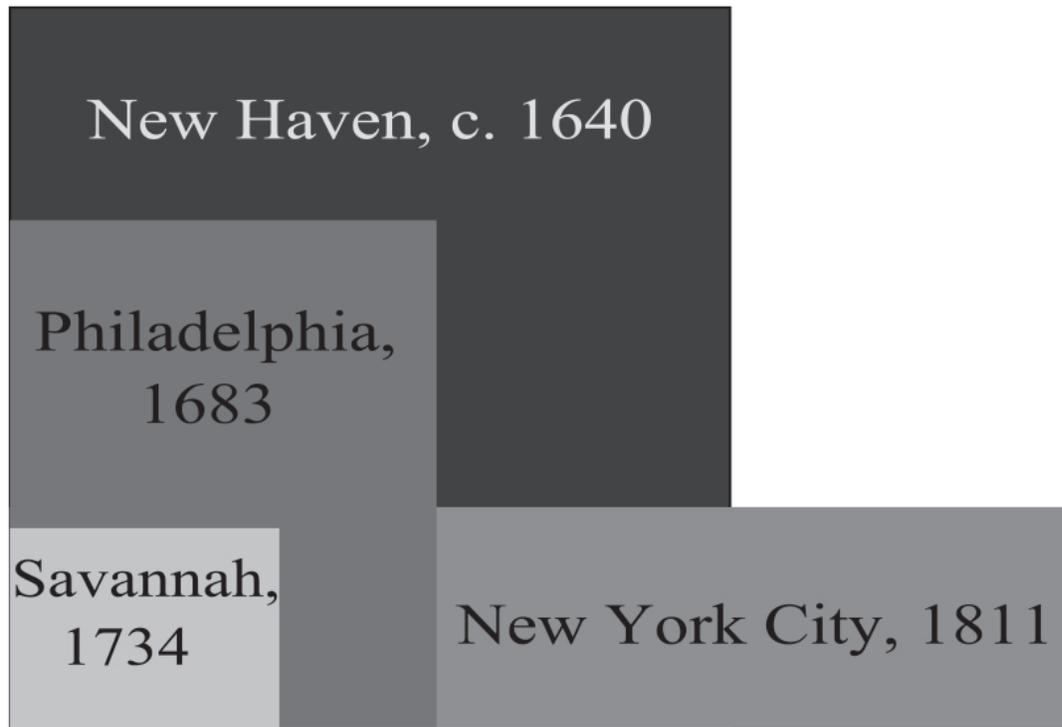
urban space in either England or New England at the time. Only London's Lincoln Inn Fields, at a much smaller eight hundred by six hundred feet, came close.²⁴ Even among those towns ordinarily called "regular" or grid-like—Cambridge, Massachusetts, Hartford, Connecticut, and Newport, Rhode Island, serve as examples²⁵—the Nine Squares are unique. In no other contemporary town were any two blocks the exact same size, let alone nine blocks. Although the general grid pattern was well known in Europe and England and even somewhat mimicked in the "regular" towns, it was only in the colony of New Haven that the grid pattern was developed on such an enormous scale and with such precision.

On the other hand, as legend has it, the town of Boston was laid out by "wandering cows."²⁶ This legend illustrates just how unusual New Haven's comprehensive plan was, given the state of the streets in other colonial towns. More likely than the cow theory, Boston settlers arrived to a complete wilderness and laid out their city infrastructure according to the existing topography, with some improvisation. In contrast to New Haven's comprehensive plan, colonial towns like Boston epitomized piecemeal development: streets were formed incrementally, often street-by-street or block-by-block, responding to the will and needs of the community or else the demands of geographic features like hills and waterways.

Though no early map for Boston exists, a map from 1722 closely approximates the general layout of the streets in 1640: streets going from east to west wind around the peninsula, with occasional side streets tracking south toward the harbor.²⁷ The cities of Salem and Ipswich are even more irregular, but like Boston, follow a generally water-centered design, with the town streets mainly running along the water line or to the water, varying with topography.²⁸ Because of the irregular streets, the blocks varied in size, too, probably according to function.²⁹ Most blocks closer to the water were small, while those further inland were typically larger and less densely crowded.³⁰

Scholars have tried to explain the reasons for early New England's irregular street patterns in varying ways. Carl Bridenbaugh has characterized early road development in these colonies as largely "fortuitous."³² "Paths appeared from house to house as they were needed, and an occasional road pushed to a nearby settlement. The first paths tended naturally to follow the configuration of the terrain with little thought of symmetry; ease of travel was the prime consideration."³³ Thus, according to Bridenbaugh, infrastructural design in many New England towns was an afterthought. Street creation followed the contours of where homes and marketplaces were already built. Similarly, Sam Bass Warner has called the process which led to these irregular results "folk planning."³⁴ For Warner, folk planning was a product of "medieval English village traditions fused with religious ideology."³⁵ The town was close-knit and group-oriented, and in most towns, piecemeal planning best suited resident needs. Irregular planning was conducive to growing American colonial individualism: as self-sufficient farmers sought out larger grants of land outside the city center, they sought new access ways to their own distant plots that were not part of any

Figure 1: Scale Drawing of Block Sizes in Early Planned Cities³¹



Note: 2.6 inches is equal to 330 feet, or 20 rods.

organized plan.³⁶ Later on, as merchants crowded the city, the town plan developed more streets to carry traffic and facilitate denser settlement. The ultimate results of this type of piecemeal planning are the layouts of many of the oldest cities we see today: winding roads with bends and curves, irregularly sized blocks, and occasionally confusing intersections, with some streets probably tracking an ancient farmer's route to his fields.

In any case, it was not long before the consequences of "folk planning" came to be associated with frustration. The town layouts of most colonial cities have been described as "ugly, chaotic, and scattered,"³⁷ and to most modern drivers and city planners, these streets, while charming, can seem incomprehensible, or, to use a city-planning term of art, "illegible."³⁸ But gripes about New England town planning have been ongoing since long before modern times. For example, although the irregular road system suited the needs of early Bostonians, the Royal Commissioners of 1665 already complained of the town's streets as "crooked, with little decency and no uniformity."³⁹ As early as the 1790s, one prominent New Havener, Yale President Timothy Dwight, wished New Haven's plan on the winding roads of Boston: "Had ten open squares been formed at the proper intersections of the principal streets . . . or had some other plan . . . been completed, Boston would even now have been the most beautiful town that the world has ever seen."⁴⁰

However, New Haven's grand and regular plan resulted in several critical errors for the city's future growth. First, the blocks were extremely large,

much larger than they were in towns that were "folkplanned,"⁴¹ requiring time-consuming and imperfect revisions to the plan a century later. Moreover, the large blocks necessitated deep lots, limiting the amount of downtown land available for resident purchase at a time when settling new residents was critical to further economic and social development. Second, although it is true that New Haven was oriented around East and West Creeks, New Haven was not oriented toward a substantial river or its natural harbor.⁴² This limited circulation between the water and the downtown market area. In Boston, Ipswich, Salem, and Manhattan, large, natural sources of water served as the main points of orientation, and in each of those cities, the main street or streets tracked the natural waterway. The water became the source of commerce and industry for early colonial cities, and New Haven's plan limited rather than facilitated access to it.

Ultimately this paper argues that comprehensive grid planning can fail, particularly when contrasted with piecemeal designs. The lesson from this microhistorical study is not that all grids fail, nor that all incrementally planned cities result in flawless plans.⁴³ It instead suggests that streets can and should be thought of in terms of supply and demand, and that New Haven is a paradigmatic case of market failure.⁴⁴ In the 1640s, the Nine Squares plan responded inadequately to the demand for streets in the developing colony, effectively performing as a market distortion because of the way the plan limited the supply of streets and artificially directed their distribution around the settlement. These lessons may prove useful as new towns and cities are being planned around the world.

This paper proceeds according to the market analogy. Part I discusses the technicalities of “supplying” streets: it briefly overviews the conditions of streets and mechanics of laying them out, but also discusses the legal procedures used to create streets in seventeenth and eighteenth-century Connecticut. Part II identifies the typical sources of demand for streets, using examples of roadway construction from New Haven outside the Nine Squares to demonstrate how legal procedures for piecemeal development within the colony facilitated efficient production and planning of streets. Part III identifies the problems that began to be felt as a result of the failures of the Nine Squares plan and describes the government’s solution: the subdivision of the Nine Squares. Part IV uses this microhistory to develop a “theory of streets,” and the circumstances that cause comprehensive grid planning to fail. Part V concludes.

I. Supplying Streets in Early New Haven

This Part proceeds by discussing two different aspects of colonial streets. The first Section discusses the construction and conditions of New Haven streets, as background for understanding the primitiveness of the technology and the ways colonists laboriously created and used streets. The second Section discusses the procedural components of laying out a street, identifying how a street was initiated and planned and how affected landowners were compensated. Unless otherwise indicated, this Part will focus on the smaller, intratown streets or highways in New Haven, rather than the larger post roads and intertown streets or highways, which were subject to different technological and procedural hurdles.

A. The Construction and Conditions of New Haven’s Streets

The highways of early Connecticut were legendary, but not for positive reasons. Many travelers in the eighteenth century left diaries describing them as the worst roads they had ever encountered, and worse, these miserable travelers were on relatively major, well-traveled roads, not even the smaller intratown streets.⁴⁵ Our concept of a street is very different from the highways of early New Haven Colony. While the records provide only glimpses of the roadways of colonial New Haven, in order to better understand the difficulties of city planning and highway construction and maintenance, it may be helpful to have an idea of what most streets or highways may have looked like in the 1600s and early 1700s in Connecticut.

Within the Nine Squares, New Haven’s streets were designed to accommodate cart and pedestrian traffic. In theory, the streets of colonial New Haven were actually as wide as or wider than most modern streets: the Nine Squares streets were major arteries, and were hence designed to be four rods wide,⁴⁶ or sixty-six feet across. Road surveyors do seem to have recognized a primitive “hierarchy of streets.”⁴⁷ Major local streets, like the Nine Squares streets, were usually four rods wide, and these roads were probably designed to bear the most traffic.⁴⁸ Outside the Nine Squares, roads were of varying width. Some roads fluctuated in length, perhaps tapering at one end.⁴⁹ Most other streets were two rods wide, and these

seem to have been subordinate collector streets for the four-rod highways.⁵⁰ Although a width of two rods may sound small in comparison to the larger roads, even two-rod roads were still thirty-three feet wide—well within the average for local street widths today, which is thirty-one to thirty-nine feet wide.⁵¹

Like many modern streets, these colonial streets were much wider than the space actually needed for two carts to safely pass.⁵² Streets were used as places for carts to travel,⁵³ of course, but they were also used by pedestrians and even served as meeting places, much like sidewalks are used today. Early streets were both access corridors and places of social engagement. The New Haven Town Records are filled with admonishments to “young persons” walking and playing in the streets on the Sabbath.⁵⁴ There are records of fights in the streets between neighbors and sometimes even melees involving wives.⁵⁵ Indeed, animals were often found in New Haven’s streets, necessitating wide streets to permit people and carts to travel around them.⁵⁶

To create a street, the land was simply cleared; there was no paving and very little if any grading.⁵⁷ The Connecticut highway statute provided that highways would be cleared using the conscripted labor of all freemen between the ages of fifteen and sixty, who could only be exempt from their clearing duties upon penalty of a fine (with some exceptions for members of the upper classes).⁵⁸ While clearing the land was undoubtedly difficult, little else was done to improve the roadways. Creeks and brooks sometimes flowed through streets, and there was no drainage after storms or snow melts, undoubtedly rendering most streets muddy and rife with puddles.⁵⁹ An eighteenth century legend about one of the main streets in nearby Hartford illustrates this: as the story went, a man in downtown Hartford saw a hat in the road, and stopped to pick it up. To his surprise, he found a man underneath who exclaimed that he needed no help, and that his horse had just struck solid ground.⁶⁰ Underused streets were susceptible to bushes and other wildlife re-growing in the cleared land.⁶¹ In 1655, every man was charged with going into the streets in the Nine Squares to clean up and cut down the “stinking weede” in the roads and “other common places aboute the Towne.”⁶² As late as 1725, several individuals were fined for failing to obey these ordinances, indicating that weed growth continued to be a problem.⁶³ In short, the conditions of the streets were most likely dismal because of the inadequacy of grading, and the absence of paving of any sort. In New Haven, even relatively important roadways like the Mill Lane, which led to most of the planters’ fields, were in a constant state of disrepair. For example, from 1662⁶⁴ to 1671,⁶⁵ there were repeated agitations to clean up Mill Lane and attempts by the townsmen to gather a labor force to do so.

Although the roads were constantly threatened by nature, early New Haven residents also improperly used roads for their own ends at times, leading to dangerous conditions for passage. Settlers were known to dig holes in the street, seeking gravel or stone for their personal use.⁶⁶ In New Haven, the town records for the year 1662 describe the problem of the town settlers

stacking wood in the streets, and the townsmen desired them to move it so that “persons might walke without danger.”⁶⁷ A law passed in Connecticut in the early eighteenth century indicated that street debris was still a problem, prescribing that persons who “block up, or lay, or cause to be laid in any High-way, any Stones, Tree or Trees, or Timber; or shall by Digging, or any other Means obstruct, hinder, or indanger the Passage of Travellers” had to pay the cost of cleaning up as well as a punitive fine.⁶⁸ Aside from causing obstructions, the freemen also occasionally fenced off parts of streets for their own use. Already by 1652, the town records contain a reproach to a freeman for fencing off a part of a public highway.⁶⁹ The early colonists solicited the public’s help to deal with the problems created by these perpestures. According to a 1702 law, any person could tear down improper fences in the street without notice to the person who had put them up.⁷⁰

In sum, New Haven’s streets were poorly delineated, poorly kept, and difficult if not impossible to use as points of orientation. Even the streets making up the squares in New Haven did not have names, although that was customary in most other American colonial towns.⁷¹ The early settlers oriented themselves either by using prominent landmarks, such as natural features, or else a notable person’s house or land.⁷² Because of these problems, even the early government had trouble remembering where the highways were. In 1684, the town government had to pay for an inventory of the current highways to keep track of their location. In one case, they noted in the town records that they should “speak with Mr. Brockett who layd out the lotts and lands on the East side the East river and enquier what high waies were laid out and where.”⁷³ As late as 1724, one freeman had “through a mistake built his house upon a high way,” apparently an understandable mistake, because the townsmen allowed the highway to be diverted around his home so long as the freeman was willing to pay for the extra costs required.⁷⁴

New Haven’s streets were as much public lands as the town green, and they were real sources of neighborhood character. Choices about streets—where to put one, how wide to make it, and whether to take care of it—shaped the town’s development for many reasons. The metes and bounds of a street determined which properties would front it. It determined block size, and thus, to a certain extent, influenced the size of the lots that would make up that block and who the residents would be. The start and end points of a street shaped the kind of traffic that would travel on it: churchgoers, farmers, seamen, or the wealthy. Largely because of the streets, areas of New Haven began to develop identities, whether those identities were commercial, residential, wealthy, public, or poor.

B. Legal Procedures for Creating Streets

Before a street could be traveled, much less laid out, it had to be planned and surveyed, implicating early legal and governmental institutions. This Section will briefly overview the procedures in place for creating streets in colonial New Haven. In general terms, the procedures for creating a road were as follows: (1) a road would be initiated through either an application or town

action; (2) the road would be surveyed and planned; and (3) damages for affected landowners would be assessed. Though the parties effectuating each of these procedural steps changed, this was the general structure of highway planning procedure in the seventeenth and eighteenth centuries.

In the earliest period of colonial New Haven, prior to its merger with the colony of Connecticut,⁷⁵ there appears to have been no official law governing the procedure for planning streets. However, highway business seems to have fallen under the jurisdiction of the General Court. Under a fundamental order on the government of New Haven, dating from 1643, the General Court was comprised of the colony Governor, Deputy Governor, elected magistrates, and deputies of the plantations within the colonies, all leading landowners of the colony.⁷⁶ In both England and Massachusetts prior to the founding of New Haven Colony, the government had general powers to survey, maintain, and correct highways,⁷⁷ and it is almost certain that the General Court of New Haven was emulating the procedures and powers already in place elsewhere.

In the early 1600s, the General Court of New Haven officiated the laying out of highways alongside the Proprietors of the Common and Undivided Lands. As a technical matter, all common land in New Haven (including highway land) belonged to the proprietors, composed of the original shareholders in the New Haven plantation venture (and later, their descendants).⁷⁸ The proprietors met regularly and retained jurisdiction over the public lands belonging to the town, including the town green.⁷⁹ After the creation of the local office of selectman or townsman by a by-law passed in 1651,⁸⁰ and even when they coexisted with the General Court, the proprietors appear to have had relatively little independent power, so other town officials were routinely involved in carrying out highway planning. Thus, even though the common land was theoretically disposed of by the proprietors, the townsmen were always involved, and many officials served as both townsmen and proprietors during their political careers.⁸¹ Suffice it to say that throughout the seventeenth and eighteenth centuries, the civic leaders were in charge of carrying out highway planning, development, and implementation.⁸²

The earliest highway procedures were informal. The General Court seems mainly to have exercised its authority to lay out roads when planning highways through undeveloped areas where they planned to grant settlers land; the Court would describe where a new highway should be laid out in a new part of the town, or else, they would appoint a few townsmen to travel to the location and report back on the proper course of action.⁸³ The Court might also assist in laying out highways in areas that were already settled, responding to perceived problems with the highway system. It occasionally heard concerns that free planters had about the location of existing highways, and supervised their relocation for more convenience.⁸⁴ The early procedure seems to have been as follows: the Court would hear an individual or group’s request for a new or relocated highway, and rule on that request.⁸⁵

Who could request a new highway? The earliest street creation procedures allowed for roadway construction to be initiated by the request or application of a resident, who would approach the General Court or the selectmen with a request for a road. This general approach, which permitted private individuals to petition the government for new streets, survived throughout the eighteenth century. The first official highway law in Connecticut was not enacted until 1702, about seventy years after the very first highway statute passed in the American colonies, but roughly contemporary with other highway statutes in New Hampshire, Pennsylvania, Delaware, New York, and New Jersey.⁸⁶ By that time, New Haven had merged with the nearby colony of Connecticut, subjecting it to Connecticut's laws and procedures for highway construction and layout. The 1702 highway statute formalized the procedure for creating new roads, which was somewhat of a departure from the earlier, less formal practice of showing up at the General Court with a request. Under the formalized process, a person would apply centrally to the County Court, which would then appoint a "Committee of two or three sufficient Freeholders of the next Towns" to visit the proposed location and evaluate the need for a new highway at that location.⁸⁷ These freemen were selected from other towns apparently to ensure they were disinterested parties. The practice of appointing a small committee to investigate a proposed roadway continued throughout the eighteenth century. Formally, between 1702 and 1773, the government did not have the authority to initiate roads in the absence of a private person's application; however, it seems that an easy solution to this problem would be to have a townsman or proprietor request a highway in his capacity as a private citizen. In 1773, the selectmen officially gained the power to investigate and lay out a public roadway even in the absence of a private person's application. The selectmen were required to give notice of the proposed roadway either in person or at the dwelling of affected landowners before laying out the road.⁸⁸

Who actually planned the road? In the early period, if a highway was deemed necessary or convenient by the committee, the Court would then order the local sheriff to summon a jury, again from freeholders of neighboring towns.⁸⁹ After the jury determined the boundaries of the road and the damages to landowners, they returned their verdict to the sheriff, who was responsible for ensuring the road would be identified and recorded at the next session of Court.⁹⁰ However, it is not clear from the records whether a jury was regularly appointed in early New Haven. More often, the court or townsmen seem to have appointed a committee of disinterested freemen from among their rank in response to a road petition. This process became formalized in 1773, when the selectmen officially received the authority to appoint a planning committee in place of a jury.⁹¹

Once a road had been requested and physically planned, the only remaining task was determining whether there were damages, and if so, how much. There is already a great deal of scholarship on the compensation requirement in early highway laws. Because highway laws were the first laws authorizing the government to take private property for public use, scholars interested in the intellectual and constitutional origins of the Takings Clause look to early highway laws to understand the use of eminent

domain power in both theory and practice in colonial times.⁹² Connecticut, like the other New England colonies, adopted a compensation requirement for taking highway land fairly early.⁹³ Although the initial highway compensation law required satisfaction to be made only when improved lands were taken for highways, after 1773, the law also required the townsmen to provide compensation when unimproved lands were taken.⁹⁴ John F. Hart has argued that in colonies bonded by religious ties, like the colonies in New England, compensation was a mechanism for keeping social order: landholders in these dense colonies were more likely to notice and be affected by intrusion on their lands because their parcels tended to be smaller and closer together, and they were more dependent on their communities, so compensation helped keep the peace.⁹⁵

For this study, it is not the intellectual origins of the highway compensation law that are of interest; it is how early colonists interpreted the compensation requirement. Although monetary payments were frequently given, in colonial Connecticut, there was a system allowing compensation in kind. In 1727, an act was passed that permitted the town proprietors to exchange common land to create new highways.⁹⁶ By the mid-eighteenth-century, the law governing compensation thus permitted the town to use other common lands—including old or underused highways—to obtain other highways, in lieu of money. Whether in the form of in-kind land grants or in the form of monetary payments, compensation was routinely given when highways were created in New Haven. Indeed, I have been able to confirm no land transfer from an individual to the town, at least between 1750 and 1784, for which the landowner did not receive some kind of compensation.⁹⁷

It is helpful to understand the factors affecting the supply of streets—the way early streets looked and the legal regime which governed them—in order to examine colonial town planning in New Haven. The following Parts will examine the success and failure of developments in different parts of early downtown New Haven. In the next Part, I will discuss the other side of street planning: demand, and how it was reflected in New Haven's subsequent development after the Nine Squares plan. New Haven began as a town with an ideal, perfect plan, but New Haven expanded outside the Nine Squares in ways that were often much more piecemeal and driven by changing settlement patterns.

II. Demand for Streets in Early New Haven

In the paragraphs that follow, I overview some of the street development that occurred following the initial laying out of the Nine Squares. This Part will discuss the conditions motivating new development between 1640 and 1784, and identify features of highway planning in action during this time. Between 1640 and 1775, private citizens and the town government planned highways that were responsive to settlement patterns and community needs, much like the piecemeal designs found in other New England colonies. The legal procedures supported piecemeal development in three ways: (1) roads were often planned with direct input from affected landowners, (2) the government could use the fluid highway exchange system to trade old, unsuccessful highways for more suitable ones, and

(3) by virtue of the petition process, most street development followed settlement rather than vice versa. I argue that, unlike the rigidity of the Nine Squares, these features of piecemeal development outside the Nine Squares allowed the street system to adapt to changing demand.

A. Determinants of Demand

1. CITY SPREADING: AGRARIAN FACTORS

After the initial settlement, the town of New Haven immediately began to expand as a result of initial settlers seeking more land for planting and for keeping their animals. The system of land division encouraged the spreading of the town: the proprietors of the common land, or all the free planters, effectuated "divisions" allocating land to the town settlers according to a number of factors, mainly their investment in the company and the number of people in their households.⁹⁸ The first division took place in January, 1640; the second, a few months after that; and the third, in 1680.⁹⁹ Excellent records exist for the third division, illustrating how this system of allocating lands affected town expansion: an individual would have received potentially large quantities of land in disparate geographic areas north, east, and west of the Nine Squares.¹⁰⁰

This system of land allocation necessitated new pathways for people living in the town center to reach their distant holdings. Already by the second division, settlers could receive land as far as two miles away from the town center.¹⁰¹ Indeed, because of the way the colony was laid out, the townsmen ordered a survey at a very early date to establish highways between the town center and the major "quarters," or large radial fields, that surrounded the Nine Squares. This is confirmed by the Town Records; in 1684, following an inventory of all the highways in the town, the records of the town recall that "at the laying the lands of the plantation ther were high wais laid out for persons to goe to theyer lands meadows and the commons."¹⁰²

2. CITY DENSIFICATION: COMMERCIAL FACTORS

However, while roads out to the farms were certainly most important prior to 1700, New Haven's evolving role in the colonial economy also precipitated infrastructural changes. In its early years, the commercial enterprise at New Haven was a colossal failure; New Haven's location prevented territorial expansion, the harbor was shallow and semi-inland, and the agricultural productivity was never very good.¹⁰³ The value of the taxable assets in New Haven provides evidence of the depression New Haven experienced after its founding. In 1666, the value of the estates in New Haven was 17,474 pounds; until well after 1700, it was never that high again. The value reached its low point of 12,367 pounds in 1682.¹⁰⁴ One wonders whether Davenport, one of the colony's main founders, left for Boston in 1668 because New Haven was losing its religious zeal¹⁰⁵ or because the economic future of the colony looked so bleak. A contemporary in Massachusetts in the late 1600s described New Haven as follows: "The Merchants either dead or come away, the rest gotten to their Farmes, The Town is not so glorious as once it was."¹⁰⁶ Although Eaton and Davenport had lofty goals of a town bustling with ship-building and trading, New Haven thus settled into a comfortable lull, where its freemen practiced subsistence farming with little surplus to export.

However, in the early 1700s, New Haven's future changed. New policies from London encouraged the New England colonies to send livestock and other goods to the West Indies, and as the main coastal town in Connecticut, New Haven rose to prominence as a site of export.¹⁰⁷ Between 1700 and 1750, despite some conflicts and competition with New York City (including their attempts to portray New Haven as a town of smugglers) and only modest increases in tonnage in the port,¹⁰⁸ the amount of taxable wealth in New Haven began to steadily rise.¹⁰⁹ By 1715, New Haven and Boston had begun to carry on vibrant trade in furs, lumber, cloth, and other products.¹¹⁰ Land trading and transport appears to have taken off in this time period as well. In 1717, the Connecticut legislature permitted John Munson of New Haven to set up a wagon route from Hartford to New Haven "to pass and transport passengers and goods," on the condition that he faithfully do so from spring through fall or else face penalty of fines.¹¹¹ By land and by sea, New Haven was becoming a critical mercantile city within Connecticut.

It was only around 1750, though, that New Haven really began to experience a boom in its economy. The amount of tonnage in New Haven's harbor increased fortyfold between 1748 and 1774.¹¹² The citizens of New Haven agitated for new bridges and an extension of Long Wharf further into the harbor.¹¹³ As New Haven's mercantile prosperity increased, the town also faced a huge influx of population. The town grew from 1400 inhabitants in 1748 to more than 5000 in 1756, then to more than 8000 in 1774.¹¹⁴ Longtime residents and established families began to distinguish themselves as "Town-Born," as opposed to the "Interlopers."¹¹⁵ Among the new people flocking to New Haven in this period were families that would soon become as identifiable with New Haven as any family: the Woosters, Shermans, and Hillhouses came to the town because of its success during this time.¹¹⁶ New Haven's fleet grew, too; New Haven's harbor grew from supporting just five boats in the late 1600s to supporting over one hundred by 1775.¹¹⁷ A large number of the new residents were affiliated with New Haven's commercial trading industry. In 1774, the number of "seafaring men" in New Haven was counted at 756. That number is nearly ten percent of the total population of the town in 1774, and closer to forty percent of all men in New Haven between the ages of twenty and seventy.¹¹⁸

With more people and more commerce, there was a need for new highways in and around downtown New Haven. Even a cursory glance at the Town Records for any year after 1750 reveals that highway business preoccupied the town meetings. The town's Land Records, which record all transactions and deeds within the town, also show how much new highway construction was occurring. Between 1750 and 1754, the town of New Haven only entered into nine transactions for highway land.¹¹⁹ Between 1770 and 1774, they entered into seventy-four transactions as part of new highway construction.¹²⁰ The town also utilized an increasing number of surveyors of highways during this time. Though only twenty surveyors were sworn in for the year 1750,¹²¹ for the year 1769, the selectmen appointed thirty-three.¹²²

B. Meeting the Demand for Streets: Piecemeal Planning

Although some new residents opted to live within the Nine Squares, many early residents sought to live on the water or on the outskirts of the growing town instead, especially necessitating development in those regions. The infrastructural development which took place outside the Nine Squares looks more similar to the development in other New England towns than it does to the symmetrical planning within the Nine Squares. Much of this development was created through legal procedures facilitating resident involvement, highway exchange, and responsive planning.

1. RESIDENT INVOLVEMENT

Though the government assumed the responsibility for planning some roads on its own initiative when it granted land in new areas of the town, most of the new highways were planned by either private initiative or private-public collaboration. Landowners frequently requested highways that would link their properties in one area to properties in another area, or to another highway. Private individuals thus played a critical role in making infrastructural decisions, whether they established informal paths or served as petitioners requesting that the selectmen lay out a road in a certain area.

Some of the highways that were developed in this period seem to have been pre-established public corridors, probably informally created by long-term common use. Carol Rose has described these types of pathways as “prescriptive” roads or roads established by “implied dedication”; both terms refer to passageways to which the public has acquired rights through use.¹²³ Multiple deeds that created public highways during this period refer to the routes of existing “paths” as markers for the boundaries of the new highway.¹²⁴ For example, in 1762, Jared Robinson received “a certain Part of a highway” in exchange for granting the proprietors of New Haven a highway across his land “where ye path now goes 2 rods wide.”¹²⁵ Other deeds are more explicit: a grant from Matthew Gilbert in 1786 stated that the land he was giving over to the town “hath been many years used for a highway.”¹²⁶ Sometimes the townsmen might slightly alter a well-established path in reconstituting it as an official road. For example, in 1765, Jonathan Dickerman received “a part of three highways” from the town, in exchange for one Certain part of my Land I bot [sic] of Peter Pernitt which is to be for an open highway for ever & is to be two rods and a half wide and is to begin at that highway yt runs by Amos Allings house and to run westward through the Teer where ye Path now goeth most of the way but at the west end to run a Little north of the Path where it will better accommodate the highway.¹²⁷

Although Rose envisioned that the public could acquire these road lands “without purchase,”¹²⁸ it seems that in New Haven at least, the landowner always received some compensation when the road officially went into the record books, whether in the form of money or land.¹²⁹

More typically, community members served a different role in street creation: they were petitioners, applying for new streets. These requests are

indicative of the collaborative, public-private method of planning. Unlike informal path creation, in collaborative planning, the government had a more active role in determining the bounds of the new street. Petitions could come from either individuals or groups, and the government’s role varied from minimal to significant.

Sometimes, the government seems merely to have acted as a middleman between landowners, facilitating and addressing one individual’s desire or need to cross the land of his neighbor.¹³⁰ For example, in 1750, Nathaniel Sperry petitioned the townsmen for a new public road out in the fields northeast of the Nine Squares.¹³¹ The highway would cut through the land of one of Sperry’s neighbors, Samuel Darling, and lead to Sperry’s parcel. The townsmen first appointed two representatives to go view the place.¹³² They returned to the next proprietors’ meeting having approved Sperry’s suggestion and having made an agreement for compensation with Darling.¹³³ The signed deed in the Land Records states that for dedicating to the public a strip of land twenty feet wide through his land, Darling received four and a half acres adjacent to the farm of one of Sperry’s relatives.¹³⁴ It is unclear whether the land Darling received was public land belonging to the proprietors, or maybe Sperry’s own land. Although the road was public, it was thus largely motivated by a single individual’s need to gain access through his neighbor’s land.

The government also appointed the committee of two or three individuals that determined the contours of the new road. An example shows how residents, the committee, and the government cooperated in generating a new street. Around 1758 or 1759, a group “Requested to Lay out a highway in . . . New Haven” close to East Haven, informing the selectmen that it was “very much needed and w[ould] be of Publick advantage.”¹³⁵ A committee then “repaired to said Place and viewed the Circumstances thereof and found that it was absolutely necessary to have a highway Laid out for the Bennifit of the Inhabitants of said New Haven.”¹³⁶ The selectmen then surveyed a long highway which crossed the land of several different landowners.¹³⁷ The landowners and selectmen appear to have negotiated over consideration for the land taken; at least one of the landowners in this particular case received just over seven pounds for the strip he granted to the town.¹³⁸

Sometimes the government had a very strong role in shaping infrastructural development by opposing a resident’s request for a new road. But they had to go through a type of adversarial, court-mediated process to do so.¹³⁹ On occasion, the New Haven government does seem to have contested the roadways proposed by members of the public. In the winter of 1766-67, a group led by individual petitioner Caleb Hitchcock asked the County Court to “Send a Committee to view the Necessity of having a highway as mentioned in [the] Petition.”¹⁴⁰ The townsmen appointed a committee to “view said place or places and any other place or places where it may be thought Necessary to have highway or highways for the Good of the Publick and report their opinion upon the whole unto the Next Town meeting.”¹⁴¹ After viewing the location, the committee evidently found a problem with the

roadway. They reported back that “they were of the opinion that it would be best for the Town to oppose said Petition at the County Court. Whereupon this meeting do appoint Capt. Amos Hitchcock, Mr. St’n Ball, and Deacon David Austin a Committee to oppose said Petition at said County Court.”¹⁴² Although there is no County Court record of this particular dispute, it seems the government and Hitchcock eventually came to some kind of agreement about the plan. In 1771, just four years later, Caleb Hitchcock and his neighbor were compensated for a new highway laid out through their holdings.¹⁴³ Although the government played a significant role in street planning when they chose to oppose roadways, it is important to note that the adversarial process prevented the government from unilaterally overruling plans by the community. Instead, it permitted community members and the selectmen to compete for control of infrastructural decisions in front of a theoretically neutral court, perhaps incentivizing bargaining between community members and the government over roadway locations.

In sum, residents had a large part in determining the contours of new roads. But the government’s ability to be either partner or adversary helped protect the system from abuses—for example, by limiting the chance that a purely self-interested road, one solely beneficial for the petitioner, as opposed to the public, could be created. Unlike comprehensive planning, piecemeal planning had the major advantage of allowing local residents with first-hand knowledge about their communities to help determine the location of the roads. And whether they merely ratified a decision or actually surveyed the street, the government still carried out provision of the road, avoiding the problems associated with private provision of roadways.¹⁴⁴

2. HIGHWAY EXCHANGE

The system of highway exchange, officially established by Connecticut law in 1727,¹⁴⁵ also shaped piecemeal development during this time. By “highway exchange,” I refer to the power that the selectmen gained to exchange highways in order to procure new highways. There were two huge advantages to this system. First, because it allowed the selectmen to relocate unsuccessful roads, it was extremely flexible. Second, it was extremely cheap, permitting the selectmen to compensate landowners in kind, even when currency may have been scarce.

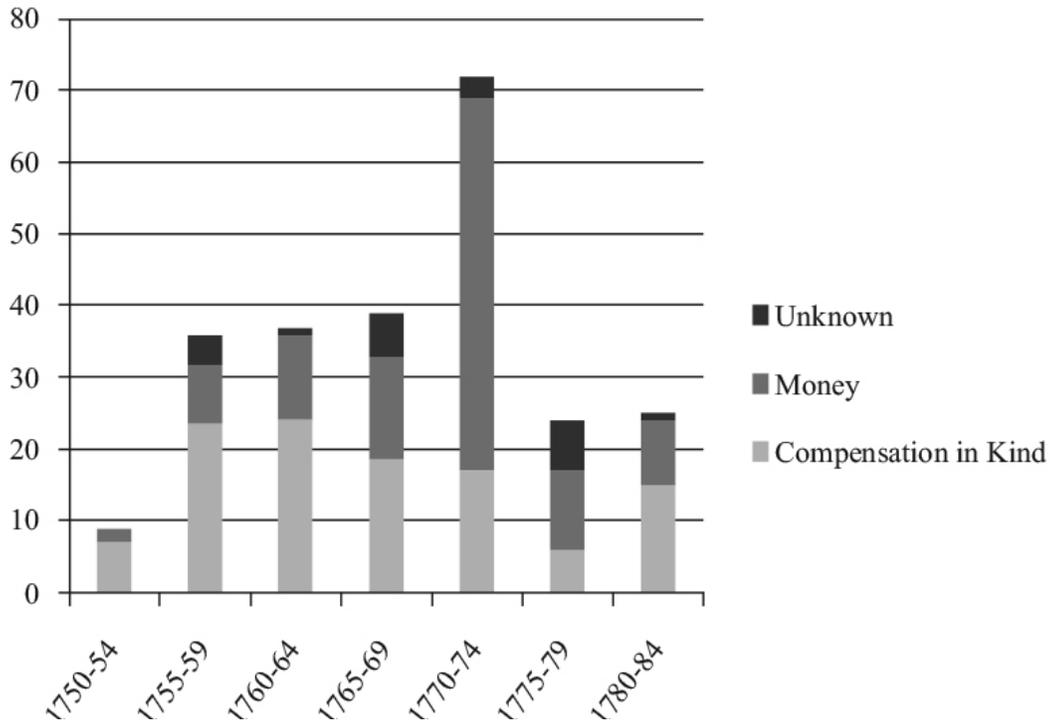
The highway exchange system rendered many infrastructural decisions subject to a sort of Darwinian selection: roads which were used survived, while those which were underused or unused were recycled back to the proprietors, who could then use them to purchase other land. This system allowed the selectmen to plan both preemptively and responsively. They could try to anticipate where a suitable road would go, but could also get rid of that road if settlement patterns required a different one elsewhere. There were definite limits to when the system would be useful. Typically, the only people who desired small strips of highway were adjacent landowners, who would often give up other sections of their land for a new highway as part of the exchange.¹⁴⁶

Even if the number of parties interested in obtaining small sections of highway was small, it is evident that the highway exchange system was beneficial for both the selectmen and adjacent landowners. There are multiple records of community members petitioning the selectmen to exchange a highway near their land, indicating their interest in obtaining the strip at the cost of another part of their property.¹⁴⁷ Joseph Basset, for example, requested in 1749 that the selectmen grant him part of an old highway near some land he stood to inherit.¹⁴⁸ The proprietors of the town determined an exchange would be appropriate and appointed a committee to visit Basset so that Basset could “Initiate ye proprietors to yt land which [he] propose[s] to l[e]t ye proprietors have.”¹⁴⁹ The committee laid out a new road through Basset’s land, and in exchange, he received rights to the old public highway adjacent to his father’s former holding.¹⁵⁰ For whatever reason, old highways were attractive land for adjacent proprietors, and the demand for former highway strips seems to have been significant enough that the selectmen and proprietors could frequently trade them.

The highway exchange system also allowed the selectmen to capitalize on a resource which had become of limited value to them and the public, but which did have value for adjacent landowners. This was incredibly advantageous: it made the cost of new development extremely low, probably allowing more development to occur. One might argue that the highway land was more valuable to the proprietors than money, but that was clearly not the case. For example, in planning one new road in 1769, the proprietors directed the committee that they should “find waste Land or needless highways to Dispose of” in order to purchase the new road, and only if that was insufficient were they “ordered to draw out of the Town Treasury.”¹⁵¹

There is evidence that at times throughout the later eighteenth century, the New Haven government was rather currency-poor, making highway exchange critically important in allowing new development to continue. New Haven struggled to pay in specie for some of its projects, in particular, Dragon Bridge over the Quinnipiac River, a project which was initiated during the Revolutionary War, but not close to completed until the 1790s due to debts and funding struggles.¹⁵² On at least some occasions in the late 1700s, the town was taken to the County Court or General Assembly over small debts that it could not pay.¹⁵³ Although the government could theoretically have sold the pieces of highway to adjacent landowners, then used the money to purchase new highway land, this appears not to have happened. One possible reason is this: with currency often scarce¹⁵⁴ and the government in debt, landowners may not have had the available cash to purchase highway strips from the town. Late eighteenth-century newspaper ads in New Haven advertised that stores would accept a variety of non-currency items for payment; Roger Sherman’s store, for example, accepted as payment “Wheat, Rye, Corn, Oats, white Beans, Flax-Seed, Butter, Cheese, Pork, Beef, Flour, Hoops, Staves, Heading, Boards, Plank, Hay, Wood, Geese Feathers, Tow-Cloth, Check, Flannel, and all kinds of Public Securities.”¹⁵⁵ The highway exchange system bypassed the problems posed by currency scarcity and valuation, offering a simple method by

Figure 2: Compensation Patterns in New Highway Construction, 1750-1784¹⁵⁷



which the selectmen could barter their highway assets for new highways or pay compensation to affected landowners. And indeed, the system was used frequently: highway exchange accounted for just short of a third of all highway creation during the period from 1750-1784, a total of about seventy-two exchanges.¹⁵⁶

Together with the other form of in-kind exchanges—grants of other common land, not abandoned highway—land and highways were used as compensation for half of all new highway construction between 1750 and 1784.¹⁵⁸ The flexibility of being able to pay with common land may have solved one possible problem with the highway exchange system: what to do if abandoned highway land was scarce. Indeed, after 1769 (and thus, in the midst of the town’s rapid growth period), the amount of highway exchange relative to land payment decreased, not to rise again until after the Revolutionary War. This may be due to increasing traffic on highways, and hence, fewer abandoned highways to use in the exchange system. Still, being able to grant regular parcels of common land had many of the same advantages as being able to pay in abandoned highway land. And because highway exchange persisted alongside the use of common lands to purchase highways, other advantages remained: if a highway was deemed unsuccessful, it could still be recycled for a new highway, supporting piecemeal development and allowing the selectmen to assess and respond to demand for streets (or in many cases, minimizing the impact of the lack of demand for a particular roadway).

3. RESPONSIVE PLANNING

Both resident involvement and highway exchange, features of incremental development in New Haven, provided the government with good feedback on the roadway system and its shortcomings. Hence, the government was able to engage in what I call responsive planning, or planning that was shaped by existing settlement patterns. Responsive planning allowed the town government to take advantage of resident knowledge indirectly, by planning according to their expressed preferences on the best lands for living, farming, and doing business. The choices residents actually made about where to live and work were a valuable source of information that the selectmen could use in planning street grids which would support economic and social life.

The most major shift in settlement patterns within central New Haven was a movement toward the water. Looking at eighteenth century maps of New Haven, it is apparent that many new homesteads were situated either directly on the creeks or on the harbor.¹⁵⁹

Critically, the infrastructure near the water often developed around new settlement patterns; in other words, land was not granted on a pre-established highway, but instead, the highway followed the settlement. Some of the street creation took the form of “grant-and-reserve” planning—early settlers would petition for land in a particular area, and the town authorities would require them to leave space for a new street. Take, for example, the creation of Water Street, a long road that tracks New Haven harbor: in the 1650s, the town government granted settlers land near the water, provided they leave room for a “Cart highway” somewhere across their properties, allowing them some discretion over where exactly it would go.¹⁶⁰ Water Street thus developed piecemeal, based on where settlers had located their homesteads.¹⁶¹

As for the other harbor streets, they were not created by the initial grant of land, but instead were created after settlers located their households there. Most of the streets near the harbor were officially established between 1750 and 1775, at the same time that the harbor was emerging as centrally important to New Haven’s economy.¹⁶² Piecemeal planning allowed the government to respond to the demand for streets and adjust for settlement preferences, particularly important for the many New Haven residents who chose to reside near the harbor. A map of New Haven from 1824 depicts five incrementally planned streets near the water—Water, Union, Fair, Olive, and Cherry Streets—that look far more like Boston than like any grid.¹⁶³

Around the harbor, the resulting street plan was more akin to the typical New England pattern of “folk” development, as opposed to the advance-planning of the Nine Squares. And indeed, as in other New England towns, these streets were formed incrementally. Presumably, many of the other small streets, alleys, and lanes depicted on the 1824 map were also the result of piecemeal planning, created in response to demand as settlers chose where to build homes and shops. Accordingly, these roads are more irregularly shaped and more deferent to topography and existing landholding patterns.

III. The Nine Squares Subdivision

While the area surrounding the Nine Squares developed incrementally, as described above, the streets within the Nine Squares remained relatively unchanged. In local parlance, the streets were probably still identified either by the names of older proprietors who had resided nearby, or else the current occupants.¹⁶⁴ But by 1775, they had at least begun to acquire names.¹⁶⁵ Downtown New Haven was still defined by the regularity of the squares, which made a great impression on visitors. On seeing New Haven for the first time, the visitor Thomas Pownall described it as follows:

[T]he Traveller has from the hills an enchanting view of the Vale and the Town; a Town of Trading, and [the] Harbour full of Vessels. The Town is built on a regular designed Plan. Is a Square, has a Place or Square in the Middle, from the Angles of which go off in right lines eight Streets. The Houses are all built in the English Fashion. In the center of the Square is a fine Meeting House with its Spire like our English Churches.¹⁶⁶

In 1754, then, Pownall described an infrastructure hardly different from the one originally laid out. Despite the growing number of lots, people, houses, and shops, the central part of New Haven in the 1750s had the same streets and blocks it had a century earlier.

A. Signs of Strain

Most of the economic and social life of the town was funneled into the Nine Squares, the heart of New Haven. New Haven historian Douglas Rae has referred to the infrastructure surrounding the seaport as an “umbilicus through which the central squares sucked up commercial opportunity from afar.”¹⁶⁷ As New Haven’s role in commerce increased during the 1700s, the “compact part” of the city, as Yale President Ezra Stiles called it,¹⁶⁸ was beginning to fill with new residences and new stores. With the increase in the number of dwellings, it is safe to assume that more people than ever were living on the eight major streets. The table below depicts a constant increase in the number of dwellings built within the Nine Squares:

Table 1: Growth in Number of Dwellings in Nine Squares Environs¹⁶⁹

Year	1724	1742	1775	1787	1798
Dwellings	157	165 ¹⁷⁰	370	466	596

However, growth was not equally paced among all the blocks. To examine the growth in each of the squares, I have counted the number of structures that appear within each square in three maps of New Haven: the Brown Map of 1724,¹⁷¹ the Wadsworth Map of 1748,¹⁷² and the Stiles Map of 1775.¹⁷³ All three maps were drawn by locals within a short time of the years they claim to depict. Unfortunately, it is probably unwise to rely on the maps for providing a precise number of buildings, since they were not all the result of official surveys. Nevertheless, despite their shortcomings, the numbers of buildings depicted on the maps do provide us with a good idea about the relative densities in each square over this time period.¹⁷⁴ I number the blocks based upon their distance from the harbor and continuing west to east, proceeding north. In other words, Block 1 is the block nearest to the water, bounded by what is now George and State streets; Block 2 is slightly west and north, Block 3 east, Blocks 4 and 5 on the corners of the center block, and Block 8 the most distant from the water.¹⁷⁵ Counting each of the separate, free-standing structures in each square, one arrives at the following numbers for each year.

The changes in patterns of development in the Nine Squares can probably be attributed to the location of two important resources: the water and the fields. As New Haven became more of a commercial town, the importance of waterways for shipping and receiving goods grew. In particular, the closeness to the harbor (as well as what remained of the creeks) probably became of increasing importance to merchants seeking land in the Nine Squares. Accordingly, we would expect to see heightened development in Blocks 1, 2, and 3. However, agrarian landholders within the Nine Squares probably cared less about the harbor and more about their proximity to the roadways that led to the vast farm fields surrounding the town. As an example, it is significant that Block 6 retained a high level of development, despite its distance from the water; Block 6 was near a path to the fields in the western part of the town. Similarly, some of the development in Block 5 can probably be attributed to the location of the road to the fields where many other citizens had their holdings. It is logical that local farmers would want to situate their dwellings close to these roads.

Some of the patterns of development in the lower three squares are also attributable to the construction of stores and shops. The location of the traditional marketplace near the center block was likely important to enterprising New Haveners considering where to offer their commercial goods and services. Locating a shop in that area downtown probably facilitated tapping into a ready customer base. The town already had a sort of “commercial district” by the 1780s.¹⁷⁶

Sometime between 1750 and 1775, as New Haven experienced its economic boom, members of the citizenry began to create small alleys or streets within the Nine Squares on the busiest commercial blocks, particularly Block 1. The maps produced in the mid-1770s show Gregson Street, a small, irregular street with multiple buildings on it; they also show Hubbard Street, probably named for nearby resident Leverett Hubbard.¹⁷⁷ Landowners in these regions appear to have coordinated to create streets where they were necessary. As in many other regions in the town, community members were driving development where there was demand for new roadways.

However, in 1784, the selectmen of the newly incorporated city of New Haven took over development within the Nine Squares, choosing to subdivide each block (with the exception of the green) into four (nearly) evenly sized blocks. The story of the subdivision of the Nine Squares has never before been told in detail. The next Section briefly explains how and why the government subdivided the squares the way they did—a history which identifies the time and cost required to subdivide the squares, in the process illustrating some of the problems posed by comprehensive grid plans in the colonial period.

Table 2: Growth in Number of Structures by Block

Year	1724	1748	1775
Block 1	14	27	47
Block 2	9	22	44
Block 3	12	22	37
Block 4	11	25	30
Block 5	10	14	23
Block 6	16	25	25
Block 7	10	17	19
Block 8	5	14	18

B. Early Property Problems: Of Holdouts and Obstacles

On September 23, 1784, just nine months after becoming officially incorporated and chartered as a city, the New Haven selectmen voted at a city meeting not only to rename the original eight streets in New Haven, but also to create new streets within the original Nine Squares. The bylaw appeared in the *New Haven Gazette* on October 14, 1784.¹⁷⁸

Given the completeness of the Town Records, it is striking that there is no mention of the decision to divide the streets. As it appears from the records, no committee was appointed to investigate whether new highways within the Nine Squares would be of public benefit. There are no records of surveyors discussing the matter with affected landowners. But it would be a mistake to assume there was no investigation and opposition, as the records might seem to indicate. The best sources for ascertaining what happened during the division of the Nine Squares are preserved in the New Haven Land Records and Connecticut Archives, in a few pages of records that reveal the people responsible for the Nine Squares subdivision and the difficulties the committee faced in trying to open the streets.

On September 22, 1783, a year before the by-law, a petition arrived at the Connecticut General Assembly. It was signed by residents of the New Haven “town plat,”¹⁷⁹ local vernacular for the Nine Squares environs. The petition requested that the residents of the New Haven downtown be permitted to form a corporation to better govern and regulate the city.¹⁸⁰ The main impetus for incorporation was better local control over trade: the group stated that “by their local circumstances they are utterly unable to gain subsistence by agriculture . . . they have been obliged to turn their attention to commerce.”¹⁸¹ After the difficulties of the Revolutionary War, the New Haven group stated that they were “renewing their efforts to extend that commerce so necessary for them.” One of the powers they requested was to be able to lay out “streets and highways [] commodious for business” within the town plat.¹⁸²

This document is a clue to the main reason the selectmen seem to have wanted new streets within the Nine Squares in 1784: smaller blocks of smaller lots were more desirable. Long before 1784, the spacious home lots granted to the first group of settlers had been divided and subdivided into smaller lots. Almost immediately after the initial settlement, several of the large home lots within the Nine Squares were split into smaller pieces and sold off.¹⁸³ People wanted to live and work near the center of the town, and the large blocks did not make settling the downtown blocks with the optimum number of residents possible. Creating smaller lots fronting on new streets would have increased aggregate land value by facilitating lot subdivision. If the owner of a Nine Squares lot wanted to sell off an internal portion of his lot to a new owner, the creation of a new public street with direct access to that lot would have made the land much more desirable.

Moreover, the new demand for smaller lots might also have been created by New Haven’s growing commercial character. The smaller lots were not lots for large gardens and small-scale farming; they were lots on which the men

primarily intended to build homes, warehouses, and shops.¹⁸⁴ Accordingly, many of the new houses and lots purchased along the water were more densely packed than the spacious lots within the Nine Squares.¹⁸⁵ Although the crowding of the blocks by houses and stores is a second possible reason for opening more streets, it seems less likely that this was the primary reason for the decision to divide. While some blocks were indeed uniformly fronted by buildings, others were very sparsely populated. As late as 1799, even after the blocks had been subdivided, a visitor to New Haven remarked that some of the houses in the Nine Squares were “detached, with considerable intervals, from one another.”¹⁸⁶ More likely, the subdivision ensured that the deep lots could be split up and sold off, making more downtown lot space available for new residents to build homes and shops.

There is another reason why the selectmen may have chosen to divide the streets when they did. There were planned subdivisions occurring at exactly this time in two of the most important cities in colonial America: Philadelphia and New York. As in New Haven, the blocks planned in early Philadelphia were somewhat large: 425 feet by 675 feet, or 425 feet by 500 feet (although this hardly compares to New Haven’s enormous blocks).¹⁸⁷ By 1762, they had begun to be cut up by narrow alleys and streets.¹⁸⁸ Between 1762 and 1794, most of the large blocks (though not all) in Philadelphia were divided into anywhere between two and four blocks.¹⁸⁹ New York, meanwhile, had been comfortably developing block-by-block in extremely irregular fashion over the course of the 1700s.¹⁹⁰ But in the 1760s, the city appointed a surveyor to lay out a subdivision of some of the blocks on the west side of Manhattan, creating small rectangular blocks.¹⁹¹ Given the timing of these other city planning initiatives, the subdivision of New Haven’s blocks may not be a coincidence. The New Haven selectmen may have felt that cosmopolitan cities were moving toward smaller block sizes, and accordingly, decided to reduce the size of New Haven’s blocks.

The by-law published in the newspaper in 1784 that named the streets and described the new layout would seem to indicate that all the streets would be laid out at once. According to that law, all the streets were ordered to be fully cut through the squares right away. This was far from reality. Street by street, piece by piece, the selectmen faced different struggles in their efforts to lay out the new roads. Some of these problems are detailed in the following subsections.

1. EVIDENCE OF RESISTANCE

The by-law establishing the streets was passed on September 23, 1784. Two weeks later, at a city meeting on October 11, 1784, the city government passed a resolution: “Voted, that application be made to the Connecticut General Assembly at their next session, for a grant to this city of more extensive powers respecting the laying out and opening of Streets and highways in sd city.”¹⁹² Two of the town’s youngest and most successful individuals, Pierpont Edwards and James Hillhouse, were appointed to be a committee to bring the bill in front of the Assembly.¹⁹³

The timing of this request from Hillhouse and Edwards suggests a link between the powers requested and the problems that the selectmen were facing in laying out the Nine Squares roads. The procedure that Hillhouse and Edwards agitated for would be more accelerated than the standard procedure under Connecticut law. Under the procedures they requested to use in the city, an aggrieved landowner in New Haven would only have one month to apply to the court, which would have to meet within one week to decide on the merits of the complaint.¹⁹⁴ More importantly, the Act stated that the city would pay the bill for convening the court, but only if the complaining landowner had “just cause” to complain; otherwise, the aggrieved owner would bear the cost.¹⁹⁵ This must have been a powerful deterrent against challenging new roads. If the landowner did not complain within one month, then the aldermen could “after the end of two months after laying out the same[,] be by said Mayor, Aldermen and Common Council laid out[,] and may be occupied as a common highway.”¹⁹⁶ If a landowner persisted in encroaching on the new road, the Act reaffirmed the city government’s power to tear down and remove any encroachment in the new streets without recompense.¹⁹⁷

The New Haven government’s petition for more highway powers in 1784 corroborates the evidence that at least some of New Haven’s residents opposed the new highways. The record¹⁹⁸ for one of the subdividing streets, Orange Street, serves as a representative example. The Orange Street Deed contains reference to a hearing where the “parties having appeared by themselves or agents or attorneys were fully heard.”¹⁹⁹ This is the first ever reference to attorneys in a record of a highway transfer. The conclusion that part of Orange Street was contested is further supported by the fact that the legal procedures for resisting a highway were being followed. The selectmen recorded that they had given notice to those affected. They appointed a committee of disinterested freeholders—three individuals from West Haven—to appraise the damages. More importantly, the highway was left unopened for at least one year,²⁰⁰ which was prescribed by the state highway laws in the event a landowner felt “aggrieved” by the new highway.²⁰¹ The deeds for three of the subdividing streets follow this pattern. There are variations in the records which make it unlikely that the language in each deed is merely boilerplate: only some of the records have references to hearings with the parties or their attorneys, while others contain simple quitclaims or relinquishments of the right to seek damages from the town.

Among the other unusual features of the records for Orange, Temple, and most of High Street is the fact that no compensation was paid. These new highways in the Nine Squares were laid out without the city paying any compensation, even a trivial amount. In choosing to award no damages, the appraisers seem to have taken into consideration the offsetting benefits the adjacent landowners would receive from a new road,²⁰² although one could argue that any new road created since 1650 had generated offsetting benefits for nearby owners, and that had never barred compensation before.²⁰³

Taking a fifty foot swath out of a downtown home lot probably affected a huge portion of an owner’s property. By this time, the amount of street frontage each lot owner would have had seems to have been very small. One merchant’s drawing of downtown in the year 1786 depicts twenty-one separate lots (with more than twenty-one structures) on one side of a block.²⁰⁴ Dividing the eight hundred and fifty foot block width by twenty-one lots, that results in an average lot frontage of about forty feet—meaning that each street could wipe out an entire home or store lot, or at the very least, a large portion of one or two.

Apart from the records of hearings just discussed, it is impossible to know what kind of resident resistance there was, or whether the new roads were unpopular among the locals. But of particular note is the fact that after creating the new highways in 1784 and implementing them slowly over the next decades, the city of New Haven (as distinct from the town) did not engage in any other formal street building project until 1799.²⁰⁵

2. STRUCTURAL OBSTACLES: ORANGE STREET

The selectmen may have faced resistance from landowners, but they also faced physical obstacles: structures standing in the paths of the new streets. The story of Orange Street indicates how the selectmen quite literally “got around” the problem.

Of any of the new streets in the city of New Haven, Orange Street would seem to be the most urgent. Already by 1775, the southernmost piece of Orange Street was opened in Block 1 by private citizens acting on their own initiative, with structures beginning to front on it.²⁰⁶ But once Orange Street was fully laid out, it did not connect to the small street in the southernmost block which had formed by 1775. It was instead located slightly west, resulting in an odd little jog at one intersection. Why?

The clearest explanation is that there was a structure in the way. The by-law establishing the street states that Orange Street was to begin above where the southernmost street was formed and head north starting “a little west” of a house of Pierpont Edwards, then a prominent lawyer in the town.²⁰⁷ The deed states that Orange Street would run by his barn on its front or west side.²⁰⁸ In laying out the new street, the selectmen appear to have sacrificed geometric perfection to keep from running over their fellow common councilman’s barn, instead plotting Orange Street west of where its lowest part already ran. Edwards was a powerful individual involved in town government, leaving us to wonder whether his authority allowed him to prevent the road from adversely affecting his property. The irregularity in Orange Street still exists today.

3. HOLDOUTS: TEMPLE STREET

The selectmen would seem to have had a major advantage in laying out Temple Street. One of the blocks they needed to bisect was the central green, which they already controlled. But even this deed references a hearing. The record establishing Temple Street refers to the “land of Capt. John Mix.”²⁰⁹ The Mix family lands seem to have been fairly large and fairly valuable: they were needed for two of the subdividing streets.²¹⁰

One of these subdividing streets, Wall Street, was not included in the original 1784 by-law establishing the new streets.²¹¹ It may have been an afterthought; a glance at the 1775 map demonstrates that the upper squares, where Wall Street is located, were very sparsely settled and relatively separated from the growing commercial district south of them.²¹² Still, by 1787, the first Wall Street Deed was filed. It stated that the road would run in a line until it approached the boundary between the lands of John Mix and a neighbor.²¹³

Yet the full extension of Wall Street through all three blocks was not accomplished until 1816, when both Capt. John Mix and his son, John Mix Jr., had died, at which point the townsmen were able to access the land by settling a debt from the estate.²¹⁴ When Mix died, the selectmen acted immediately to finish extending Wall Street through the blocks. Mix died in debt \$208.32 to the city of New Haven. The strip of land needed for Wall Street was appraised at \$134, a not insignificant sum for a swath which was only two-hundred-and-twenty-eight feet long and twenty-six feet, eight inches wide.²¹⁵ At just over twentyfive feet wide, Mix's land only constituted half the piece needed to extend the forty-foot-wide road through to College Street. The two landholders who held the other pieces—John H. Lynde, who lived near Temple and Wall,²¹⁶ and Elizur Goodrich—were prominent lawyers in the city,²¹⁷ and both had some involvement with city government.²¹⁸ With no shortage of civic spirit, both Lynde and Goodrich turned over their small pieces of land for Wall Street after Mix's death, in 1816 and 1817, for the minimal consideration of one dollar a piece.²¹⁹

4. EXTRALEGAL NEGOTIATIONS: HIGH STREET

High Street, the third new north-south street after Orange and Temple, was both the first and the last highway laid out in the Nine Squares.

The street was advanced block by block; the first block was laid out in 1784, but the last one was not laid out until 1827.²²⁰ Unlike the other two north-south streets, which appear to have been laid out in the northernmost blocks first, the townsmen tried to lay out High Street beginning in the southernmost block. Lower High Street was only laid out forty feet wide, as opposed to Orange and Temple streets, both of which had a width of fifty feet.²²¹ This may have been an adjustment made because of the crowdedness of the lower block, necessitating a narrower road to avoid houses and barns.

The same three West Haven men who had appraised the lands affected by Orange Street and Temple Street also appraised the lands which were taken on the lower block of High Street.²²² But instead of awarding no compensation, this time, the committee referenced an unusual reason why the damages were settled:

*We the subscribers freeholders under oath appointed by Sam Bishop Justice of the Peace to appraise and estimate the damage done to James Prescott Mary Lucas Joel Atwater Noah Potter and Thankfull his wife by laying out the within mentioned highway the sd James Prescot [sic] and Mary Lucas having agreed and by exchange of land settled the matter of damages respecting their sd two Lots so yt they demand no damages, do adjudge that the laying out sd highway is no damage to Joel Atwater and Noah Potter and Thankfull his wife but yt said lots are benefitted by laying out sd highway.*²²³

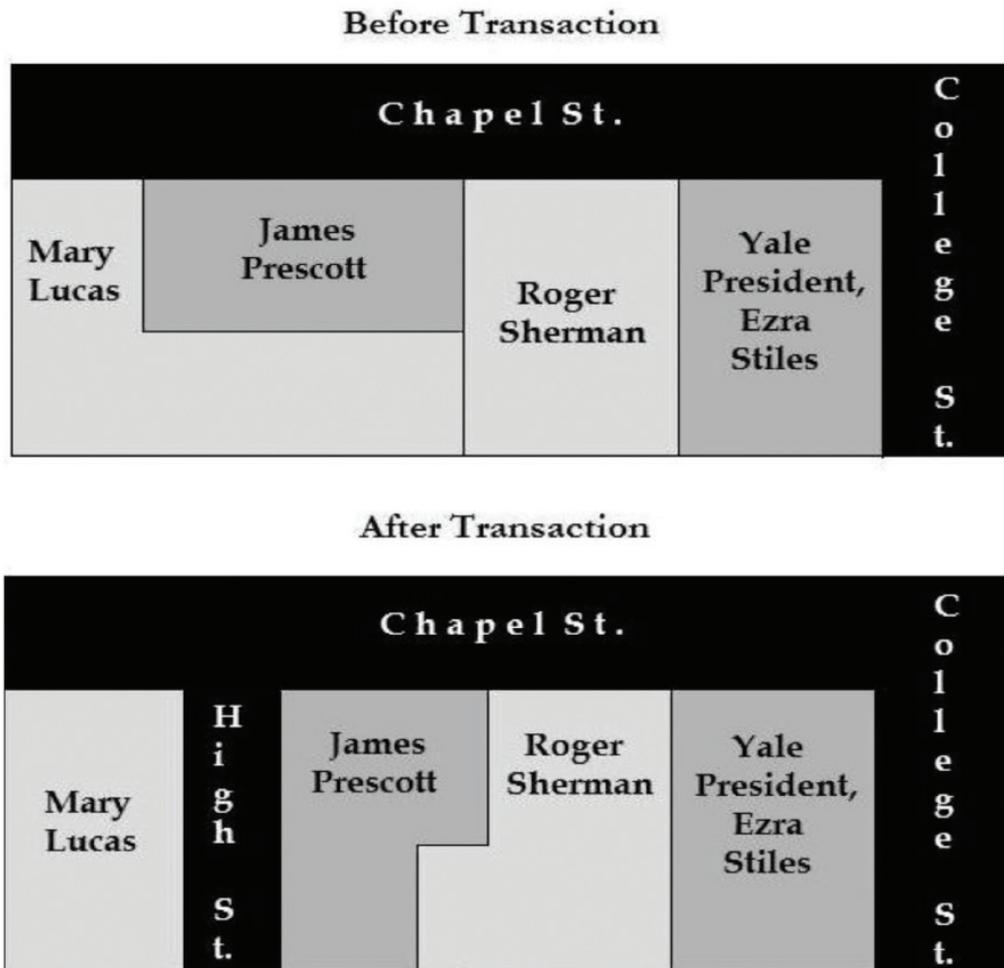
As with Temple Street and Orange Street, no monetary damages were awarded. This is the only deed which explicitly invokes the “offsetting benefits” doctrine, stating that the benefits of the new highway outweighed the damages that some of the landholders suffered.

But less straightforward is the reference to an “exchange of land” between the two damaged owners. It seems that Lucas and Prescott might have had claims against the town stemming from the creation of High Street, but that these claims were relinquished after a transaction between them. Hunting through the records, it becomes evident that the transaction was actually very complex, and designed to placate only one of the parties: James Prescott. The transaction provides a clear example of how the selectmen of New Haven may have dealt with possible problems related to their street plan: with a lot of extralegal deal-making.

In the fall of 1784, James Prescott was a party to two land deals on the same day: one, a transfer from New Haven Mayor Roger Sherman to him, and another reciprocal deed between himself and Mary Lucas.

From the two deeds, Prescott appears to have had a house and shop between some of Lucas's land and Sherman's residence. His lot was not very deep; his neighbor, Mary Lucas, seems to have owned land bordering his lot on both its west and south sides. In the transfer, Roger Sherman swapped a piece of his land fronting on Chapel Street for a roughly equally-sized piece out of Mary Lucas's land behind Prescott's lot.²²⁴ Lucas and Prescott swapped all of their land on different sides of the new street, so that Lucas would have all of the land on the west side of the street and Prescott would have all of the land on the east side.²²⁵ The following diagram indicates the result of the swap:

Figure 3: Representational Illustration of the Lucas Deed



Note: Exact dimensions not available, hence not to scale.

In this transaction, two leaders of city government—Roger Sherman and James Hillhouse—had to give up land to relocate Prescott’s lot. Sherman may have been involved out of civic responsibility, but also family ties: he was married to James Prescott’s sister²²⁶ and, a decade later, went into business with his brother.²²⁷ Hillhouse’s connection to the deal is more remote. It is through Lucas: Mary Lucas was Hillhouse’s mother, using her maiden name.²²⁸ Although Lucas did gain frontage space on High Street, in terms of total acreage, this deal was a loser for her. She gained only a tiny strip on the west side of High Street. The one-sidedness of the deal suggests that Prescott could have been a key problem. There is a record of Prescott constructing the frame for a new house on his Chapel Street lot in late 1784, suggesting he may have had to move a structure when the new street was created.²²⁹ Hillhouse’s involvement is all but certain: the witnesses to the transaction between Prescott and Lucas were James Hillhouse and his biological father, William.²³⁰ By facilitating the land transfer from his mother to Prescott, Hillhouse seems to have aided in the creation of the new streets with his entrepreneurial skills, not his civic leadership abilities.

He personally helped engineer deals to overcome major obstacles to laying out the roads.

C. Some Lessons from the Nine Squares Subdivision

Both the original Nine Squares plan and the subdivision were designed with a clear, fixed plan in mind. But it took over sixty years to fully recognize the plan they laid out in 1784. Visitors to the city near 1800 could still remark that only “most” of the squares were divided by cross streets.²³¹

In his later years, James Hillhouse apparently gave inquiring minds the impression that the Nine Squares were subdivided when the streets were “opened by the owners of the property at their own convenience and discretion, according to some plan spontaneously agreed upon.”²³² If Hillhouse was referring to a schedule for opening the streets, then perhaps there is a positive explanation for the extreme delays. Perhaps the selectmen of New Haven were relying on a type of amortization period. They gave landowners in certain areas advance warning of the plan

for the streets, fair notice not to continue improving their properties or building structures on those lands; there is also the possibility that some landowners may have been given time to relocate completely.²³³ Although this is a plausible explanation for the delay, and most landowners must have been given notice when the plan for the streets was published in local newspapers, there is no concrete evidence to confirm or refute that the delay was intentional.

Indeed, there is at least as much evidence to the contrary. It appears that while maybe a few sections of a couple streets were opened harmoniously and slowly according to some spontaneous schedule, other rewards point the other way. The city government pursued greater powers over removing encroachments and limiting road appeals. The records refer to local hearings. In some blocks, the government enjoyed the advantages of resident cooperation, usually from a member of their own rank. In others, they took land without compensation for the first time in recorded town history. Sometimes they had to resort to personal connections and negotiations to sway landowners into supporting their street plan. On other occasions, they waited patiently for a landowner to die to finally access the estate. All in all, it was an event fraught with problems that seemed to plague the city for the next several decades, as roads which were supposedly named and established in 1784 remained unopened until nearly 1850.

There are two ways to interpret the subdivision, yielding different results. The subdivision may have been a positive event. It is probably safe to assume that in the aggregate, property values within the Nine Squares rose when the new streets were implemented, simply because they helped create more frontage lots and made better circulation around downtown possible. Even the order in which the streets were laid out may reflect a positive version of Harold Demsetz's famous thesis that property rights "develop to internalize externalities when the gains of internalization become larger than the cost of internalization."²³⁴ With a few exceptions,²³⁵ the streets were generally laid out in the most crowded blocks first, and in the most sparsely settled blocks later. It could be argued that public property rights in streets were created when it was efficient to do so: when the gains of internalizing the negative externalities incurred by crowding, internal building, and private negotiations over easements exceeded the admittedly high costs of establishing a new road. If part of the explanation for the lengthy amount of time required to open all the Nine Squares streets was a sort of compromise, or a type of amortization period—a time during which landowners were given significant advance warning not to make improvements to their properties that would affect the land already designated for streets—then this positive story may well be correct.²³⁶

But the unavoidable conclusion is that the subdivision may only have been overly costly in the short term. In the long run, the subdividing streets seem to have been successful. Property values probably rose, and settlement on the new streets occurred fairly rapidly; by 1824, in each of the Nine Squares, residents had built on the subdividing streets then laid out.²³⁷

Although the subdivision may have been costly and premature in parts, even if the timing was wrong, the plan itself was probably inevitable. There are only so many ways to divide a square, and it was probably better to ensure the subdividing streets were long and straight than to chance the possibly irregular consequences of private formation of these streets. The street planning committee may have done the best they could with the poor plan they were dealt by their predecessors. The subdivision may have had its flaws, but if anything, these time-consuming revisions are further indications of just how much New Haven's original Nine Squares plan may have set the city back.

Hillhouse did express one regret about the subdividing streets: late in his life, he regretted "that he did not insist on carrying every street through to the water in a straight line, viz: to the harbor in one direction, and from Mill River to West River in the other."²³⁸ This may reveal the true extent of his leadership in the subdivision, but also exposes some of the flaws inherent even in the new plan. Even after the subdivision, the Nine Squares were poorly integrated with the rest of the streets in the city. As in 1800, a traveler on Wall Street or even Crown Street and High Street today cannot travel to any other part of the city without taking one of the other parallel Nine Squares streets. Indeed, here lies the main problem with the entire Nine Squares development, both in 1638 and in 1784. In the government's efforts to carry out idealized, geometric street plans, they neglected community needs like the location of resources (for example, the harbor) and the patterns which would best help New Haven grow into a metropolis.

IV. Toward a Theory of New Streets

Looking back on this history, is the Nine Squares plan something to be celebrated? New Haven takes a lot of pride in its status as the first planned city. As modern drivers, we applaud the straight streets of the Nine Squares grid. But it is not clear that New Haven's plan has always been beneficial for the city. Gleaning lessons from town planning in New Haven, this Part attempts to define a theory of street creation, limited to street creation in the wilderness.

A. A Market for Streets

In areas planned by incremental planning and folk planning, street creation was dependent on market forces. The demand for streets determined their location and their layout. Infrastructural choices followed settlement patterns. In certain parts of New Haven, the result was perhaps less geometric, but the resulting streets were efficient for the community and provided a nice gradient of blocks and lots with mixed sizes and mixed uses. Resident preferences and demand—a person's desire to live near the wharf, for example—determined settlement patterns, and correspondingly, lot and block sizes, and the street grids which framed them. The Nine Squares plan, in contrast, responded to no perceived demand. Instead of choosing to live within the Nine Squares, almost from the outset, many new residents migrated to lots on the harbor, creek, or river. Besides the fact that the squares were oriented strangely away from the harbor line, the block sizes

prescribed by the street grid were also incompatible with public demand. While large garden lots on spacious blocks may have been what a few early planters desired, less than a century later, many residents of downtown New Haven gravitated toward home and commercial lots which were on smaller blocks with less deep lots. As this Article has described, on some blocks, they cut their own streets into the lots, subdividing blocks on their own initiative.

Piecemeal planning, done with input from residents, offered many advantages in early colonies like New Haven. First, the petition process lowered the search and information costs the government would incur in planning roads: although small government committees still had to travel to the proposed location and investigate the appropriateness of putting a road there, the neighbors and affected landowners could quickly and easily provide the surveyors with good information about nearby settlement and the need for the road. Second, when the residents were involved in infrastructural planning, it was *prima facie* evidence that a road was in demand and would be used, minimizing losses from unnecessary highways that might need to be corrected or relocated later. Third, the government's role in laying out roads was preserved through the petition process, preventing problems associated with purely private road generation. By filtering all road requests through a representative body, the chance that self-interested behavior would affect road planning decreased (for example, someone creating a street that benefitted his own property, but created strong negative externalities for his neighbors).²³⁹ Additionally, public roads are classic examples of public goods; few would argue with the assumption that governments are best at providing roads, particularly because of their powers of taxation and eminent domain.²⁴⁰ And laying out a street is a large event that requires coordination; although some of New Haven's roads appear to have been formed solely by "customary usage," governments are certainly best at facilitating and coordinating the physical layout of roadways.²⁴¹ Indeed, this is why the network benefits of street coordination were not lost when planning was influenced from the bottom up: the government was still at the top, coordinating the street layout as it developed.²⁴² Piecemeal planning allowed the government to use the knowledge of residents and the enforcement powers of the government, maximizing the relative strengths of both the private and public spheres.

In a sense, imposing a comprehensive grid plan in the early colonies may have operated as a market distortion, preventing natural settlement forces from producing the ideal street layout. The planners seem to have been in a difficult position to accurately assess what type of infrastructure would best meet resident needs. Given the uncertainty of their settlements, it was near impossible to predict whether the city would be commercial or agrarian, and even who the new residents would be, giving them poor information with which to create a street plan that would support settlement. By prescribing a comprehensive plan with meager information, the planners of New Haven left the colony and town inflexible as residents learned about the advantages and disadvantages of their locales and the strengths and weaknesses of their populations.

B. Analyzing the Market Theory: The Plans of New York, Philadelphia, and Boston

At first glance, the histories of the city plans in Boston, New York, and Philadelphia might seem to contradict my theory about the failure of comprehensive grid planning in New Haven. On the contrary, I do not want to assert that all early grid plans failed, or that all piecemeal plans were perfect. My theory is more limited than that. I instead assert that a street plan should be thought of in terms of supply and demand, and that New Haven's original comprehensive plan failed because it was hopelessly divorced from the needs of its residents. I also argue that piecemeal planning seems to have conferred some advantages on the colonies. Indeed, the histories of these three cities seem to support my theory, because those plans succeeded most when they complemented the needs of city residents.

Boston has retained its city plan in large part, although the piecemeal plan is criticized by planners²⁴³ and visitors alike. Indeed, such plans may not be normatively desirable from a modern perspective. However, if we perceive city planning in terms of supply and demand, there are good reasons for encouraging piecemeal planning in close-knit, relatively small towns like those in the early colonies. The first advantage is informational. Incremental planning allowed early colonial governments to tap into the knowledge base of immediate neighbors about where roads should be located, either directly (by speaking with the landowner), or indirectly (by planning a road after settlement occurred). The local landowners were best able to assess the desirability of a new road and had the opportunity to influence the road plan—if multiple locals conveyed interest in a particular pathway to a certain area, or a certain street pattern conducive to particular block and lot sizes, the town government could take advantage of that resource. Locals could create access ways for public use that were efficient for them,²⁴⁴ in the sense that residents were best able to inform the authorities about which lands to dedicate to the public and which to reserve for private use in order to maximize benefits and minimize costs.²⁴⁵

The second advantage is predictive. Incremental planning does not mandate foresight, but it does require attentiveness to developing settlement patterns, rather than prescribing them. Renowned city planner Frederick Law Olmsted once wrote that the "time and attention" devoted to some comprehensive plans might be as "scanty" as the time devoted to piecemeal ones, judging from how well those plans anticipated future city needs.²⁴⁶ But I counter that at the very least, piecemeal plans are successful in the sense that they respond to contemporary needs, whereas poorly-thought-out comprehensive plans may not. One of the intriguing results of piecemeal planning in Boston is the street and block gradient which resulted: the streets generally formed small, crowded blocks near the harbor, and larger, more expansive blocks farther away.²⁴⁷ This gradient may have supported growth by addressing changing and unstable settlement preferences in a way comprehensive grid plans could not.

Although piecemeal planning has major informational and predictive advantages, it also has limits. Piecemeal planning seems to work best

in close-knit communities, when landowners are likely to cooperate in cost-minimizing behavior for the group.²⁴⁸ Moreover, it would also work best in communities where preferences are otherwise difficult to assess or predict—perfectly suited to the uncertainties in the early colonies. When the information asymmetry changes—when long roads require coordination among many landowners, when the residents are less close-knit and may be more likely to engage in self-interested planning decisions that inflict high negative externalities on their neighbors, or when planners are in a good position to predict future land uses and the social and economic environment—comprehensive planning by designated representatives is probably preferable. It would undoubtedly be both difficult and undesirable to encourage incremental planning in larger, less close-knit cities, hence it was probably wise for the New York City government to take control over all road construction in 1807, preventing private citizens from opening roads.²⁴⁹

The grid plan implemented in New York City in 1811 is an ideal example of when planning is appropriate.²⁵⁰ In the populous and expanding city, it was no longer desirable or efficient for residents to plan the roads; that was better allocated to their representative body, the corporation of the city. The planners were intensively concerned with the demands of the growing city, and adjusting the plan to fit those needs. In choosing a new street plan for New York, the planning commission was primarily concerned with “what the space was actually going to be used for.”²⁵¹ In the words of one historian of New York’s city government, Hendrik Hartog, “the choices contained in the map were not impositions of public power, but, rather, extrapolations from trends. . . . [P]ublic officials could learn from private practices and habits how best to mold a public sphere that satisfied the wants of their public.”²⁵² Although their primary objective was making land cheaper and more convenient for residents, the planners also considered where commercial activity would take place, and how and whether commerce should be dispersed around the city.²⁵³ They concluded that a grid made up of rectangular blocks was the ideal solution to produce affordable housing and encourage commerce to spread outside of the central marketplace.²⁵⁴ The New York City plan of 1811 is an example of a comprehensive plan which seems to have worked, although it has no shortage of critics.²⁵⁵ On top of problems with the grid plan in New York, critics have identified the epidemic spread of the grid across the country as problematic.²⁵⁶ This makes sense: a comprehensively planned grid may not make sense for every city’s demands, and hence, should not be implemented. Piecemeal plans, smaller-scale comprehensive plans, or altogether different large-scale plans may be more appropriate, depending on the individual city’s economic and social needs.

The history of Philadelphia’s town plan provides an excellent comparison for evaluating early town planning. There are parts of Philadelphia’s comprehensive plan which are revered by town planners.²⁵⁷ The founder, William Penn, may have modeled his gridiron plan after a contemporaneous plan advanced for London after significant parts of it burned, or else

modeled it after the other grid patterns emerging at that time in locales ranging from New Haven to Ireland.²⁵⁸ And indeed, even though comprehensively planned in the gridiron pattern, there are parts of Philadelphia’s plan that seem to have adequately addressed the demands of a new colony. The town is located along the Delaware and Schuylkill rivers, major water arteries.²⁵⁹ As in New Haven, the Philadelphia streets were uniform,²⁶⁰ though the blocks were slightly smaller.²⁶¹ However, Philadelphia, too, appears to have had some major problems with its regular plan, and like New Haven, underwent a costly and unpopular subdivision to deal with crowding and commercialization. The subdivision was effectuated in the 1730s or 1740s, and involved the relocation of some streets, the division of many blocks, and the elimination of a few of the formerly public squares.²⁶² The subdivision was extremely unpopular with some residents, who argued that the plan favored wealthy proprietors at the public’s expense by increasing the proprietors’ access to and frontage on the river and eliminating some of the squares.²⁶³ It would be difficult to fully assess the history of Philadelphia’s town plan without a complete microhistorical study of the records. However, I hypothesize that the history is positive when the street addressed some assessed demand (for example, the layout of a major street along the Delaware River). But like New Haven, it is plausible that Philadelphia also struggled with the consequences of imposing a uniform, comprehensive plan instead of supplying diverse streets suited to different and fluctuating colony needs.

Comparing the histories of New York, Boston, and Philadelphia to New Haven’s early infrastructural history, there is good reason to suggest that incremental planning influenced by residents—like the planning that created Boston and many other New England colonial towns—was better suited to early colonial development than systematized, comprehensive grid planning because of the informational and predictive advantages it conferred. The Nine Squares plan seems to have suffered by being disadvantaged in both. It lacked foresight about future needs and failed to meet contemporary needs. Even beginning with the 1640s, there is no good or clear explanation for why the blocks were made so large. Even if the planters of New Haven Colony could not have predicted the commercial changes coming their way, if they had planned incrementally, they would not have needed any foresight. Moreover, they may have been more able to adapt to the town’s changing settlement patterns and economic and social needs.

This is not to say that the winding roads and irregular streets which may result from “folk planning” are normatively desirable: instead, this study merely suggests that for the members of developing colonies, small-scale, accretive development best served residents. There are certainly advantages to “legibility” and ease of comprehension in a city plan that cities like Boston and Cambridge lack. But I counter that in the colonial and Revolutionary period, when attracting and settling new residents and industries was critical for growth, piecemeal plans were preferable because of their adaptability and responsiveness to resident preferences and

demands. New Haven's leaders, for all of their centralized planning, failed to do what the "folk planners" of other colonial-era towns and cities were able to do. New Haven spent more than a century—and a century of some of its most important and substantial growth—with a street plan that limited intratown circulation, reduced homelot availability in central downtown, and cut off access between the marketplace and the water. This almost certainly would not have happened had a plan developed incrementally. Indeed, one must wonder whether the substantial growth that eventually prompted New York to require a new plan may be due in part to the success of its own piecemeal plan on the lower tip of Manhattan.

Conclusion

This paper has called into question the admiration for New Haven's earliest town plan, the Nine Squares. While idealized and geometric, it adapted poorly as the town and eventually, the city of New Haven experienced the economic and social changes of the seventeenth and eighteenth centuries. In contrast to the parts of the town laid out through the petition procedure and other legal mechanism, the streets and blocks of the Nine Squares were divorced from resident demand. They created blocks that were inefficiently-sized, and ill-suited to commercial development.

Outside the Nine Squares, New Haven's piecemeal street planning was often the result of small-scale, incremental decisions. Planning committees did not have a large end plan in mind when they approved petitions: they planned only whatever streets were necessary for people to reach their fields or the waterways. Streets shifted with settlement patterns, deferring to topography and resident preferences. Moreover, the system of highway exchange encouraged these small-scale, experimental decisions, because they were not necessarily final. If successful, the road would survive and become part of the street pattern. If unsuccessful, the street could be remedied easily: it could be relocated to a more suitable location. Road creation, in essence, proceeded through a "succession of incremental changes," allowing planners to "avoid serious lasting mistakes."²⁶⁴

In contrast, New Haven's Nine Squares grid plan was classically comprehensive. Decisions were made about what the end plan of the streets would be, and then, the means for development were chosen and the large-scale plan was carried out. But once laid out, problems were apparent, and errors difficult to remedy because settlement had followed the infrastructure. The blocks were too big, limiting the availability of accessible parcels downtown. Rather than opening New Haven's commercial center, the seaport structure funneled traffic into the corner of George and York Streets. And it is not altogether evident that absurd street patterns and comprehensive planning are mutually exclusive. When other cities developed irregularly-shaped blocks and winding streets, they avoided strange, angular three-street intersections like those at the corners of the Squares.

***Jane Jacobs: On the Street* Exhibit at University of Virginia School of Architecture**

Reid Saunders and Katie Lang

In November 2016, the Community Design Research Center honored the legacy and influence of Jane Jacobs through a symposium entitled *The Modernity of Work and Place: Jane Jacobs and the Design of the 21st Century City*. One of the elements of the symposium was an exhibit in the School of Architecture on the great thinker.

Jane Jacobs spoke for what she believed and stood up to planners, architects, and policymakers whose destructive actions toward vibrant neighborhoods she opposed. Her observation-based urban theories were intuitive and yet ran starkly contrary to common understanding at the time.

The exhibit, titled *Jane Jacobs: On the Street*, focused on Jane Jacobs: her origin, writings, and the lasting impact that she has had in urban theory and activism. While Jacobs saw herself as a writer, some of her most notable contributions did not stay on paper or in theory but rather motivated her actions as a speaker, community organizer, and activist. She spoke truth to power and advocated for the neighborhoods and urbanism that she saw promoting community, safety, and economic vitality. This exhibit aimed to show both her actions and the thinking that motivated them.

An additional element of the exhibit challenged viewers to take Jacobs's observational style of theorizing and to apply it to our modern streetscapes. It featured immersive virtual reality scenes from Richmond, Virginia, that could be observed from similar lenses of scale, interaction, and the balance of uses across time.

The failures of the Nine Squares plan were further exposed during the subdivision of 1784. It is true that as demand changes—for example, when interstates and major arterials for automobile traffic became necessary—the street grid changes, so it would be foolish to judge a street grid a failure simply because it looks different than it originally did, or because eminent domain was required to accomplish it. The difference in New Haven is the amount of time and money required. I have demonstrated that New Haven’s redevelopment in 1784 was large-scale, as opposed to minor street revisions occurring at the time in other cities.²⁶⁵ The New Haven town officials, in both their public and private capacity, had to expend tremendous resources both to open the streets and to prevent and repair encroachment. It took sixty years to lay all of the streets out, and throughout, confusion reigned about where the streets actually were. As late as 1805, a New Havener evidently had been mistakenly sold some of one of the new streets by a downtown landowner, and had to deed it back to the city for a dollar.²⁶⁶ All of this effort seems to have been expended in order to make New Haven’s infrastructure capable of supporting a modern, commercial city—a result which other cities, and even other areas of New Haven, accomplished with far less intervention and far fewer resources.

Why did the Nine Squares persist? After they were laid out with such confidence, and particularly after town leaders disbursed the home lots within the Nine Squares, New Haven was committed to its city plan. New Haven’s Nine Squares are an example of semistrong form path

dependence.²⁶⁷ We know now that New Haven’s large blocks were costly to adapt to commercial life. But would it have been efficient to completely destroy them, in favor of a new, water-oriented, community-developed plan? Probably not. Still, looking at the map of the piecemeal streets around the harbor,²⁶⁸ it is not so difficult to imagine a plan like Boston’s here in New Haven, with streets winding around the waterway and then progressing inward, creating irregularly-shaped blocks. It is tempting to speculate on what consequences New Haven has suffered as a result of its strange city plan. Examining the other mercantile cities with long streets that tracked along harbors and rivers, one wonders whether they started with an advantage of accessibility that New Haven, with its funnelshaped seaport structure and enormous blocks, never had. The history of its town plan suggests that the quaint, quirky roads that many travelers curse today may have been those best poised to nurture the town three hundred years ago—and that new planners would do well to consider the realities of demand on the ground before designing grand city plans that bear no relationship to future residents’ preferences.

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Appendix

Compensation Patterns in New Highway Construction, 1750-1784

Year	Sample Size ²⁶⁹	Compensation in Kind	In Kind-Land	In Kind-Highway	Money	Unknown
1750-54	9	7	1	6	0	9
1755-59	36	23.5	6.5	17	8.5	4
1760-64	37	24	9.5	14.5	12	1
1765-69	39	18.5	3	15.5	14.5	6
1770-74	72	17	10	7	52	3
1775-79	24	6	3	3	11	7
1780-84	25	15	6	9	9	1
Total	242	111	39	72	109	22

Note: A value of one-half represents compensation that was partially in one category, partially in another.

Endnotes

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1. JOHN W. REPS, *THE MAKING OF URBAN AMERICA: A HISTORY OF CITY PLANNING IN THE UNITED STATES* 28 (1965) (quoting directive from Ferdinand to Pedrarias Davila, 1513).
2. See Gus Lubin & Mamta Badkar, *Scary New Satellite Pictures Of China's Ghost Cities*, *BUSINESS INSIDER*, Mar. 5, 2013, <http://www.businessinsider.com/satellitepictures-of-chinese-ghost-cities-2013-3?op=1>.
3. See R.N. Bhaskar, *The New Cities of India*, *FORBES INDIA*, Nov. 30, 2010, <http://forbesindia.com/article/resolution/the-new-cities-of-india/19662/1>.
4. Robert C. Ellickson, *The Law and Economics of Street Layouts: How a Grid Pattern Benefits a Downtown*, 64 *ALA. L. REV.* 463, 475 (2013) (describing potential of street plan "to enhance [residents'] opportunities to engage in face-to-face interactions, social and commercial").
5. *Id.* at 479-84.
6. *WALL STREET* (20th Century Fox 1987).
7. Ellickson, *supra* note 4, at 479.
8. See 2 JAMES D. KORNWOLF, *ARCHITECTURE AND TOWN PLANNING IN COLONIAL NORTH AMERICA* 1177 (2002); REPS, *supra* note 1, at 129.
9. REPS, *supra* note 1, at 129 (noting that despite a lack of direct evidence, there is a reasonable basis for this belief).
10. *Id.*
11. See *id.* at 124-28.
12. Elizabeth Mills Brown, *John Brockett of New Haven: The Man and the Myth*, 27 *J. NEW HAVEN COL. HIST. SOC'Y* 3, 5 (1980).
13. CITY PLAN DEPARTMENT, CITY OF NEW HAVEN, *COMPREHENSIVE PLAN FOR DEVELOPMENT I.2* (2003), available at <http://www.cityofnewhaven.com/CityPlan/pdfs/PlanningPrograms/ComprehensivePlan/SectionIntroduction.pdf>.
14. *Id.*; see Ellickson, *supra* note 4, at 470.
15. This is not to say that all planned towns or colonies were failures. See *infra* Section IV.B. (discussing New York and Philadelphia).
16. See James W. Ely, Jr., "That Due Satisfaction May Be Made:" The Fifth Amendment and the Origins of the Compensation Principle, 36 *AM. J. LEGAL HIST.* 1 (1992); William B. Stoebuck, *A General Theory of Eminent Domain*, 47 *WASH. L. REV.* 553 (1972); William Michael Treanor, *Note, The Origins and Original Significance of the Just Compensation Clause of the Fifth Amendment*, 94 *YALE L.J.* 694 (1985). It can be difficult to tell which transfers were consensual and which were the result of nonconsensual eminent domain. Only a very small minority of landowners requested a road on their own properties, meaning there was some degree of compulsion exerted upon most affected landowners. Even in nonconsensual cases, the town seems to have negotiated with the affected landowner about compensation and documented the transfer using a deed. This study uses all transfers of highway land from citizens to the town in its discussion of compensation patterns and planning, though these transfers likely fall across a spectrum from consensual sales to nonconsensual eminent domain and compensation.
17. CORNELIA HUGHES DAYTON, *WOMEN BEFORE THE BAR: GENDER, LAW, AND SOCIETY IN CONNECTICUT 1639-1789*, 22-23 (1995).
18. REPS, *supra* note 1, at 129.
19. ANTHONY N.B. GARVAN, *ARCHITECTURE AND TOWN PLANNING IN COLONIAL CONNECTICUT* 47-48 (1951).
20. Brown, *supra* note 12, at 11-20. Elizabeth Mills Brown has written a thorough and convincing critique of the popular assumption that John Brockett laid out the town, even offering suggestions of other possible surveyors.
21. REPS, *supra* note 1, at 129. Reps's hypothesis derives primarily from one peculiarity of the Nine Squares: from the time of their first settlement, there was a less regular "suburb" along the water, already settled in the 1640s. According to Reps, as Eaton and Davenport were preparing to leave for New Haven, they realized that there would be more in their company than previously anticipated. As a result, they tacked on the suburb as an afterthought, providing evidence that the plan for the Nine Squares predated the settlers' arrival in Connecticut. *Id.* at 129-30. Elizabeth Mills Brown has suggested that if Eaton never returned to Massachusetts, he may have laid it out (with some help) over the winter of 1637-1638. See Brown, *supra* note 12, at 4.
22. See *infra* note 31.
23. 16.9 acres is the mathematical equivalent of fifty two square rods. NAT'L INST. OF STANDARDS AND TECH., *GENERAL TABLES OF UNITS OF MEASUREMENT C-3* (2010), <http://www.nist.gov/pml/wmd/pubs/upload/appc-14-hb44-final.pdf>.
24. REPS, *supra* note 1, at 130.
25. *Id.* at 126-27, 129.
26. LAWRENCE W. KENNEDY, *PLANNING THE CITY UPON A HILL: BOSTON SINCE 1630*, 12 (1992).
27. See REPS, *supra* note 1, at 142.
28. See *id.* at 124, 137.
29. The map of 1722 depicts some blocks which remain measurable today. For example, in Boston's North End, Prince Street, Bennett Street, Salem Street, and North Street (now Hanover Street) formed one block that was split by an alley or smaller street—this block was about five hundred and twenty-eight feet by two hundred feet. Closer to Boston Common, there were larger blocks. The block formed by Winter Street, West Street, Tremont Street, and Marlborough Street (today, Washington Street) was closer to five hundred and twenty-eight feet on each side. See REPS, *supra* note 1, at 142.
30. See *id.*
31. The blocks vary in size within each of these cities, but I have chosen what I believe are fairly average sizes. New Haven's original blocks were eight hundred and fifty feet to a side. JOHN W. BARBER, *HISTORY AND ANTIQUITIES OF NEW HAVEN, CONN.* 12, 18 (1831), available at <http://ia311338.us.archive.org/1/items/historyantiquiti00barbe/historyantiquiti00barbe.pdf>. John W. Reps misstated this distance in his book, stating that each was "16 rods, or 825 feet," but those are not equivalent. REPS, *supra* note 1, at 128. A New York City block in Manhattan north of 14th Street is about two hundred and sixty-four feet by one thousand and fifty-six feet (or one-twentieth of a mile by one-fifth of a mile). In Savannah, the city blocks within each ward consisted of three ninety-foot long home lots fronting one side and four sixty-foot wide home lots fronting the other side, resulting in rough dimensions of about two hundred and seventy feet by two hundred and forty feet. REPS, *supra* note 1, at 187, 189. Philadelphia blocks were four hundred and twenty-five feet wide, but varied in length from five hundred to six hundred and seventy-five feet. I used six hundred feet as the length for this diagram. REPS, *supra* note 1, at 163.
32. CARL BRIDENBAUGH, *CITIES IN THE WILDERNESS: THE FIRST CENTURY OF URBAN LIFE IN AMERICA 1625-1742*, 13 (1938).
33. *Id.*
34. SAM BASS WARNER JR., *THE URBAN WILDERNESS: A HISTORY OF THE AMERICAN CITY* 7 (1972).
35. *Id.*
36. ERIC H. MONKKONEN, *AMERICA BECOMES URBAN: THE DEVELOPMENT OF U.S. CITIES & TOWNS, 1780-1980*, 40 (1988).
37. *Id.*

38. See KEVIN LYNCH, *THE IMAGE OF THE CITY* 3 (1960) (“Just as this printed page, if it is legible, can be visually grasped as a related pattern of recognizable symbols, so a legible city would be one whose districts or landmarks or pathways are easily identifiable and are easily grouped into an over-all pattern.”). Lynch has described Boston’s street pattern as “generally confused.” *Id.* at 22.
39. BRIDENBAUGH, *supra* note 32, at 15.
40. CHRISTOPHER TUNNARD & HENRY HOPE REED, *AMERICAN SKYLINE: THE GROWTH AND FORM OF OUR CITIES AND TOWNS* 56 (1956).
41. See *supra* note 31.
42. Cambridge, Massachusetts, probably the second most famous “compact” town in contrast to the “linear” towns of Salem and Boston, was also laid out along a creek rather than the Charles River. See REPS, *supra* note 1, at 126-27.
43. Boston’s downtown area was redesigned in parts in the late eighteenth and early nineteenth centuries. However, these redesigns were often part of rebuilding after fires or other disasters rather than a result of necessary eminent domain, and those projects which were accomplished with eminent domain were relatively small scale when compared to the Nine Squares subdivision. See KENNEDY, *supra* note 26, at 23-41.
44. Although a preferable metric for judging the success of streets would be property values, by virtue of the imprecise demarcation used in the records, this is impossible to determine for seventeenth- and eighteenth-century New Haven. Thus, I judge the success of streets by the amount of settlement and construction they facilitated, a less precise but still valuable measure of their desirability. See, e.g., *infra* Section III.
45. ISABEL S. MITCHELL, *ROADS AND ROAD-MAKING IN COLONIAL CONNECTICUT* 2 (1933) (quoting several travelers’ diaries, including Lord Adam Gordon’s quote from 1768 that the road from Norfolk, Connecticut was the “worst he had seen in America”).
46. See BARBER, *supra* note 31, at 12.
47. See ROBERT C. ELLICKSON & VICKI L. BEEN, *LAND USE CONTROLS: CASES AND MATERIALS* 486-87 (2d ed. 2000) (describing the four categories of streets used by modern traffic engineers as “arterial, collector, subcollector (local), and access (cul-de-sac or loop)”).
48. Major streets outside the Nine Squares were also four rods wide. See, e.g., Deeds of Jan. 7, 1771, in 30 NEW HAVEN LAND RECORDS 500, 500, 501 (on file with the New Haven City Clerk’s Office) [hereinafter NHLR] (creating major roadway to North Haven).
49. See, e.g., Deed of Apr. 10, 1760, in 23 NHLR, *supra* note 48, at 289, 289 (creating road in Wallingford that began five rods wide but tapered to two rods wide).
50. This is by far the most common width, judging from my own experience reading over two hundred deeds from the period 1750-1784. See, e.g., Deed of Jan. 14, 1751, in 15 NHLR, *supra* note 48, at 422, 422 (creating a two rod highway which connected to one of the four rod highways); Deed of Oct. 31, 1765, in 27 NHLR, *supra* note 48, at 371, 371 (creating road two rods wide in Amity along the lands of two neighbors); Deed of Sept. 6, 1773, in 33 NHLR, *supra* note 48, at 284, 284. Rarely, streets were smaller. See Deed of Dec. 6, 1750, in 15 NHLR, *supra* note 48, at 386, 386 (creating highway out in the western farmlands “about twenty two feet wide more or Less, not Less than twenty foot in the narrowest Place”).
51. ELLICKSON & BEEN, *supra* note 47, at 487.
52. *Id.* (citing AMERICAN SOCIETY OF CIVIL ENGINEERING ET AL., *RESIDENTIAL STREETS* 38 (2d ed. 1990)) (stating that modern streets need only be twenty-eight feet wide to accommodate two-way traffic and curbside parking on each side).
53. Settlers sometimes explicitly requested roads for use as cart paths. See ANCIEN TOWN RECORDS, VOLUME I: NEW HAVEN TOWN RECORDS, 1649-1662, at 164 (Franklin Bowditch Dexter ed., 1917) [hereinafter VOLUME I: 1649-1662].
54. See *id.* at 396.
55. See ANCIEN TOWN RECORDS, VOLUME II: NEW HAVEN TOWN RECORDS, 1662-1684, at 242 (Franklin Bowditch Dexter ed., 1919) [hereinafter VOLUME II: 1662-1684].
56. See *id.* at 361; VOLUME I: 1649-1662, *supra* note 53, at 33 (noting that property owners were fined for defective fences when their animals got into the streets).
57. Isabel Mitchell provides a colorful description of early highways: The highways that were to be so carefully laid out with “as little damage as possible to private men’s properties” were but wide swaths cut through the forest, rough and uneven, with half buried boulders and tree stumps sticking up here and there. No attempt was made to improve the surface. Instead of piling up gravel in the center, turnpike fashion, or laying a foundation of rubble or stone, they simply cleared it of bushes and the easily removable trees and stumps. Frequently the middle was lower than the sides MITCHELL, *supra* note 45, at 9.
58. High-ways, in ACTS AND LAWS, OF HIS MAJESTIES COLONY OF CONNECTICUT IN NEW-ENGLAND 49 (1702).
59. MITCHELL, *supra* note 45, at 9.
60. Simeon E. Baldwin, A Ride Across Connecticut Before the Revolution, in 9 PAPERS OF THE NEW HAVEN COLONY HIST. SOC’Y 161, 162 (1918).
61. MITCHELL, *supra* note 45, at 9.
62. VOLUME I: 1649-1662, *supra* note 53, at 279-80.
63. CHARLES H. LEVERMORE, *THE REPUBLIC OF NEW HAVEN* 186 (1886).
64. VOLUME II: 1662-1684, *supra* note 55, at 14.
65. *Id.* at 296.
66. MITCHELL, *supra* note 45, at 12.
67. VOLUME II: 1662-1684, *supra* note 55, at 16.
68. An Act for Providing, Altering, Regulating, and Mending High-ways, in ACTS AND LAWS PASSED BY THE GENERAL COURT OR ASSEMBLY OF HIS MAJESTY’S ENGLISH COLONY OF CONNECTICUT IN NEW ENGLAND IN AMERICA 85, 87 (1768) [hereinafter Connecticut Highway Law, 1768]; see also MITCHELL, *supra* note 45, at 13 (dating the passage of this law to 1715, although I have been unable to independently confirm the date of passage).
69. VOLUME I: 1649-1662, *supra* note 53, at 156.
70. High-ways, *supra* note 58, at 50 (providing that any person can tear down encroachments in the road). One can imagine that confusion about the exact location of roadways may have rendered this a confusing and damaging provision. Hence, by the middle of the eighteenth century, the Connecticut laws required that the landowner receive warning from the town selectmen prior to being fined or having their structure forcibly torn down. See Connecticut Highway Law, 1768, *supra* note 68, at 87.
71. See BRIDENBAUGH, *supra* note 32, at 15-16.
72. See, e.g., VOLUME I: 1649-1662, *supra* note 53, at 81 (describing several land transactions in terms of the location of natural resources, a particular freeman’s meadow, and the homelots of other individuals).
73. ANCIEN TOWN RECORDS, VOLUME III: NEW HAVEN TOWN RECORDS, 1684-1769, at 44 (Zara Jones Powers ed., 1962) [hereinafter VOLUME III: 1684-1769].
74. *Id.* at 537.
75. The merging of the two colonies occurred in 1662. According to the records, a group of gentlemen from Connecticut came down with a charter claiming to include New Haven, which was perceived as an evil and duplicitous act. The lively debate is preserved in the town records. VOLUME II: 1662-1684, *supra* note 55, at 12-14.
76. Government of New Haven Colony (1643), in FRANCIS NEWTON THORPE, *THE FEDERAL AND STATE CONSTITUTIONS COLONIAL CHARTERS, AND OTHER ORGANIC LAWS OF THE STATES, TERRITORIES, AND COLONIES NOW OR HERETOFORE FORMING THE UNITED STATES OF AMERICA* (1909), available at http://avalon.law.yale.edu/17th_century/ct02.asp.
77. John F. Hart, Takings and Compensation in Early America: The Colonial Highway Acts in Social Context, 40 AM. J. LEGAL HIST. 253, 264 (1996).
78. See Charles H. Levermore, *Municipal History, 1. The Town Government, in HISTORY OF THE CITY OF NEW HAVEN TO THE PRESENT TIME* 422, 432 (Edward E. Atwater ed., 1887), available at <http://www.archive.org/download/historyofcityofn00atwa/historyofcityofn00atwa.pdf>.

79. *Id.* at 430; ROLLIN G. OSTERWEIS, *THREE CENTURIES OF NEW HAVEN, 1638-1938*, at 107 (1953).
80. Levermore, *supra* note 78, at 430 (identifying how the creation of the New Haven selectmen mirrored the town governance structure created in colonial Massachusetts).
81. At least one scholar of early New Haven has painted a rivalry between the town government and the proprietors over the disposition of common lands. FRANKLIN BOWDITCH DEXTER, *NEW HAVEN IN 1784* (1884), available at <http://www.archive.org/download/newhavenin1784pa00dextiala/newhavenin1784pa00dextiala.pdf>. However, it seems that they not only were cooperative in their administration of New Haven affairs, but that the lines between the two groups were extremely blurred. Many proprietors were former selectmen or town surveyors. To provide an example, Ebenezer Beecher and Samuel Sherman, proprietors in 1750, were selectmen for the year 1746 and 1747, respectively. Chauncy Whittlesey, another proprietor in 1750, was a surveyor in 1751. See 2 *New Haven Proprietors Records: 1749-1771* 9, 11 (unpublished collection, on file at New Haven Colony Historical Society); *VOLUME III: 1684-1769*, *supra* note 73, at 651, 659, 683. There is one interesting difference: new settlers could not be proprietors as late as 1723. It was an honor reserved for descendants of the original proprietors. OSTERWEIS, *supra* note 79, at 106-07. This distinction seems relatively symbolic and of little consequence, at least for street planning.
82. The records are even more confusing, with petitions for roads coming to proprietors, the Court, and selectmen alike, each group occasionally dictating the boundaries of a road. In terms of formal policy, the mayor and selectmen seamlessly officially received the power to lay out highways “in the name and behalf of the proprs” by a town vote in 1764. 2 *New Haven Proprietors Records*, *supra* note 81, at 181. By this point, the new settlers may have so much outnumbered descendants of the proprietors that all distinctions were obsolete.
83. See *VOLUME I: 1649-1662*, *supra* note 53, at 115 (appointing four freemen to travel to Mill Lane to assess where it should be relocated for more convenience and least damage to landholders).
84. *Id.* at 115 (discussing the relocation of Mill Lane).
85. *VOLUME II: 1662-1684*, *supra* note 55, at 309 (ruling on petition of Henry Glover for a highway toward the farm lands).
86. Hart, *supra* note 77, at 257-63. The first highway statute in the colonies was in Virginia in 1632, providing only that the colonial authorities had the power to lay out convenient roads; the first to provide compensation was in Massachusetts in 1635, and it closely resembled the one Connecticut ultimately adopted. *Id.* at 258.
87. High-ways, *supra* note 58, at 50.
88. An Act in Addition to, and Alteration of a Law of this Colony intituled, an Act for Providing, Regulating and Mending High-Ways, in *ACTS AND LAWS, MADE AND PASSED BY THE GENERAL COURT OR ASSEMBLY OF HIS MAJESTY’S ENGLISH COLONY OF CONNECTICUT, IN NEW-ENGLAND, IN AMERICA* 379, 380 (1773) [hereinafter *Connecticut Highway Law, 1773*].
89. *Id.* The jury was sworn under this oath: You Swear by the Name of the Ever-living God, That you will Lay out the Way mentioned in the Precept by which you are now Summoned, according to the best of your Skill and Judgment; with most Convenience to the Publick, and least Prejudice to any particular Person or Persons: And that you will make a Just Estimation of the Damages done to the Property of any particular Person, by your laying said Way, according to your best Judgment. So help you God.” An Act Prescribing the Forms of Several Oaths, in *ACTS AND LAWS PASSED BY THE GENERAL COURT OR ASSEMBLY OF HIS MAJESTIES COLONY OF CONNECTICUT IN NEW ENGLAND* 388, 388 (1731).
90. High-ways, *supra* note 58, at 50. Paying these jurors seems to have become too expensive for the town to maintain. The preamble of a highway act passed in 1773 eliminated the role of the jury, stating that the move to planning by a small committee as opposed to planning by a jury was necessitated by the “great and unnecessary Expence” occasioned by the earlier method. *Connecticut Highway Law, 1773*, *supra* note 88, at 379.
91. *Connecticut Highway Law, 1773*, *supra* note 88, at 379.
92. See, e.g., Ely, *supra* note 16; Hart, *supra* note 77; Stoebuck, *supra* note 16; Treanor, *supra* note 16.
93. The earliest highway law in Connecticut contained a compensation requirement: Provided, That if any person be [by the laying out of a highway] damnified in his Propriety, or Improved grounds, the Town shall make him reasonable satisfaction, by the Estimation of those that laid out the same; and if such persons so damaged, find himself aggrieved by any act or thing done by the Jury, either in laying out of the said way, or estimate of his Damages, he may apply unto the said County Court for relief, before any allowance, or determination be made by them; who are hereby impowred to hear and determine the same . . . High-ways, *supra* note 58, at 50.
94. *Connecticut Highway Law, 1773*, *supra* note 88, at 380 (requiring compensation for taking “private Property” in general).
95. See Hart, *supra* note 77, at 305.
96. An Act for Enabling the Proprietors . . . to Make Exchanges of said Common Land, for the Procuring Needful and Convenient High Ways, in *ACTS AND LAWS PASSED BY THE GENERAL COURT OR ASSEMBLY OF HIS MAJESTIES COLONY OF CONNECTICUT IN NEW ENGLAND* 346, 346 (1727).
97. More detail on compensation patterns appears in Subsection II.B.2. I have reviewed every transfer of highway land from citizens of New Haven to the Proprietors, Selectmen, or Town of New Haven between 1750 and 1784. 15-41 NHLR, *supra* note 48.
98. There are two possible exceptions, which do not identify whether or not compensation was paid; however, because there was no mention of a hearing or damage calculations, as there are in the confirmable cases in which no compensation was paid later on, I imagine that there must have been some deal struck between the government and the landowners. See Deed of Apr. 1, 1771, in 31 NHLR, *supra* note 48, at 465, 465; Deed of Aug. 6, 1770, in 30 NHLR, *supra* note 48, at 459, 459.
99. Edward E. Atwater, *History of the City of New Haven to the Present Time*, in *HISTORY OF NEW HAVEN*, *supra* note 78, at 1, 3, 10-11 [hereinafter *Atwater, The Colony of New Haven*].
100. *Id.* at 3.
101. For example, in the third division, the meadows were near the creeks; the Neck was north of the squares, close to Mill River. *Id.* at 10-11.
102. *Id.* at 3.
103. *VOLUME III: 1684-1769*, *supra* note 73, at 40.
104. See CHARLES M. ANDREWS, *COLONIAL PERIOD OF AMERICAN HISTORY; THE SETTLEMENTS, VOLUME 2* 193-94 (1936).
105. Edward E. Atwater, *The Town of New Haven Before the War of the Revolution*, in *HISTORY OF THE CITY OF NEW HAVEN*, *supra* note 78, at 10, 22 [hereinafter *Atwater, The Town of New Haven*].
106. Atwater, *The Colony of New Haven*, *supra* note 98, at 9-10.
107. Brown, *supra* note 12, at 5 (quoting 1 *Proceedings* (2d Ser.) 245 (Mass. Hist. Soc’y)).
108. See generally Thomas R. Trowbridge, Jr., *History of the Ancient Maritime Interests of New Haven*, in 3 *PAPERS OF THE NEW HAVEN COLONY HISTORICAL SOCIETY* 85, 85-204 (1882), available at <http://books.google.com> (search title).
109. See *id.* at 199-202.
110. See data taken from Atwater, *The Town of New Haven*, *supra* note 104, at 22,31.
111. OSTERWEIS, *supra* note 79, at 101.
112. CHARLES J. HOADLY, *PUBLIC RECORDS OF THE COLONY OF CONNECTICUT FROM MAY 1717 TO OCTOBER 1725*, at 37, available at <http://www.colonialct.uconn.edu/>.
113. See Trowbridge, *supra* note 107, at 112-114.
114. OSTERWEIS, *supra* note 79, at 101-02.
115. Trowbridge, *supra* note 107, at 229.
116. OSTERWEIS, *supra* note 79, at 102.

116. *Id.*
117. See *id.* at 104.
118. CHARLES J. HOADLY, PUBLIC RECORDS OF THE COLONY OF CONNECTICUT FROM OCTOBER 1772 to April 1775, at 485, available at <http://www.colonialct.uconn.edu/>.
119. See *infra* Appendix (Compensation Patterns in New Highway Construction, 1750-1784).
120. *Id.* Although a good number of the new highways were on the outskirts of New Haven—in Amity, Bethany, and other parishes that would later become independent towns—many were also close to downtown. For example, the street which probably preceded Fair Street in downtown New Haven (the extension of George Street past State Street) was accomplished in 1771. Deed of Sept. 5, 1771, in 34 NHLR, *supra* note 48, at 205, 205 (granting land of John Hall, deceased, “opposite to the shop of Mr. Tho. Howell” to the town). Both of the individuals identified in the deed are visible on the map from 1748. Other highways formed during this town were created in what was known as the “Oysterpoint Quarter,” in the area east of the city along the water (just south of what is today Wooster Square). See, e.g., Deed of Jan. 26, 1771, in 33 NHLR, *supra* note 48, at 517, 517 (describing land transaction from Caleb Trowbridge to the town in Oysterpoint Quarter, for a highway).
121. VOLUME III: 1684-1769, *supra* note 73, at 676.
122. *Id.* at 800.
123. See Carol M. Rose, *The Comedy of the Commons: Custom, Commerce, and Inherently Public Property*, 53 U. CHI. L. REV. 711, 723-24 (1986).
124. See, e.g., Deed of Aug. 6, 1781 (recorded Aug. 6, 1781), in 38 NHLR, *supra* note 48, at 253, 253 (highway exchange between town and landowners granting land “round the point of the hill as the path now goes”); Deed of Dec. 5, 1768, in 29 NHLR, *supra* note 48, at 437, 437 (highway exchange implicating land where the “path now goes”); Deed of July 10, 1767, in 28 NHLR, *supra* note 48, at 463, 463 (giving Bazel Munson monetary compensation for land where the “path now goes”).
125. Deed of Aug. 9, 1762, in 24 NHLR, *supra* note 48, at 460, 461.
126. Deed of Apr. 3, 1786 (recorded Apr. 3, 1786), in 42 NHLR, *supra* note 48, at 426, 426.
127. Deed of Sept. 17, 1765, in 27 NHLR, *supra* note 48, at 387, 387.
128. Rose, *supra* note 123, at 723.
129. See the deeds discussed *supra* note 124. Given the benefits conferred on these landowners by new roads, the prevalence of compensation is striking. The townsmen may have compensated these landowners to formalize their control over them as public pathways, both satiating landowners and possibly making it more difficult for a subsequent landowner to reclaim them. Contemporary records indicate that the townsmen were having a difficult time keeping their own underutilized roads free from private encroachment. In 1768, at a town meeting, the following vote was recorded: Whereas there are many highways taken in by Persons who have possessed them more than fifteen years and now Claim the Same by virtue [sic] of the Law of Possession which to the Town Seems altogether unreasonable that they should hold the Same It is therefore voted that the Selectmen remove Such persons off from Such highways and if they Cannot do it with a Course of Law, they are hereby directed to try a Case in the Law, and See whether highways Can be holden by Possession at the Cost of the Town. VOLUME III: 1684-1769, *supra* note 73, at 804.
130. VOLUME II: 1662-1684, *supra* note 55, at 309.
131. 2 New Haven Proprietors Records, *supra* note 81, at 13.
132. *Id.*
133. *Id.* at 14.
134. Deed of Dec. 6, 1750, in 15 NHLR, *supra* note 48, at 386, 386.
135. VOLUME III: 1684-1769, *supra* note 73, at 748. The “Half Mile” refers to an area near Branford. See *id.* at 748-49.
136. *Id.* Although the committee was supposed to come from neighboring towns, see *supra* notes 87-88 and accompanying text, this practice does not seem to have been followed consistently.
137. *Id.* at 749.
138. Deed of Apr. 12, 1760, in 28 NHLR, *supra* note 48, at 461, 461 (deed from Moses Thompson).
139. Although this hearing procedure between the townsmen and the petitioner was not established by law prior to 1702, High-ways, *supra* note 58, at 49-50, it was part of the process by the middle of the eighteenth century. An Act for Providing, Altering, Regulating and Mending High ways, *supra* note 68, at 87.
140. VOLUME III: 1684-1769, *supra* note 73, at 789.
141. *Id.*
142. *Id.* at 790.
143. Deed of Jan. 7, 1771, in 30 NHLR, *supra* note 48, at 500, 500 (deed of Sam Sarket); Deed of Jun. 26, 1771, in 40 NHLR, *supra* note 48, at 526, 526 (deed of Caleb Hitchcock).
144. If roads were to be planned purely by private initiative without the government as intermediary, there would probably be difficulties in financing, coordination, and initiation (for example, a landowner might not have any incentive to open a road if he assumes his neighbor will assume the costs and difficulties of doing so). See Robert C. Ellickson, *Property in Land*, 102 YALE L.J. 1315, 1385 (1993). Moreover, the government could prevent landowners from opening unnecessary, duplicative streets, or opening streets solely for their private gain.
145. An Act for Enabling the Proprietors, *supra* note 96, at 346.
146. An example is the case of Alvan Bradley, who gave up a strip fifty rods long and four rods wide along the south side of his holding in exchange for an equally-sized parcel that had formerly been a highway through his land. Deed of Oct. 30, 1765, in 27 NHLR, *supra* note 48, at 328, 328.
147. See, e.g., VOLUME III: 1684-1769, *supra* note 73, at 722 (petition of John Thomas); *id.* at 765 (petition of Ezra Dodge); 2 New Haven Proprietors Records, *supra* note 81, at 1 (petition of Andrew Goodyear); *id.* at 7 (petition of Ebenezer Toler).
148. See 2 New Haven Proprietors Records, *supra* note 81, at 1; Deed of Jan. 14, 1751, in 15 NHLR, *supra* note 48, at 422, 422 [hereinafter *Basset Deed*].
149. 2 New Haven Proprietors Records, *supra* note 81, at 1.
150. *Basset Deed*, *supra* note 148, at 422.
151. New Haven Town Records, 1769-1807, at 2-3 (unpublished collection, on file at the New Haven Colony Historical Society).
152. *Petitions by Inhabitants of New Haven (Nos. 44-59)*, microformed on 2 Travel, 2d Series, Connecticut Archives (Conn. State Library).
153. *Petition of Gideon Todd (Nos. 46-47)*, microformed on 6 Travel, 2d Series, Connecticut Archives (Conn. State Library) (seeking recovery of debt against town of New Haven for thirty-six pounds, which they are unable to pay); *Dayton v. New Haven*, 8 New Haven Co. Court Rec. 558 (1784) (unpublished collection, on file at Conn. State Library) (awarding Dayton thirty pounds against the town that he had been unable to secure from them).
154. Currency instability resulted from several factors. The circulation of specie was frequently in jeopardy because of policies from England and other restrictions. Additionally, the colonial economy occasionally faced deep recessions and inflation. See Claire Priest, *Currency Policies and Legal Development in Colonial New England*, 110 YALE L.J. 1303 (2001) (discussing currency crises of the eighteenth century, as well as the economic practices, such as bartering, that arose during times of currency scarcity).
155. NEW HAVEN GAZETTE, Nov. 11, 1784, at 5, microformed on Film An N413:1 (on file at Sterling Mem'l Library, Yale Univ.).
156. See *infra* Appendix (Compensation Patterns in New Highway Construction, 1750-1784).
157. See *id.* (containing numerical data and source for data).
158. *Id.* There are a few other outlying types of in-kind compensation—for example, taking the land for a highway, but awarding some kind of right to the original landowner. See *Deeds of Dec. 31, 1778* (recorded Jan. 1, 1779), in 37 NHLR, *supra* note 48, at 536, 536-40 (awarding

- landowners the right to the cleared lumber in exchange for the land). 159. See Edward E. Atwater, *The Town of New Haven Before the War of the Revolution*, in *HISTORY OF THE CITY OF NEW HAVEN*, supra note 78, at 25; id. at 33 [hereinafter *Stiles Map of 1775*]; “Plan of the city of New Haven taken in 1748” (on file at Beinecke Library, Yale Univ.) [hereinafter *Wadsworth Map of 1748*].
160. See VOLUME I: 1649-1662, supra note 53, at 164.
161. What is now Fleet Street, a road near Water Street, also appears to be the result of grant-and-reserve planning, rather than a road planned in advance of settlement. VOLUME II: 1662-1684, supra note 55, at 322 (describing necessity for highway near lands of Alsop and Trowbridge); *Wadsworth Map of 1748*, supra note 159 (showing Alsop and Trowbridge, residing near lower Fleet Street).
162. Union Street was established by two deeds, taking land from the lots of Hezekiah Sabin and Phillip Rexford, both of whom are depicted on the map of 1748. Sabin and Rexford were paid in “New York currency” for their strips of land. Deed of Dec. 3, 1750, in 15 NHLR, supra note 48, at 396, 396 (Sabin); Deed of Dec. 10, 1750, in 15 NHLR, supra note 48, at 395, 395 (Rexford). Fair Street was also the result of incremental planning, after a transaction with the heirs of a landowner whose parcel stood between State Street and Union Street. Deed of Sept. 5, 1771, in 34 NHLR, supra note 48, at 205, 205 (granting land of the late John Hall beginning “to begin on the East Side of the Town Street opposite to the Shop of Mr. Tho. Howell” and running east thirteen rods to another highway, presumably Union Street); Deed of Apr. 1, 1771, in 31 NHLR, supra note 48, at 465, 465 (establishing small highway to the harbor from lands of “John Rhode” south through lands Sam Mansfield and James Sherman); *Wadsworth Map of 1748*, supra note 159 (depicting lands of “Row,” Mansfield, and Sherman near modern Olive Street).
163. Plan of New Haven (on file at New Haven Colony Historical Soc’y) [hereinafter *Map of 1824*]. It should be noted that the location of Union Street is not quite as it was in the eighteenth century; Union Street was relocated in 1802. Deed of Nov. 30, 1802 (recorded Dec. 3, 1802), in 52 NHLR, supra note 48, at 181, 181. It was moved eight rods, or one hundred and thirty-two feet, to the east, and referred to as “New Union Street.” The move affected only two landowners, both of whom were compensated by “old” Union Street. In other words, they received an identically-sized strip at the west end of their lots in exchange for a strip on the east end, and they still had property fronting on Union Street. Id.
164. Vote of September 23, 1784, in *BYE LAWS OF THE CITY OF NEW HAVEN IN CONNECTICUT* 1 (1803).
165. Some street names were based purely on their geographical location: Grove Street was known as “North Street,” and York Street as “West Street.” Atwater, *The Town of New Haven*, supra note 104, at 32; DEXTER, supra note 81, at 52. Others were based on local features: Chapel, College, and Elm streets, named for the church, Yale, and New Haven’s first two trees, have retained the same names since at least 1775. Atwater, *The Town of New Haven*, supra note 104, at 32. Church Street was called “Market Street” because of its proximity to the green and the traditional center of commerce. George Street was called “Leather Lane,” id., probably because of the several tanneries located there. See *Stiles Map of 1775*, supra note 159. State Street was known as “Queen Street,” perhaps the only street without a readily identifiable local source for its name. Atwater, *The Town of New Haven*, supra note 104, at 32; DEXTER, supra note 81, at 52.
166. THOMAS POWNALL, *A TOPOGRAPHICAL DESCRIPTION OF THE DOMINIONS OF THE UNITED STATES OF AMERICA* 58 (Lois Mulkearn ed., 2d ed., Arno Press 1976), available at <https://archive.org/details/topographical-caldes00pown>.
167. DOUGLAS W. RAE, *CITY: URBANISM AND ITS END* 40 (2003).
168. 3 *THE LITERARY DIARY OF EZRA STILES, D.D., L.L.D.: PRESIDENT OF YALE COLLEGE* 17 (Franklin Bowditch Dexter ed., 1901) [hereinafter *DIARY OF EZRA STILES*].
169. The first three numbers attesting to the number of dwellings come from a count done by Ezra Stiles in 1782, compiled after consultation with a local eightyone year old man able to give him an account of the landscape in 1724. The final two numbers come from official counts done by local newspapers. The number for 1787, from *Connecticut Magazine*, is recorded in *Stiles’s diary*. The second, appearing in the *Connecticut Journal*, is reprinted in Edward Atwater’s book on the city. *DIARY OF EZRA STILES*, supra note 168, at 15-17, 288-89; Edward E. Atwater, *Annals of the City of New Haven from its Incorporation in 1784 to its Centennial in 1784*, in *HISTORY OF THE CITY OF NEW HAVEN*, supra note 78, at 80, 88-89.
170. This number, from the memory of President Stiles, is probably too low. I counted the number of structures appearing on the 1724, 1748, and 1775 maps, and came out with the following numbers of structures: in 1724, about 165 structures; in 1748, 390 structures; in 1775, about 450 structures. Although these are far from official numbers, they suggest that Stiles’s number is a bit under what it should be, perhaps by about 50-100. Thomas Trowbridge asserts that there were probably about 225 total buildings in this period, which would also be consistent with a higher number than that given by Stiles. See Trowbridge, supra note 107, at 201.
171. The map for the year 1724 was drawn by Joseph Brown and copied by Ezra Stiles in 1782. At that time, Brown was still living at the age of 81 and provided Stiles with the identities of the occupants to the best of his memory. Atwater, *The Town of New Haven*, supra note 104, at 24.
172. The map for the year 1748 was drawn by General James Wadsworth in red, blue, and black ink. It is probably from an actual survey; it records the names and occupations of the residents, and the different colors of ink appear to indicate the material composition of the structures (primarily whether they were wood or stone). See *Wadsworth Map of 1748*, supra note 159. The *Wadsworth map* was copied and engraved in 1806 by Thomas Kensett. I use the number of structures that appear on the original, although the number of structures which appear on the later engraving are consistent. See Edward E. Atwater, *The Town of New Haven Before the War of the Revolution*, in *HISTORY OF THE CITY OF NEW HAVEN*, supra note 78, at 31.
173. The 1775 map was drawn by Ezra Stiles, and appears in his diary in the year 1778. *DIARY OF EZRA STILES*, supra note 168, at 275; see *Stiles Map of 1775*, supra note 159.
174. For example, although I used the *Wadsworth map of 1748* to count numbers of structures, the number of dwellinghouses depicted on *Stiles’s map of the squares in 1742* is fairly consistent in terms of overall density. Both show less density in the upper three squares and increased activity in the lower squares, particularly Block 8. See *DIARY OF EZRA STILES*, supra note 168, at 17.
175. I have excluded the green; although the number of structures changed slightly as a few additional public buildings were added to the square, because no one was constructing homes or shops there, the need for a street through the green was not dependent on density.
176. The map of 1748 identifies many merchants and shopkeepers on these streets. See *Wadsworth Map of 1748*, supra note 159.
177. See *Stiles Map of 1775*, supra note 159.
178. *NEW HAVEN GAZETTE*, No. 23, Oct. 14, 1784, at 3, microformed on Film An N413:1 (on file at Sterling Mem’l Library, Yale Univ.) (“VOTED, That the Streets in the City of New-Haven be named as follows, viz. The Street from Capt. Samuel Munson’s corner to Thomas Howell, Esq’r’s shop—STATE STREET. The Street from Cooper’s corner to Capt. Robert Brown’s corner—CHURCH STREET. The Street from Dixwell’s corner to Dunbar’s corner—COLLEGE STREET. The Street from Tench’s corner to Andrews’s corner—YORK STREET. The Street from Capt. Samuel Munson’s corner to Tench’s corner—GROVE STREET. The Street from Bishop’s corner to Darling’s corner—ELM STREET. The Street from Rhodes’s corner to Mr. Isaac Doolittle’s corner—CHAPEL STREET. The Street from Andrews’s corner to Thomas Howell, Esq’r’s shop—GEORGE STREET. . . . The Street from Grove Street across the squares, a little west of Pierpont Edwards, Esq’r’s. thence over into George Street—ORANGE STREET. The Street across the middle squares in front of the State House and other public buildings—TEMPLE STREET. The Street between the dwelling-houses, where Mr. Timothy Jones, deceased dwelt, and where Mr. David Austin, jun. now lives up

- through the square to the green, and across the opposite square, near the new gaol—COURT STREET. The Street across the upper squares from Grove-Street to George Street which runs between the dwelling house and store of Henry Daggett, Esq.—HIGH STREET. The Street from Mr. Joseph Howell's, across the squares between the old and new houses of Mr. Joel Atwater—CROWN STREET. . .")179. Petition of the Inhabitants of the Town Plat of New Haven, (No. 1a), microformed on 10 Towns and Lands, 1st Series, Connecticut Archives (Conn. State Library).
180. *Id.* at 1b.
181. *Id.* at 1a.
182. *Id.*
183. See VOLUME I: 1649-1662, *supra* note 53, at 371 (noting subdivision of Samuel Eaton's former lot on the corner of Elm and York into two smaller lots fronting York Street); *id.* at 116 (noting subdivision of Owen Rowe's lot near the Green into three rectangular strips fronting Church Street).
184. VOLUME II: 1662-1684, *supra* note 55, at 425 (noting John Sackett's request to build a shop); *id.* at 384 (noting Jon Pryor's request for a shop by the "waterside"); *id.* at 400 (Bradly requests a shop "creekside"); *id.* at 440 (Mansfield's request for creekside land for a shop).
185. See Stiles Map of 1775, *supra* note 159.
186. DUKE DE LA ROCHEFOUCAULT LIANCOURT, TRAVELS THROUGH THE UNITED STATES OF NORTH AMERICA 521 (1799), available at <https://archive.org/details/travelsthroughn01larorich>.
187. REPS, *supra* note 1, at 163.
188. *Id.* at 165.
189. *Id.* at 170; see also Figure 1 (Scale Drawing of Block Sizes in Early Planned Cities).
190. REPS, *supra* note 1, at 154.
191. *Id.*
192. Meeting at City of New Haven, Connecticut (No. 6), microformed on 10 Towns and Lands, 1st Series, Connecticut Archives (on file at Conn. State Library).
193. *Id.*
194. An Act in Alteration of an Act Entitled An Act for Incorporating a Part of the Town of New Haven (No. 7a-7b), microformed on 10 Towns and Lands, *supra* note 192.
195. *Id.*
196. *Id.*
197. *Id.*
198. Although I refer to these as deeds, and they are recorded as such in the New Haven Land Records, these documents serve as records of more than simply contractual transactions. In cases where roads were contested, they describe the bounds of the parcel to be taken, but also identify the parties involved, whether there was a hearing and if the parties were represented by attorneys or agents, and any compensation granted. It also identifies the members of the committee appointed to assess damages, their verdicts on whether damages were awarded, and, if damages were appropriate, how much was ordered paid.
199. Deed of Sept. 22, 1784 (recorded June 5, 1787), in 43 NHLR, *supra* note 48, at 9, 10 [hereinafter Orange Street Deed].
200. The deed was not signed until 1785. It was not recorded until 1787. Orange Street Deed, *supra* note 199, at 10.
201. Connecticut Highway Law, 1773, *supra* note 88, at 381.
202. This is less explicit in the Orange Street Deed than it is in the deed for High Street. See Deed of Aug. 4, 1784 (recorded June 5, 1787), in 43 NHLR, *supra* note 48, at 10, 10 [hereinafter High Street Deed].
203. I cautiously advance an unsupported hypothesis that the New Haven government may have been currency poor and deeply in debt after the war and a surge of infrastructural projects, requiring them to resort to an extreme form of eminent domain. When they could not pay in ordinary circumstances, the selectmen seem to have used highway land to purchase new highway land. But most of the highway land at their disposal was in distant locations, and thus worth little to many of the occupants in the Nine Squares who may have been merchants rather than farmers. The city government simply may not have been able to afford to pay monetary damages to the affected landholders.
204. See Atwater, *Annals of the City of New Haven*, *supra* note 169, at 83.
205. There is one exception: a highway exchange involving James Hillhouse's mother where she gave the town an unidentifiable, minor street on her land near modern Grove Street. Deed of July 8, 1785 (recorded July 11, 1785), in 42 NHLR, *supra* note 48, at 449, 449; see *infra* Subsection III.B.3.
206. See Stiles Map of 1775, *supra* note 159, at 33.
207. Vote of September 23, 1784, *supra* note 164, at 3.
208. Orange Street Deed, *supra* note 199, at 9-10.
209. Deed of Sept. 22, 1784 (recorded July 10, 1787), in 43 NHLR, *supra* note 48, at 12, 12-13 [hereinafter Temple Street Deed].
210. See *id.*; Deed of May 8, 1816, in 64 NHLR, *supra* note 48, at 255, 255 [hereinafter Wall Street Deed].
211. Vote of September 23, 1784, *supra* note 164, at 1.
212. See Stiles Map of 1775, *supra* note 159.
213. *Id.*
214. *Id.*
215. Wall Street Deed, *supra* note 210, at 255. After visiting New Haven in 1799, a French traveler stated that the average price for land in New Haven was between \$14 and \$18 an acre. DUKE DE LA ROCHEFOUCAULT LIANCOURT, *supra* note 186, at 523. It is unclear which part of New Haven the Duke was discussing. Land within the Nine Squares was probably more valuable than outlying land in New Haven, so the amount paid for Mix's land may be consistent with land values within the town plat.
216. Lynde Harrison, *The Bench and Bar of New Haven*, in *HISTORY OF THE CITY OF NEW HAVEN*, *supra* note 78, at 244.
217. See *id.* at 243; Charles Atwater, *Banks and Banking*, in *HISTORY OF THE CITY OF NEW HAVEN*, *supra* note 78, at 323, 324.
218. Elizur Goodrich was a Justice of the Peace in the late eighteenth century, as well as a councilman and alderman. *Id.* at 324; Charles H. Levermore, *Municipal History: 2. The City Government*, in *HISTORY OF THE CITY OF NEW HAVEN*, *supra* note 78, at 446, 453. Lynde is listed as the individual (along with architect Ithiel Towne) who transacted with the estate conservator in the second Wall Street deed. Wall Street Deed, *supra* note 215, at 59.
219. Deed of Apr. 17, 1817 (recorded Apr. 17, 1817), in 64 NHLR, *supra* note 48, at 256, 256; Deed of Aug. 4, 1816 (recorded Apr. 17, 1817), in 64 NHLR, *supra* note 48, at 257, 257.
220. *Id.* at 346.
221. High Street Deed, *supra* note 202, at 10.
222. *Id.*
223. *Id.* at 10-11 (emphasis added).
224. Deed of Sept. 4, 1784 (recorded Sept. 6, 1784), in 40 NHLR, *supra* note 48, at 448, 448 [hereinafter Sherman Deed].
225. Deed of Aug. 16, 1784 (recorded Sept. 6, 1784), in 40 NHLR, *supra* note 48, at 449, 449 [hereinafter Lucas Deed].
226. See LEWIS HENRY BOUTELL, *THE LIFE OF ROGER SHERMAN* 44 (1896), available at <http://books.google.com> (search title).
227. S.W. Chapel St., in *THE DANA COLLECTION* (on file at New Haven Colony Historical Society).
228. James Abraham Hillhouse married Mary Lucas, who outlived him by almost fifty years. See Edward E. Atwater, *Cemeteries*, in *HISTORY OF THE CITY OF NEW HAVEN*, *supra* note 78, at 684, 685. 229. Sherman Deed, *supra* note 224, at 448.
230. Lucas Deed, *supra* note 225, at 449.
231. See JEDIDIAH MORSE, *AN ABRIDGMENT OF THE AMERICAN GAZETTEER* 245 (Boston, 1798). Some of the streets that were opened at one time have since closed or have been purchased by private owners. See Danny

- Serna, Briefly: Wall and High Streets to Remain Closed to Traffic, *YALE DAILY NEWS*, Mar. 21, 2011, <http://yaledailynews.com/blog/2011/03/21/briefly-wall-and-high-streets-to-remain-closed-to-traffic/>.
232. REV. LEONARD BACON, SKETCH OF THE LIFE AND PUBLIC SERVICES OF HON. JAMES HILLHOUSE OF NEW HAVEN 37-38 (1860), available at <http://books.google.com> (searchtitle).
233. Cf. *In re Furman Street*, 17 Wend. 649, 667 (N.Y. Sup. Ct. 1836) (disallowing damages for buildings erected after a map of new streets had been published).
234. Harold Demsetz, *Toward a Theory of Property Rights*, 57 *AM. ECON. REV.* 347, 350 (1967).
235. The most important exception is probably the southernmost block of Orange Street, which was divided by private initiative in part, but a section of which seems to have been divided later than the northernmost and center blocks. See *infra* Section IV.B.
236. See *supra* notes 232-33 & accompanying text.
237. See Map of 1824, *supra* note 163.
238. See *id.*
239. A pessimistic view of some of the townsmen's actions in carrying out comprehensive plans might yield evidence of just as much self-interested behavior. We know that at least one councilman averted the seizure of his own property for a new street, at least for a while. See Temple Street Deed, *supra* note 209 (Jeremiah Atwater).
240. Ellickson, *supra* note 144, at 1385.
241. *Id.*
242. Cf. Gary D. Libecap & Dean Lueck, *The Demarcation of Land and the Role of Coordinating Institutions* (Int'l Centre for Econ. Research, Working Paper No. 14/ 2009, 2009), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1436986 (discussing the advantages of a "rectangular system" of systematic, regular property demarcation, including straight roads, because of the coordination benefits among agents which reduce the adjustment and transaction costs which may come in the future). I believe that the role of the government in the petition process was sufficient to reap these network benefits. 243. See, e.g., LYNCH, *supra* note 38, at 16-25.
247. See REPS, *supra* note 1, at 142.
248. See Ellickson, *supra* note 144, at 1321, 1331. Downtown New Haven seems to have been close-knit both in 1640 and 1784, even though the population had grown. In 1640, the ties that bound the population were religious and social. In 1784, they were familial and commercial. See, e.g., *supra* notes 226-227 & accompanying text.
249. HENDRIK HARTOG, *PUBLIC PROPERTY AND PRIVATE POWER: THE CORPORATION OF THE CITY OF NEW YORK IN AMERICAN LAW, 1730-1870*, at 174 (1983).
250. Although I have cited New York as an example of successful comprehensive planning, the history of some of Philadelphia's town plan is similarly positive. See Olmsted, *supra* note 246, at 172-73.
251. HARTOG, *supra* note 249, at 164. See also *id.* at 163-64 ("Unlike most city planners, [the commissioners] did not seek to impose a particular, idealized way of life on the community through the manipulation of space. They justified the map as an expression of ongoing processes in the city. Imposition of the map would change nothing because it simply reflected dominant social forces.")
252. *Id.* at 165. It is intriguing that the planners initially planned to keep some privately generated roads in their plan; judging from the implementation of the plan, this did not happen. Hartog has no explanation for why they did not do so, considering they had described incorporating privately-generated roads as "a favourite object with the Commissioners" in their own plan. *Id.* at 161.
253. *Id.* at 164-65.
254. See *id.*
255. See REPS, *supra* note 1, at 294-99 (describing the history of New York's plan and criticizing it); Frederick Law Olmsted and J. James R. Croes, Preliminary Report of the Landscape Architect and the Civil Topographical Engineer, upon the Laying Out of the Twenty-third and Twenty-fourth Wards, in *LANDSCAPE INTO CITYSCAPE: FREDERICK LAW OLMSTED'S PLANS FOR A GREATER NEW YORK CITY* 352 (Albert Fein, ed., 1967).
256. See, e.g., REPS, *supra* note 1, at 314 (discussing the lack of logic in implementing a grid plan in San Francisco).
257. See *supra* note 250.
258. REPS, *supra* note 1, at 163.
259. This was a significant concern of the planner, William Penn. His instructions for situating the colony, sent along with the original settlers, said as follows: [L]et the rivers and creeks be sounded on my side of Delaware River, . . . where most ships may best ride, of deepest draught of water, if possible to load or unload at the bank or key side, without boating or lightening of it. It would do well if the river coming into that creek be navigable, at least for boats *Id.* at 160 (quoting Instructions Given by me, William Penn . . . to . . . my Commissioners for the Settling of the . . . Colony . . . , in SAMUEL HAZARD, *ANNALS OF PENNSYLVANIA* 527-30 (1850)).
260. *Id.* at 162.
261. See *supra* Figure 1 (Scale Drawing of Block Sizes in Early Planned Cities).
262. See REPS, *supra* note 1, at 167-72 (describing the subdivision).
263. *Id.* at 69; *id.* at 169 (quoting John Reed, Explanation, in 3 *PENNSYLVANIA ARCHIVES* 295 (3d. Ser. 1894)).
264. Charles E. Lindblom, *The Science of "Muddling Through,"* in *READINGS IN PLANNING THEORY* 288, 299 (Scott Campbell & Susan S. Fainstein, eds. 2003) (using the language of "branch" decision-making to describe incremental policymaking more broadly).
265. E.g., KENNEDY, *supra* note 26, at 27-30 (describing the revision of Boston's plan by the creation of Franklin Street as part of the Tontine Crescent project).
266. Deed of Mar. 18, 1805 (recorded Mar. 15, 1805), in 54 *NHLR*, *supra* note 48, at 201, 201.
267. See Mark J. Roe, *Chaos and Evolution in Law and Economics*, 109 *HARV. L. REV.* 641, 648-50 (1996).
268. See Map of 1824, *supra* note 163.
269. Represents all deeds for highway land to the Proprietors, Selectmen, or Town of New Haven between 1750 and 1784, not including the Nine Squares conveyances. 15-41 *NHLR*, *supra* note 48.

III. City and New Work

Jane Jacobs, Credentials, Education, and Economic Growth

Stuart Andreason

ABSTRACT

Jane Jacobs was a skeptic of credentialization but a major proponent of education. Through her choices, Jacobs showed that degrees did not define her knowledge—she never completed college and turned down honorary degrees from over thirty institutions (Dreier 2006). Yet, knowledge and skill were incredibly important to her. Knowledge and human capital are threads throughout her work—as drivers of new work and local economic growth.

Governments have similarly taken up the call to improve skills in their communities, identifying talent as the key factor in business location (Brown 2015). Many use educational attainment as proxy for skill levels, but this likely does not comprehensively represent the skills needed in business. For example, throughout its history, Boston’s workforce has had skill advantages relative to other communities, but historically these have been in noncredentialed technical skills; it has recently transitioned into more traditionally measured educational attainment (Glaeser 2005).

Many communities have worked to develop technical credentials to represent the skills in their communities. In *Dark Age Ahead*, Jacobs shared her concern about an overemphasis on credentialization at the expense of true education. She argued that education for the sake of credentialization leads to skill development that meets short-term needs, not skill development that drives long-term employability, innovation, and economic growth. Her concerns were prescient; today the Lumina Foundation has identified 113 efforts to improve credentialization (Lumina Foundation 2015). This essay explores the balance cities must strike between skill development and credentialization from Jacobs’s perspective on human capital and local economic growth.

1. INTRODUCTION

Human capital has long been understood to be a driver of economic development—at the local and national level (Becker 1994; Florida 2002; Glaeser 2005; Romer 1986, 1990; Warsh 2006). But, until recently, human capital and skill development were not a significant focus of local economic development efforts—instead, much of the focus was on more traditional factors of production like land, energy, and other natural resources (Eisinger 1988). Historically, the primary focus on labor and human capital in local economic development was on its comparative costs—often communities would pitch to companies and investors the relatively inexpensive labor that they could offer to industry (Cobb 1982). Trends in the demand for labor began to shift roughly twenty years ago. Scholars of local economic development started to place greater emphasis on skill, talent, and creativity in local economic development practice (Clarke and Gaile 1992, 1998). Slowly, labor in local economic development was reframed from a cost-based accounting item to one of human capital (Markusen 2008;

Mathur 1999). Today, economic development practice has a significant focus on improving, measuring, and conveying to firms the skills in the workforce (Brown 2015; Brown and Parkins 2014). The importance of skills in economic development is increasingly agreed upon, but the importance of formal education and attendant credentials to capture and signify this human capital remains an open question.

Jane Jacobs was ahead of the curve in linking skills with economic development. In the 1960s, Jacobs wrote about the importance of skills and human capital in developing new work, new employment, and ultimately economic growth. In *The Economy of Cities*, Jacobs explored the processes by which “explosive growth” and new work are formed, and specialized skills play the central role in Jacobs’s development process. Largely, economic development for Jacobs was driven by individual skill and talent that led to new discovery and translated to new markets and production. Jacobs described the phenomenon through examples of individual actors that fit her thesis.

One of the heroines in Jacobs’s *The Economy of Cities* was Ida Rosenthal, the inventor of the woman’s brassiere. As Jacobs describes, Rosenthal was an immigrant to America and an independent seamstress who through day-to-day dressmaking and sewing developed a new product, the bra. As the product became incredibly popular, Rosenthal began to hire additional staff to help her produce and sell. She built a company around the product and eventually employed over 200 different workers in the production and sales of women’s undergarments. It was through this type of creativity and specialized skill development that Jacobs saw innovation occur. In her description, innovation was more organic, iterative, and layered than some deliberate invention process, and it came from people of all backgrounds and skill levels. Rosenthal did not hold traditional educational credentials, nor did Jacobs.

2. JANE JACOBS’S HISTORY WITH EDUCATIONAL INSTITUTIONS

Jane Jacobs’s personal educational history is well-documented. She attended, but did not graduate from, Columbia University and was enrolled in its general studies program. While at Columbia, she studied a wide range of topics, including the history of the writing and negotiations that developed the U.S. Constitution. Under her maiden name, Jane Butzner, she published *Constitutional Chaff: Rejected Suggestions of the Constitutional Convention of 1787*. The book explored the history of ideas that were ultimately not included in the Constitution, primarily compiled from historic notes from the founding fathers (Laurence 2011). Her interests were far reaching; she came to focus on economics and urban life because of her affinity for neighborhoods like Greenwich Village, where she lived. Jacobs found a job at the magazine *Iron Age* after her second year at Columbia, and her journalism career moved on from there. Her relationship with education was shaped early on. In an interview, she expressed frustration about the institutional guidelines that were placed on her education. She said:

For the first time I liked school and for the first time I made good marks. This was almost my undoing because after I had garnered, statistically, a certain number of credits I became the property of Barnard College at Columbia, and once I was the property of Barnard I had to take, it seemed, what Barnard wanted me to take, not what I wanted to learn. Fortunately my high-school marks had been so bad that Barnard decided I could not belong to it and I was therefore allowed to continue getting an education (Allen 1997).

As such, she held an arm's length relationship with educational institutions for much of her life. She was offered over thirty honorary degrees but turned them all down (Dreier 2006). In 1996, she did accept the Thomas Jefferson Medal in Architecture, an award given by the Thomas Jefferson Foundation and the University of Virginia School of Architecture. While one of the highest honors given by the University of Virginia, it is not an honorary degree, nor does the institution confer honorary degrees—things that were likely important to Jacobs.

Jacobs was an example of the difference between credentials and skills—she held none of the traditional credentials that are expected of writers and public intellectuals of her stature, such as a college degree. Yet through her hard work, she was able to do work relatively equivalent to her peers who had followed more traditional paths to writing. Given her path, her opinions and suggestions were often not seen as serious or rigorous by many of her contemporaries. Lewis Mumford described Jacobs's work as “Mother Jacobs' Home Remedies” (Mumford 1962). Despite the marginalization of Jacobs's work at the time, she never pursued ways to build credentials around her education and skill level, and she showed concern about this becoming a broad scale effort of educational institutions.

3. GROWTH IN CREDENTIALING AND ACCESS TO THE LABOR MARKET

Recently, the credentialing of workers along the entire educational and skill spectrum has increased significantly. Many professions have developed new certificates and credentials in order to better capture the skills necessary to complete the work that is required and in demand. ACT, the testing company, administers the National Career Readiness Certificate—largely focused on learners entering the workforce rather than postsecondary training. Between 2006 and 2014, over 2.3 million of these certificates were issued (ACT 2014). New credentials focused on first-time job seekers are similarly available through industry-specific organizations. The National Retail Federation offers a Retail Industry Fundamentals credential for entry-level workers. Fields such as health care have seen significant upskilling—employers are expecting higher levels of education in the workforce. Prominently, health care employers increasingly expect nurses to hold a four-year college degree rather than an associate's degree (Wardrip, Fee, Nelson, and Andreason 2015).

Broadly, credentials include not only traditional educational degrees—associate's degrees, bachelor's degrees, and professional and doctorate degrees—but also occupational licenses, certifications, and postsecondary

certificates (as distinct from a degree). Recent estimates suggest that 27 percent of the American workforce holds one of these nondegree credentials (Cronen, McQuiggan, and Isenberg 2017). Beyond these, there are increasingly other nontraditional credentials such as online badges and certificates associated with courses, training, or skill demonstrations or tests. The growth in all of these credential options has been staggering. In the last thirty years, the number of nondegree certificates awarded by postsecondary institutions and other providers increased 800 percent; by one estimate, today there are over 4,000 different nondegree credentials available with less than 10 percent accredited or reviewed by a third party (Lumina Foundation, 2015).

The focus on credentialing and skill development may be driven by the increasing challenges in economic mobility and opportunity—on average, higher skilled workers have greater opportunities to advance and build wealth (Carnevale 2011; Carnevale, Smith, and Strohl 2010). Social service organizations and workforce development organizations may hope to drive the benefits and signals associated with traditional degrees to mid- and low-skill workers. Additionally, credentials help to capture and measure the skill content in a given community—an important imperative of economic development activity today. Economic development organizations work to measure and market the quality of the labor and human capital stocks in a community (Brown 2015; Brown and Parkins 2014).

The significant growth in credentialing for occupations provides opportunities for workers, but also new challenges and complexities in the labor market. Proponents of credentialing, including many of the organizations that develop and administer credential tests, note that developing standards for occupations and jobs that once had none could potentially make those positions more prominent and understandable to workers who may have previously had trouble accessing or understanding the skill requirements for the position. Others have been more cautious about the role that credentials may play in the labor market, arguing that new credentials could create new barriers for work that previously had not existed. For example, as positions that typically included significant on the job training or shorter postsecondary educational programs increase educational expectations, or upskill, workers with limited time and money to invest in their education may not be able to complete necessary training to access work (Wardrip, Andreason, and de Zeeuw 2017). Additionally, many credentials, especially licenses, are developed locally or at the state level so, absent interjurisdictional transportability, this could create challenges for the geographic mobility of workers (Hershbein, Boddy, and Kearney 2015).

In addition to the significant growth of nondegree credentials, traditional educational credentials have expanded significantly since the middle of the twentieth century. While the United States may have a lower proportion of adults holding college degrees than some other developed nations, such as Canada, Norway, and South Korea, in terms of sheer numbers, the United States has more workers with college degrees than these peers. The lower proportion is largely driven by greater population growth and immigration

in the United States (Andreason 2014). Credentialing—through traditional college-based credentials or new and different varieties that address low-to-semi high-skilled positions—has become an important aspect of the American training system and labor market and a key way that workers invest in their own competitiveness in the labor market.

Late in Jacobs’s life, she entered the education and credentialing debate. Jacobs was concerned about the education industry that had built itself around providing access to well-paying jobs. In *Dark Age Ahead*, Jacobs wrote about the differences between education and credentialing. She was concerned that traditional educational institutions, particularly colleges, had transitioned into an industry that helped to provide access to quality jobs in the labor market. The reframing of the role of these institutions from ones that built and conveyed knowledge to ones that helped individuals receive access to good jobs was deeply troubling for her. Her arguments on how new work is created, through organic development of new skills and ideas, as well as the role that educational institutions can play in developing and fostering that type of innovation are instructive to the current credentialing movement.

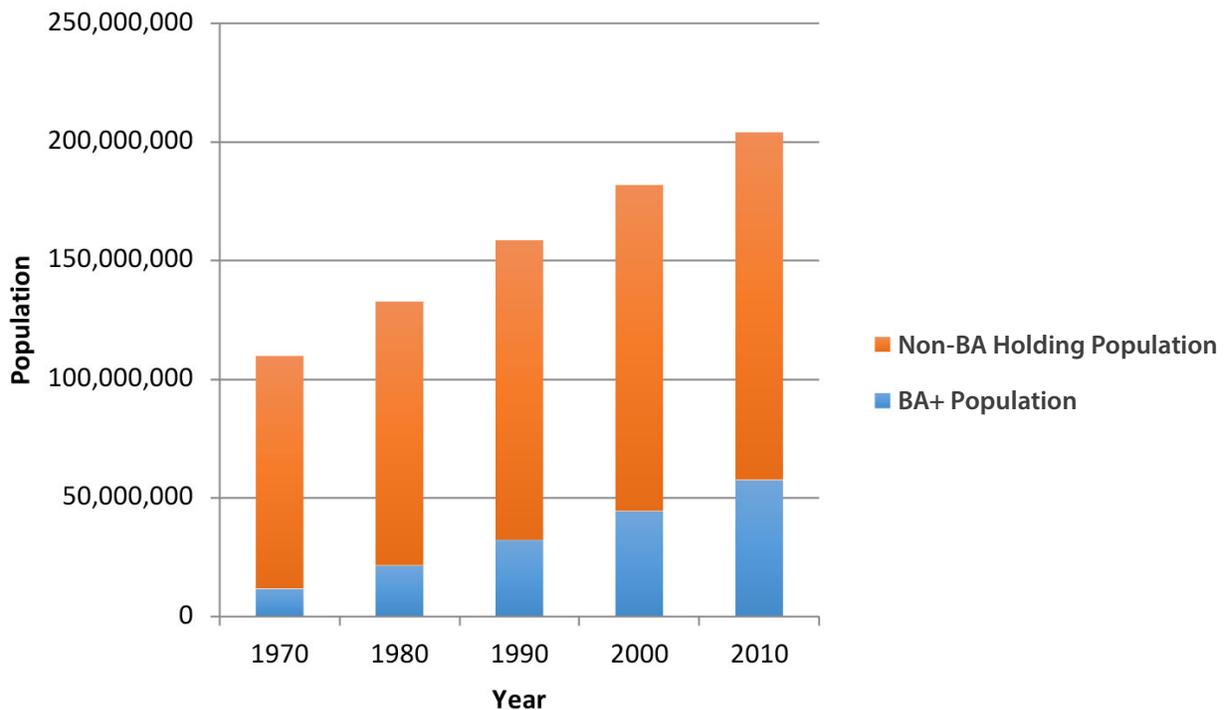
4. CREDENTIALS AND ACCESS TO WORK

Credentials play an important role in determining the access that workers have to different vocations. One of the most common is a degree from

a secondary school or a postsecondary institution such as a college or university, but these are far from the only credentials that play a role in creating opportunity in the labor market. Professional licenses are also credentials, and professions ranging from medical doctors to barbers and cosmeticians are licensed, typically by a state governing board. Since many licenses are determined by the state, workers who relocate from one state to another may find that their credential no longer provides them access to the work they had done and potentially hope to do in a new jurisdiction. Many workers who emigrate from one country to another face similar challenges—credentials that offered them access to certain types of work are not accepted, as readily understood, or do not provide access to the same work (Li 2001). A common example is medical doctors who immigrate to the United States and cannot find equal work as their training and credentials are not recognized by American licensing boards or employers.

The important distinction between licenses and nonlicense credentials is that licenses are typically legally required in order to perform a profession or vocation. Nonlicense credentials may provide a clear path toward a certain profession or vocation but are not required to perform the work. Licensure has increased significantly over the last half of the twentieth century and beginning of the twenty-first. In 1950, less than 5 percent of occupations required a license; in 2015, over 30 percent of workers in America held jobs that required a license (Hershbein et al. 2015). Depending

Figure 1: Proportion of population age 25 or older holding a bachelor’s degree or higher compared with the non-bachelor’s degree holding



Source: U.S. Decennial Census and American Community Survey Data, downloaded from Social Explorer. Calculations by the author. In 1970 and 1980 Censuses, the equivalent of holding a bachelor’s degree is “completing four years of postsecondary education.” Actual degree attainment, instead of years of schooling completed, was collected starting with the 1990 Census.

on the state, some of the licensed professions that may not truly require a license for safety and health reasons include ballroom dance instructors, makeup artists, and locksmiths, among many others. From medical doctors to cosmetologists, licensure touches all occupational skill levels. Originally developed to protect the health and safety of consumers, licenses now affect a broad range of workers.

In some cases, the licensing standards for many professions have been set to protect workers already engaged in the work and to limit competition from additional entrants into a market. In *North Carolina Board of Dental Examiners v. Federal Trade Commission*, the Supreme Court found that if a state licensing board has a majority of members who are active in the occupation in which they are licensing workers, then the board is not protected by antitrust immunity (*North Carolina Board of Dental Examiners v. Federal Trade Commission* 2015). In that case, the Board of Dental Examiners had created licensing standards that limited opportunities for workers and entrepreneurs to perform cosmetic cleaning and teeth whitening outside of dental offices under the supervision of a doctor of dental medicine—greater protection than necessary to protect the health and safety of consumers purchasing cleaning and whitening services.

While increasing licensing standards sometimes decreases access to occupations, sometimes these changes are driven by demand in the labor market and from employers. Registered nurses are a prime example of this. While state standards for licensing nurses has not changed significantly recently, employers increasingly expect that nurses will earn a bachelor's of nursing science, a four-year degree that is higher than required by law and arguably a greater skill than necessary for the job. This is sometimes referred to as “upskilling” or “upcredentialing.” Recent analysis of job ads for middle-skill workers suggests that employers are increasingly expecting higher levels of credentialing for middle-skill positions like registered nurses (Wardrip et al. 2017, 2015).

While it is difficult to understand whether increases in employer preference for skills and credentials are related to changes in the function of the work or driven by other factors, increasing expectations of skills and credentials are evident in the current labor market as well as in history. Vocational education developed in Chicago late in the nineteenth century in order to provide African Americans with access to clerical positions; this ultimately increased the number of workers with credentials for clerical positions in the labor market enough that workers were expected to come prepared with hard skills and credentials. Previously, these jobs were filled by finding dependable workers who were trained on the job through quasi-apprenticeship programs (Neckerman 2010). While the credentials helped expand access to previously excluded populations, the production of new credentials shifted much of the training responsibility away from the employer (via on the job training and education) to the employee (via participation in training programs, often necessitating financial commitments and time out of the labor market) (Andreason 2016; Cottom 2017; McCarthy 2014; Osterman 2007; Prince 2015).

As nonlicensed professions increasingly develop credentials to help create access to jobs, employers often react by expecting workers to obtain the training and credentials prior to interviewing or qualifying for the job. As credentials expand, this may touch many jobs that previously required little to no preparatory investment or education.

The “upskilling” process is one that often happens outside of state licensing boards or through public policy. In the case of contemporary upskilling of registered nurses and other middle-skill occupations, credentialing standards increased due to a combination of the educational and training system supplying additional skills to expand access to work and employers coming to expect the higher standard of training. Similarly, in the historical case of clerical work in Chicago, the educational system targeted a demographic group for additional skills so they could access better jobs and employers grew to expect these changes from all of their workers, or at least their new employees.

Programs that are developed to build credentials for workers from disadvantaged backgrounds can create challenges in a labor market. Programs need to be valid and accepted by employers—often achieved by skewing these programs toward the most rigorous standards for the work. New credentials can slowly become the standard for an entire occupation locally, even if that standard is not necessary to adequately perform the work. Similarly, programs that undershoot the rigor necessary to get workers into the occupation will find that employers do not value or recognize the credential and educational program. Correctly “matching” training and education with work content is a challenge and is even more difficult when matching a new or nontraditional credential with training for a previously noncredentialed or nonlicensed occupation. Yet, providing access and opportunity to new and different work through alternative means provides an opportunity for workers who were unable to complete training through more traditional pathways and investments.

Another important question about credentials for lower- and middle-skilled positions is what demand exists for these credentials. The expansion of credentials over the last several years ranges from digital badges and online certificates to new occupational certificates developed by industry associations and other groups. Finally, new academic programs have been developed at and delivered through traditional institutions to credential new occupations (Crawford and Sheets 2015). A significant number of institutions have developed programs that, in order to shorten time to completion, offer academic credit or credentials for prior learning (Prince 2015).

Current practice has seen significant expansion of credentials. As noted previously, greater numbers and proportions of workers hold traditional college-based credentials today than ever before in America. There has been significant expansion of licensing in the last sixty years as well (Hershbein et al. 2015). Additionally, numerous organizations, institutions, and companies have developed nonlicense credentials. A Lumina Foundation initiative,

“Connecting Credentials” is working with 120 different initiatives in a cross-sector collaboration to *improve* credentials. Many other actors have been involved in developing and offering new credentials as well. These include both nonprofit and for-profit institutions. Testing companies have developed new products, like the National Career Readiness Certificate, that help signal basic career readiness.

Credentials are a significant and growing way in which workers are signaling skills and investing in labor market security. Yet there are questions from job seekers about which credentials are valuable and worth pursuing and questions from industry about which credentials they should value and demand. A part of this challenge is related to existing questions about the *educational* value of these new signals in the labor market.

5. LEARNING VERSUS CREDENTIALING

Jacobs would likely have been concerned by changes in the labor market that favored the highest-skilled workers and by the increasing returns to educational credentials. Her studies of urban areas, cities, and economic growth are often richly written with characters like Ida Rosenthal, the seamstress who invented a quickly essential new product, or shopkeepers who maintained order on the streets of cities and communities. As these types of positions became devalued and higher-skill workers incited to go into other work, Jacobs’s concern would be around the development of new products that would lead to new work.

She was concerned that educational institutions had become complicit in these changes. In *Dark Age Ahead*, she focused on how universities shifted their focus in the decades after the civil unrest of the 1960s. She noted that during protests, students complained about a lack of rapport with professors and about being shut out of having personal relationships with holders of significant knowledge and wisdom. But one short decade later, Jacobs notes, “Students apparently take it for granted that credentialing is the primary business of intuitions of higher learning and that its cost is an unavoidable initiation fee into acceptable adulthood” (Jacobs 2005).

Seamstresses and shopkeepers were key participants in a healthy community for Jacobs—and much of being able to do this work was driven by learning by doing or taking entrepreneurial risks. Jacobs suggested that the value of education ought not to be related to the market value of the work that someone did after education. Her concerns over credentialing were primarily targeted toward traditional institutions that had shifted much of their educational models toward credentialing as well as the student populations who had focused on their education as a step toward success in the labor market.

This perspective is helpful in thinking about similar challenges that other authors note. How do new credentials appropriately capture the value and education involved in prior learning? Prince (2015) suggests that competency-based frameworks help link credentials with the skills they aim to capture—where students or workers demonstrate proficiency in a

skill, often through an assessment or test, to earn a credential. Jacobs would likely argue that doing the work on the job ought to be evidence enough. In an increasingly changing labor market, credentials may lose their relevancy or value as well; but as they are slowly adopted and expected by employers, credentials could create new barriers to entry into previously accessible entry-level work.

Jacobs would also likely question the role that new credentials play in developing new work or innovative new products that increase employment. There is certainly a relationship between the skill level in metropolitan areas and the number of new products, as measured by patent issuance (Florida, Mellander, and Stolarick 2008), but the process by which the relationship exists is uncertain—workers with high educational attainment may follow demand for work in places with innovation or they may drive the innovation themselves. In fact, this chicken and egg question has been a focus of local economic development research for some time (Andreason 2014, chapter 3; Partridge and Rickman 2003, 2008). Jacobs would argue that the actual knowledge and production of workers all along the spectrum would drive this change, in line with the new growth theory in economics (Cortright 2001; Krugman 1996; Romer 1986, 1990; Warsh 2006). But a distinction between development of the skill and signaling, or credentialing, of the skill is important. Developing these skills happened through building new knowledge through study and education—based on writings in *Dark Age Ahead*, credentials would likely matter less than the educational experience to Jacobs.

Proponents would suggest that credentials only help prepare the market for skills and knowledge in a complex labor market. Theoretically, they are correct—as long as credentials help improve information on the value that workers can bring to firms and industry, they help improve the information available in the labor market. Yet there is significant variation even in the value of some of the most common credentials, such as the college degree (Carnevale 2011; Carnevale et al. 2010). For example, many four-year degrees, including many in the liberal arts, carry less market value (in terms of pay after graduation) than others—to a point where many associate’s degrees in science, technology, engineering, and math pay more than many four-year liberal arts degrees over their lifetime. Yet four-year degrees are often treated similarly in policy discussions. As new credentials enter the market, there is often little understanding of or confusion about their value and importance (Crawford and Sheets 2015). The credentialing movement can help to better define and deliver information on credentials.

6. POTENTIAL CREDENTIALING AND EDUCATION POLICIES

One of the greatest concerns for the credentialing movement going forward is that its conceptual model holds true—credentials have to help better illustrate the skills workers have and then help remove barriers. Ideally, credentials provide alternative pathways to occupations that require specific skills, but they have long or costly educational programs that aren’t necessary for the work. Ideally, credentials help to improve information in

the labor market and eliminate barriers to work. Yet, credential inflation, upskilling, and upcredentialing are evident in employer preferences for positions that provide relatively high wages and had typically required less than a college degree. Similarly, it isn't clear that credentials remove other barriers to work, such as experience. Until some of these challenges are addressed through policies and practice, unevenness in the value of credentials will persist. In order to meet these challenges, credential policy could focus on several areas: information for students and employers, vetting demand, and aligning with work experiences.

Despite the vast growth in credentials, the market isn't well understood—by job seekers or by employers. Employers do not demand or value certain credentials because there is not information on the increased productivity or service of workers with credentials—better evaluations of the benefits (or lack thereof) of new credentials will be essential if employers are to be convinced. Job seekers are challenged in identifying where they would like to make investments in new credentials—the labor and educational value of credentials are often not clear. Efforts involved in *Connecting Credentials* have aimed to better track and capture the labor market benefits of credentials. This type of information would be hugely helpful, especially if presented in ways that are understandable to the job seekers. Information on wage and employment outcomes of others with the same credential, ideally from the same granting organization, would help workers understand the investment of time and resources. While this does not adequately capture Jacobs's differentiation between investments in access to the labor market and education, it would be an important step in indicating if the organizations helped to impart vocational or occupational skills and crafts.

Better understanding the demand for credentials is similarly important. Do firms need credentials in order to develop competitive advantage, maintain workplace safety, or increase productivity? The jury is still out on this question.

There is evidence from studies of particular sectors that suggest different dynamics related to the widespread adoption of credentials. Pressure from professional associations and pressure to improve institutional rankings have driven hospitals and major health systems to expect registered nurses to hold bachelor's degrees in nursing science (BSN)—a credential that is not required for occupational licensure or not necessary to perform the functions of the job (Fee 2017; Ross, Svajlenka, and Williams 2014; Wardrip et al. 2017, footnote 1). It is unclear what is driving this trend. It could be that nursing and health care are increasingly complex occupations that require greater education. Yet, it could also simply be how firms keep up with competitors and not due to the changing nature of work or productivity—it could instead be driven by hospital ranking guides, which track the percentage of the nursing workforce holding BSN degrees.

While a slightly different dynamic, firms that request higher levels of educational attainment are more likely to increase educational expectations relative to other peer firms as well (Hershbein and Kahn 2016). These may be firms that see their competitive advantage as having a higher level of skill and specialization than competitors, or it could be opportunistic. Hershbein and Kahn (2016) find that this upcredentialing happens during downturns and slack labor markets. Beyond signaling and evaluating potential hires, the studies of demand for credentials is often related to firm competitiveness—potentially for firm-level signaling.

While recent trends driving the growth of credentials are unclear, if firms need new credentials to execute business functions, then the credentials are likely important to develop, but they may not be the antidote to other drivers of disparities in the labor market. If, as in the case of Chicago typists in the 1800s, educational programs were developed to help address other issues in the labor market, like discrimination, credentials may be adopted just because a supply of them is created. This adoption of credentials creates new barriers to entry—including time, cost, and jurisdictional, or geographic, friction. This adoption may be out of occupational “guild” protection, as in the case of dental hygienists in North Carolina, or it may be a more altruistic process of slow upskilling as civic society, government, and industry work to find new pathways to work for fields that previously did not need credentials. Industry adoption of credentials alone is not evidence of their importance—a link to how they help solve problems with business functions is important. This link helps develop a better understanding of the educational value of the program behind the credential.

Aligning with work experiences might be an important middle step. Jacobs showed that building knowledge can happen in a number of different ways and in different venues. Ida Rosenthal experimented and developed new products. Jacobs herself was curious and studied a wide range of topics. She wrote about her experiences and her understanding of urban communities in some of her seminal works. While disparaged for using a different “pathway” to become a public intellectual and lacking traditional credentials, she clearly had an education that prepared her for that work. Similarly, finding ways to integrate credentialing with work experience likely will help to link education and skill. Jacobs might argue that with this link the credential isn't important in and of itself, but with such broad adoption and expansion of credentialing, they likely remain practically important signals in the labor market. Jacobs would agree that one of the important steps for the credentialing movement is ensuring that those credentials, and the experiences in earning credentials, impart new knowledge and skills—education. Without that, and without evidence that credentials provide that, they are new barriers and unavoidable costs to success in the labor market. When linked with education, credentials can be the opposite—new ways to access work and opportunities and to signal the potential of workers.

Endnotes

1 There is some evidence that the tightness of a labor market leads to adoption of new credentials or increased educational requirements. Metropolitan statistical areas (MSAs), a close approximation of local labor markets, hit particularly hard during the Great Recession, relative to other MSAs, showed greater levels of upskilling. The upskilling tends to stick even in recovery and is associated with capital investments by firms, potentially suggesting that downturns are periods where firms adjust to routine-biased technological change (Hershbein and Kahn 2016).

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Building Blocks of Economic Life

Richard C. Schragger

*In my book, *City Power: Urban Governance in a Global Age* (2016), I rely on Jane Jacobs's work to reorient our economic thinking away from the nation-state and toward the city. Thinking about the city as Jacobs did—as an organic process of growth and decline—helps us to understand the city as an economic concept.*

I start with the reemergence of the city as a driver of economic development. Observers of the city have always appreciated the city's central role in cultural, political, and economic life. But the city *qua* city has not conventionally been treated as a core economic concept. The nation-state has tended to be the dominant unit of economic analysis.

If there is a conventional wisdom, Jane Jacobs will challenge it. And in *Cities and the Wealth of Nations*, Jacobs does just that by attacking the economic primacy of the nation-state. She writes:

Nations are political and military entities, and so are blocs of nations. But it doesn't necessarily follow from this that they are also the basic, salient entities of economic life or that they are particularly useful for probing the mysteries of economic structure, the reasons for rise and decline of wealth. . . . Once we . . . try looking at the real economic world in its own right rather than as a dependent artifact of politics, we can't avoid seeing that most nations are composed of collections or grab bags of very different economies, rich regions and poor ones within the same nation. . . . We can't avoid seeing, too, that among all the various types of economies, cities are unique in their abilities to shape and reshape the economies of other settlements, including those far removed from them geographically.¹

Jacobs goes on to argue that the wealth of nations is actually generated by particular places inside nations—the “grab bags of very different economies.” And so, for Jacobs, management of the “potpourris we call national economies” is really the management of a collection of city economies, even if some are rising and some are falling.² Cities are the generators of new economic activity because, first, they contain producers who can build upon their existing skills, and second, city markets—for consumers or producers—are both diverse and concentrated. Moreover, cities influence far-flung non-city economies—changing the nature of rural areas, small towns, and villages—by their needs. Nation-states that are not working economically have cities that are not working economically.

There is an important debate within the urban economics literature about whether cities generate growth for a national economy or merely capture and concentrate it.³ The evidence is overwhelming that within nations, cities account for a disproportionate share of gross domestic product and

income. And also within nations, there is a strong correlation between city size and wealth. But the fact that there is a high rate of urbanization or a lot of big cities in a particular nation does not mean that nation will be wealthy. Urban economists continue to debate the role of cities in national and global economic development.⁴

Whether cities create or capture growth is in some ways the wrong question, however, for it assumes that the city preexists its own (and the nation's) economy. To hold this view is to assume that the city exists independently of the economic processes that produce it.

Whatever the merits of the debate, then, many urban economists have come to share the view that cities are at least a *necessary* (even if not sufficient) condition for economic growth. And many of Jacobs's insights about the linkages between economic growth and urbanization have been embraced. Indeed, over the last decade or so, we have witnessed what Edward Soja calls “the rediscovery of the generative power of cities.”⁵

Three sets of ideas have contributed to this renewed appreciation of the connections between cities and economies. First and foremost is the development and diffusion of sophisticated approaches to the geography of economic activity. The economics literature now recognizes the spatial quality of economic activity—the fact that the bulk of economic activity happens in particular places. Jacobs's insight that nations do not have one economy but many turns out to be prescient.

The central insight of economic geography is that “the world is not flat.”⁶ Maps of the density of economic activity show it concentrated in very specific places: in cities first; in regions within nations second; and in particular nations within the world third. Economic activity seems to exhibit a particular structure whereby development happens mostly in particular regions and not at all in others.⁷ The industrial belt of the United States and the Ruhr Valley in Germany are examples. Another example is the concentration of finance, accounting, and law firms in places like New York and London. That cities or regions exist at all is itself a reflection of the fact that economic activity happens in territorial clumps.

Economic geographers have argued for some time that there is a spatial regularity to economic processes.⁸ That regularity manifests itself in the distribution of economic activity in space—in the necessary fact that some places have more economic activity and some have less. Indeed, a person's location is *the* central determinant of economic opportunity, and it has become a primary focus for those who think about economic development. As the *2009 World Development Report* observes, urbanization and economic production tend to run in tandem. Economic production concentrates; it does not spread evenly across space. How geography influences economic opportunity is thus the central question for economic policymakers; formerly “mere undercurrents in policy,” “space and place” have now become a “major focus.”⁹

Second, much regional economic literature recognizes that “cross-border economic processes—flows of capital, labor, goods, raw materials, travelers” are now dominated by cities and regions.¹⁰ Those “global cities” that dominate the international financial markets—New York, London, Tokyo—are particularly relevant. But these cities are only the most obvious examples of how certain places have far-flung economic influence. The city has always exerted power over other economies—either in the immediate hinterlands of the city or further afield—through its demands for goods, its generative capacity, and its diverse and incessantly mobile population.

Theorists attribute the more recent rise of cities and regions to the globalization of the economy, the lifting of interstate trade restrictions, the rise of the transnational business corporation, and the emergence of high-technology regions.¹¹ There was a moment when globalization, the lowering of barriers to entry, and the decreasing costs of transportation and communication seemed to suggest the end of the city. What was the purpose of a city in an era of instant communication, when workers could work from anywhere and goods could be purchased and delivered anywhere? But cities have not disappeared, and many in fact are more robust than ever before. Productive enterprises have to be *somewhere*; they want to be in particular places, and they now have increased access to those places as national borders have become less salient. The change from nation-state-dominated trade flows to city-dominated trade flows is understood as a significant shift in the global economy. As barriers to trade between nations have fallen, cities’ interactions and economic influence have grown.

Third, and relatedly, many scholars have drawn a connection between cities and economic innovation. Much of this work emphasizes the benefits of physical proximity for the sharing of knowledge within and across industries, for providing large and diverse sources of labor, and for generating specialized industries. These are what economists call “economies of agglomeration.” Proximity or colocation is both a product of and a source for a set of effects that are said to foster innovation, increase productivity, and generate growth.

Agglomeration economies come in three basic flavors. The first is what firms do when they expand in their current location. This is the familiar traditional economies of scale, where expanding production at some given site lowers a firm’s unit costs and allows it to operate at greater efficiency. The industrial plant is an example.

A second form of agglomeration exists where there are benefits to businesses in one industry for locating in the same place. Colocation might be a benefit because shoppers want to minimize the costs of shopping trips and maximize the benefits of choice. The shopping mall is an example. Clustering of industries or businesses is also beneficial because it can encourage specialization. When firms cluster together, they can share inputs among themselves, which allows suppliers to tailor their products to a specific industry and provide better access to them. Los Angeles’s fashion district and New York’s publishing industry are examples.

Further, workers with industry-specific skills will be attracted to a place with lots of different firms operating in the same industry. When firms within an industry are clustered together, it benefits both the businesses and employees because search costs for jobs for both employees and employers are low and laid-off employees can quickly obtain employment at a similar firm.¹²

There also may be learning across a single industry when it is concentrated in one place. Economists, following classic work by Michael Porter and AnnaLee Saxenian in the 1990s, emphasize the role that business clusters play in stimulating innovation, as businesses benefit from the technological and creative spillover of other knowledgeable and productive persons within their community.¹³ Silicon Valley and its concentration of technology firms is the classic example of a single-industry agglomeration.

A third form of agglomeration exists when businesses from different industries gain from locating in the same place. Here we start to see how a full-fledged city—which is again both the product of and the source for these economic gains—takes shape. The gains to having many different kinds of business activities in the same place include the benefits to consumers and customers of having multiple retailers and suppliers in close proximity, the benefits to businesses of specialization, the benefits to employees and employers of deep labor pools, and the benefits that come when knowledge is shared across different businesses and activities.

The city is an “urban warehouse” that allows businesses to specialize in their production since they do not need to provide all required services to the area’s population.¹⁴ The proximity of firms to suppliers and customers also reduces shipping costs, which in turn encourages more trade and innovation among the city’s businesses and leads to the creation of new kinds of work. And by locating in an urban area, businesses can take advantage of public infrastructure like good highways and well-functioning public utilities.¹⁵

In the best case, these benefits are all enhanced by the knowledge and technological and creative sharing that occurs across industries, activities, and businesses in close proximity. These spillovers across different kinds of industries and businesses are sometimes referred to as “Jane Jacobs’s externalities,” for it was Jacobs who articulated the relationship between local diversity and economic innovation.

Indeed, as Jacobs saw intuitively, innovation is both what creates cities and what cities in turn *do*:

Cities are places where adding new work to older work proceeds vigorously. Indeed, any settlement where this happens becomes a city. Because of this process city economies are more complicated and diverse than the economies of villages, towns, and farms, as well as being larger.¹⁶

This process is one of invention—“Economic life develops by grace of innovating.” Thus, as Jacobs famously points out, Mrs. Ida Rosenthal, a custom seamstress, realizes her customers need better undergarments so that her dresses fit them better. After experimenting with brassieres on the side, she invents a new industry in 1920s New York: brassiere making. The new industry results from the coincidence of customers, existing technology, and the availability of new technology—all of which occurs in the city. Urban economies expand “by adding new kinds of work.”¹⁷

There have been efforts to test the connection between urbanization and cross-industry innovation. One important study appears to show a link between urban variety and higher employment growth, especially in cities with smaller businesses.¹⁸ Studies on the location of patent applications suggest that more invention is going on in cities or large metropolitan areas. And many theorists have noted a connection between cities and creative enterprises, driven by the interchange of ideas face to face. “As Jacobs rightly emphasized,” Robert Lucas writes, “much of economic life is creative . . . [w]hat can people be paying Manhattan or downtown Chicago rents for, if not for being near other people?”¹⁹

Whatever form that the agglomeration benefit takes in the city, it has been cited as the reason why city workers are more highly educated and enjoy higher incomes than those outside the city and why specialized industries are more readily found in urban rather than rural areas. Industrial expertise and specialization occur most readily within cities. Cities in turn trade with each other on that comparative advantage. A nation’s economy is thus the combined production and trade of a network of cities. Without intercity trade, there is very little economic production at all.

These agglomeration effects explain the salience of cities and other geographical agglomerations (like Silicon Valley) in a technological era that seems—at first glance—to have overcome the costs of transportation and the need for physical proximity. Indeed, as Mario Polèse observes, “[o]ne of the paradoxes of the IT revolution,” is that firms and individuals still place high value on proximity to big cities.²⁰ “The more the world shrinks, the more *place* matters. In a completely flat world with no barriers to trade or interaction, what matters is access to the right places with the right people.”²¹

Some economists have also hypothesized that agglomeration economies have a self-reinforcing, positive feedback quality. Larger markets lead to more customers; this makes the location more attractive to firms, which leads to more firms and more jobs; the market then grows larger, which leads to even higher profits as the cycle repeats. The city grows! Agglomeration economies explain why cities become more important, not less, when one considers the mechanisms for economic growth.

It thus should not be a surprise that urbanization is the salient fact of American demographic and political life.²² The twentieth century has witnessed monumental shifts in Americans’ work and living patterns, including the great migration into the industrial cities, a later movement

out of central cities into the suburbs, and the development of increasingly large and dense metropolitan areas.²³ In 1860, less than 20 percent of the population lived in urban areas; in 2000, close to 80 percent did.²⁴ The story of nineteenth and twentieth century economic development is the story of the industrial city and the rise of the greater metropolitan region.²⁵ In the last quarter-century, that has been followed by the repopulation of certain city cores. Urbanism—with its characteristic density, division of labor, and social interaction—is the norm now, not the exception.

Of course, even when North America was mostly rural and the continent’s economy was agriculturally based, cities were the ports of entry and the chief sites of interstate and international trade.²⁶ Cities have been trading centers from the beginning of civilization; this was no different in early America, and it is no different now. American cities developed along the coasts or at the mouths of rivers for maximum access to transatlantic trade.²⁷ Later, with the development of canals and the building of the railroads, trade moved into the center of the country.

For example, it was Chicago that drove the engine of Midwestern agricultural and industrial development in the mid-1800s. As William Cronon shows in *Nature’s Metropolis*—his now-iconic story of Chicago’s rise—the economies of scale that could be achieved in the city made it possible to produce and then to move resources—wheat, wood, cattle, pigs—out of the hinterlands. The city literally created “commodities” by generating the infrastructure needed to trade them in large quantities and, in so doing, unalterably shaped the rural and agricultural landscape.²⁸ Trade and capital flows moved between the great cities and between Chicago and the smaller cities of the Midwest. Resources and material moved into Chicago to be bundled; capital flowed back from the east.²⁹

The late nineteenth and early twentieth centuries saw the rise of the industrial cities. Migrants flowed into cities like Detroit, Pittsburgh, and Buffalo to provide labor for the expanding industrial economy. Cities grew at an increasing pace: between 1900 and 1920, Detroit grew from 285,704 to 993,078; New York from 3,437,202 to 5,620,048; San Francisco from 342,782 to 506,676; Chicago from 1,698,575 to 2,701,705; Buffalo grew 43.8 percent; and Pittsburgh grew 82.9 percent.³⁰ The great migration of African Americans began with World War I, when millions began moving out of the South and eventually into the large cities of the West, Midwest, and Northeast.³¹ Meanwhile, immigrants from Europe were pouring into American cities. Between 1900 and 1920, close to fifteen million immigrants entered the United States, many of whom settled in industrial cities.³²

The Great Depression and wartime economy accelerated the migration to the cities, though at a time when the urban industrial age was starting to decline. Industry and persons began to move out to the suburbs and to the urbanizing South and West. Central city populations began to experience population losses in the 1950s, and then more rapidly through the ‘60s, ‘70s, and ‘80s. Since the mid-twentieth century, old, cold cities have lost ground to newer Sunbelt cities, though urbanization itself has increased. The

eastern corridor between Boston and Washington, DC, constitutes a massive metropolitan area of fifty-five million people.³⁴ The population of the region spanning from Los Angeles to San Diego in California is approaching twenty million people. The economic and urbanized region of Chicago and its environs arguably sprawls from Kenosha, Wisconsin, in the north, to Joliet, Illinois, in the south.³⁵ The Texas cities of Houston and Dallas and their regional areas constitute 47 percent of the state's population. Denver and its massive metropolitan area constitute 60 percent of the state's population. The Atlanta MSA contributes 50 percent of the population of Georgia.

Of course, there is an important distinction between central cities and MSAs—this difference is often submerged under the general rubric of “urbanization.” That the concept of urbanization includes the densest parts of midtown Manhattan, sprawling Los Angeles, and suburban Phoenix makes the concept somewhat less useful when talking about intrametropolitan relationships. The form that urbanization takes in any given metropolitan area is obviously extremely important, as is the relationship between any given central city, its suburbs, or the other cities within its regional orbit.

Moreover, there are important distinctions that any general account of “the city” will leave out: distinctions between small, medium, and large cities; cities with hinterlands and cities that are mostly self-contained; cities with a recognizable urban core and cities without; or cities with multiple cores. The distinction between cities and suburbs itself may not hold in particular metropolitan areas. That distinction—so dominant in the twentieth century writings on cities—has eroded as low-density Sunbelt cities have sprawled and relatively dense and economically active places with no identifiable core have developed in otherwise suburban settings. The sociological and economic line between cities and suburbs has also eroded. Metropolitan-area racial and income segregation has not tracked the city-suburb line for some time.³⁶

One also has to be attentive to scale. Agglomeration effects occur at different distances depending on their form. Knowledge spillovers that require face-to-face contact may be highly localized; one might have to be located in lower Manhattan to obtain the benefits of Wall Street's financial agglomeration. The benefits of agglomeration for consumers also can be obtained only at relatively close range: in the shopping mall or on the main street. Labor and talent pools, however, will likely operate on a metropolitan scale as long as transportation costs are not prohibitive. Distance will be felt differently depending on the type of spillover. And the multiple parts of a city and the wider metropolitan region will be affected by different agglomerations operating at different scales.

Nevertheless, the “rediscovery of the generative power of cities” encompasses both a renewed attention to the benefits of a dense and economically robust urban core *and* the emergence of the city-region as a central economic unit. For my purposes, the important point is that nations and states are secondary in importance to metropolitan regions and often to specific cities within those regions.³⁷

And for good reason. Urban areas generate the bulk of economic development in the United States. Cities are the largest economic entities in their states, regions, and nations. The top ten metropolitan regions in the world account for 2.6 percent of the global population but over 20 percent of global economic activity.³⁸ Phoenix generates 70 percent of Arizona's total economic output and 71 percent of the state's employment.³⁹ Cleveland's metropolitan economy is bigger than Ireland's.⁴⁰ Six American metropolitan areas—New York City, Los Angeles, Chicago, Washington, DC, Dallas, and Philadelphia—rank among the top thirty largest economies in the world. The gross metropolitan product of the top ten metropolitan areas in the country exceeds the total gross domestic product of thirty-four states and the District of Columbia combined. New York's metropolitan-area economy is the tenth largest economy in the world. The Los Angeles metropolitan-area economy is the eighteenth largest. Though the United States began as an agricultural and rural nation, it is now indisputably an urban one. Thus, when one speaks about the economy, one is mostly speaking about inter- and intrametropolitan trade.⁴¹ To talk about the national economy is to talk mostly about urban-based development and urban-based trade flows.⁴²

Endnotes

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- 14 Eberts and McMillen, “Agglomeration Economies,” 1463 (citing G.S. Goldstein and T.J. Gronberg, “Economies of Scope and Economies of Agglomeration,” *Journal of Urban Economics* 16, no. 1 (July 1984):91).
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Assessing the Effectiveness of Urban Policies: How Do Social Interactions Influence Policy Outcomes?¹

Santiago M. Pinto

1. INTRODUCTION

Today, my presentation is organized around two broad ideas or concepts that in my view constitute the foundations of Jane Jacobs's work. The idea of a "web-way of thinking" about cities and the idea of cities as problems of "organized complexity." This is something that has always fascinated me about Jane Jacobs. Her way of thinking was very sophisticated, but she did not need to use complicated and high-tech methods and machinery.

Jane Jacobs argued that cities are a network of dynamic social relationships. When she talks about cities as problems of "organized complexity," she means it is important to acknowledge that a large number of interrelated factors operate simultaneously in a city, and they interact in an organic way. Cities are complex structures, but they have their own organizing forces driven mostly by social interactions. Today, I am going to follow Jane Jacobs's "web-way of thinking" and focus on how the "social space" and social interactions influence the effectiveness of urban policies.

2. MOTIVATION

The fact that individuals operate in a "social space" and that this "social space" affects the behavior of individuals has been emphasized for a long time by many disciplines in social science. In economics, we have only recently started paying more attention to this issue. But it is also fair to say that many advanced theoretical and empirical methods and tools have been developed in the field of economics since then. The main problem researchers face is that it is not completely clear how to define the social space from an empirical standpoint. Also, the task of identifying and quantifying the impact of social interactions using available information is quite challenging. In general, neighborhood-level data have been used to approximate social interactions. The neighborhood and the social network have been treated as similar concepts and ideas. This seems very reasonable as a starting point: one expects that the cost of expanding social interactions increases with distance. Moreover, there is the constraint of data availability.

Understanding how the social interactions shape people's behavior is extremely relevant to make sense of policy outcomes. For instance, we frequently observe that policies with similar characteristics generate a variety of outcomes. Think about housing assistance programs for low-income families or downtown revitalization programs. Some programs seem to have been quite successful. Some others have not. There are many reasons why this could happen, but the "social context" in which those policies are implemented might help explain some of the variation in outcomes. Moreover, recent empirical studies that use data collected from "social experiments" could provide new insights. I will also stress, throughout the presentation, that the "social space" is not exclusively defined by the "physical space," and such a distinction may be relevant in certain situations and social contexts.

3. URBAN DISPARITIES AND URBAN POLICIES

One of the usual justifications for the design and implementation of urban policies is the need to address social and economic disparities across urban areas or cities. Living conditions vary across regions and cities, and this is true even after controlling for region- and city-specific characteristics. In theory, we should not expect this to happen if people can move without restrictions. But we don't really observe this kind of behavior.

What is even more striking is that social and economic conditions differ at a very micro level. For instance, living conditions differ across neighborhoods within cities. This is true almost everywhere, including developed economies such as the U.S. For instance, the average difference in median metropolitan statistical area (MSA) income between the seventy-fifth and twenty-fifth MSA percentile is 24.5 percent in the U.S. Within MSAs, the average difference in median census tract income (relative to the MSA median income) between the seventy-fifth and twenty-fifth census tract percentile is 54.8 percent.² Other things are simultaneously taking place in the U.S. For instance, income segregation has been steadily increasing. Various measures of segregation, such as dissimilarity and income inequality indices, all tend to indicate similar results. The main observation that I would like to point out is that the percentage of families living in middle-income neighborhoods has decreased from 64.7 percent in 1970 to 40.5 percent in 2012.³ Moreover, the same holds for racial segregation, educational attainment segregation, and occupational segregation. But most importantly, social and economic differences across neighborhoods are remarkably persistent in time.

3.1 Urban policies

Partly to address some of these factors, governments at different levels design and implement urban policies. Broadly speaking, policies are classified as people-based and place- or location-based. There is a huge debate about which policies are more effective. Frequently, the discussion even becomes ideological. People-based programs are generally referred to as "spatially blind policies." They include all those policies that would help low-income families move. In this case, whether a family receives assistance depends upon household characteristics, income, and employment status instead of where they live. Income support programs (like the Earned Income Tax Credit in the U.S.), education assistance programs, job training programs, and some types of housing programs, such as the well-known Moving to Opportunity, which I will discuss later, are a few examples of such policies.

Place-based or location-based policies target resources to specific geographic areas previously identified as distressed. They generally offer some form of special treatment, including tax subsidies, public investments, special rules or regulations, etc. It is true that this classification is, perhaps, somewhat extreme. One can think about a spectrum or a range of different types of policies. For instance, policies that involve investment in transportation systems and transportation infrastructure might be perhaps somewhere in the middle.

3.2 A few remarks

A few remarks are worth pointing out at this stage before continuing. First, policy interventions are not always effective at achieving their goals. It is important to understand why those policies have failed. This is something that Jane Jacobs used to emphasize: we should learn from failed policies. Second, for some policymakers and practitioners, it might seem puzzling that policies that share similar characteristics have different effects in different places and social contexts. And third, policy interventions may have an impact on how people interact and generate endogenous social responses that might lead to policy outcomes that were not originally anticipated nor intended.

4. SOCIAL INTERACTIONS

The idea that the social and economic outcomes I referred to earlier (spatial inequality, concentration of poverty, segregation, and their persistence over time) have a connection to social interactions is an old idea in economics that goes back to the 1960s and early 1970s. There was the notion that social interactions may lead to “traps” or situations characterized by bad outcomes that are not easy to escape. Social interactions tend to perpetuate those situations. The literature on social interactions is very rich and extensive, and it actually stresses both the negative and positive effects of social interactions. I am not going to review that literature today. But let me briefly mention two widely used concepts in the literature: neighborhood effects and network effects.

Neighborhood effects include those factors that influence the behavior and outcomes of individuals living in close proximity. For instance, the composition of a residential neighborhood may affect individual outcomes such as educational achievement, the probability of finding a job, and the propensity to engage in crime. Models that include network effects assume that the specific structure of social connections shape the behavior of individuals. Network effects may be determined, among other things, by ethnicity, race, age, nationality, tastes, and many attributes other than physical distance.

These two concepts are clearly interrelated. More frequent interactions take place among individuals in close physical proximity, so there is a partial overlap between the social and the physical space. But it is important to acknowledge that they may operate and may influence the effectiveness of policies in different ways.

Social interactions, among other things, may help understand why we observe large differences in policy outcomes after the implementation of policies that look similar. Models that incorporate social interactions generate what are called social multipliers and multiple equilibria. These terms may sound technical but I believe they are easy to understand. The concept of the social multiplier is one of the key elements of the “web-way of thinking.” The idea is that a change in a policy may have a direct effect on the actions of an individual and an indirect effect that takes place through

the impact of the policy on the behavior of those who interact with the individual through a network. These are the so-called spillover effects. For example, consider the case in which an individual’s inclination toward crime affects the criminal behavior of his neighbors. Then, a change in law enforcement or policing will have both a direct effect on crime and an indirect effect through social influence. Once we account for both the direct and indirect effects, a small policy change may lead to large changes in outcomes.

It is also well-known that models that include network effects are frequently characterized by the presence of multiple equilibria. The presence of multiple equilibria means that we can potentially observe various possible outcomes in contexts that are completely identical. Typically, this happens because social interactions induce externalities. For example, consider a community in which people’s preferences for smoking are stronger when the proportion of smokers in the community is larger. In that community, we may observe two possible outcomes: one where few individuals smoke and another where many individuals smoke (if the dependence of agents’ preferences on the proportion of smokers in the population is strong enough). Usually, these models are characterized by thresholds: if the proportion of smokers is greater than some amount, then mostly everyone ends up smoking; if it smaller than that amount, then no one smokes. Why is it important to consider the existence of multiple equilibria? First, it helps us understand why we may observe a variety of different outcomes as a result of the implementation of a particular policy. And second, it raises the possibility that a given policy may have counterintuitive effects precisely because of the feedback effects induced through the network.

5. WHAT DOES RECENT EVIDENCE SAY?

So what has the empirical research on social interactions found about how they affect policy outcomes? The availability of new data, collected mostly from “social experiments,” has made it easier to identify the effects of social interactions. I will focus in this presentation on just a few of those examples, including housing voucher programs (both in the U.S. and in other countries), research work that studies the impact of peers on education outcomes, and some other work that has studied how the specific structure of the social space can explain various outcomes.

5.1 Housing voucher: Moving to Opportunity (MTO) experiment

Let me start by considering a well-known housing assistance program called the Moving to Opportunity (MTO) project. This project took place in several U.S. cities during the period 1994-2010. This was a random assignment social experiment that offered housing vouchers to families living in subsidized housing in high-poverty neighborhoods. The vouchers could only be used to pay for their housing rents in neighborhoods with low poverty rates. This kind of intervention has generally been considered an example of a people-based policy.

A few research papers studied the implications of this program. I will today highlight only some of the findings.⁴ According to those studies, the policy affected children of different ages differently when their families decided to move. Specifically, moving positively affected children who were younger, but negatively affected those who were older. Younger children received higher annual incomes, improved their educational attainment, and were more likely to reside in higher-quality neighborhoods as adults. For older children, however, the program did not seem to affect labor market outcomes or participation in welfare programs. Among other things, the results seem to indicate that it might take some time for the positive neighborhood effects, if any, to take place.

5.2 Housing voucher programs in developing economies

Programs like MTO were implemented in developing economies as well. There are a few additional factors to consider in this context, however. For instance, developing economies are generally characterized by the proliferation of informal social insurance mechanisms that arise between individuals and communities in response to the lack of formal institutions.

One example that has been recently studied by Barnhardt, Field, and Pande (2017) is a housing voucher program implemented in a city in India. This program randomly selected residents from city slums and gave them the opportunity to relocate to better neighborhoods on the city's periphery (seven miles from the city center), where they were offered highly subsidized housing. The findings of this experiment were mixed. First, a large number of households exited the program. Some individuals selected by the program chose not to move, and a significant proportion of those who moved ended up returning to the city slums within a ten-year period. Second, households that relocated to the city's periphery did not become better off. Movers reported they were living substantially farther away from their families and were experiencing substantially higher costs of maintaining their connections. It was also noted that the number of informal insurance practices became substantially smaller in the new neighborhoods. Using information obtained from follow-up surveys, the paper describes how those who stayed in the city slums reported receiving informal assistance from their social network, but movers reported lacking such informal support.

5.3 Housing voucher programs: A few remarks

A few things can be learned from these types of programs:

1. Relocation seems to generate a social dislocation problem, especially for some youths;
2. The cost of changing social networks may not be negligible;
3. Geographic isolation from the social network may have large social and economic costs;
4. The positive effects resulting from social interactions will be observed

if those effects (that is, the responses of individuals to the presence of different types of individuals in their group) materialize faster than the relocation adjustment process. Otherwise, individuals would quickly move back to their previous economic and social conditions.

Other important factors should also be taken into consideration. For instance, what happens to the original networks once social connections are disrupted? What happens to people residing in the destination neighborhood? The outcomes and the degree of social integration will depend, among other things, on the attitude toward newcomers of residents in recipient neighborhoods. Moreover, what happens when interventions are large? What are the effects of scaling up these kinds of programs? Further research is needed in all these areas.

5.4 Education

Additionally, policies may cause the endogenous formation of networks, change the entire dynamic of the social interactions, and ultimately influence the effectiveness of the policies. Let me consider one example that may illustrate this idea.

In a recent paper, Carrell, Sacerdote, and West (2013) use data from cohorts of entering freshman at the U.S. Air Force Academy. The study comprises two stages. In the first stage, the authors identify peer effects from historical data. Using this data, based on a random allocation of freshman students to different squadrons of approximately thirty students, they find that low-ability students benefit from the presence of high-ability students in the same group. In the second stage, they use this information to sort incoming freshman into what they call "optimal groups." More specifically, students were arranged in groups with the goal of improving the academic performance of those with low skills but not affecting the performance of high-skilled students. As a result, they assigned incoming students into three groups: a group of randomly assigned students (same criterion as in previous years); a group that combines high- and low-ability students (mixed group); and a group of students with middle ability (homogeneous group).

What were the outcomes of such experiment? Remember that the composition of the treatment group was designed to increase the achievement of low-ability students and keep the performance of high-ability students unchanged. However, contrary to their predictions, they found that the academic achievement of students with high ability remained the same; it declined for students with low ability; and it improved for students with middle ability.

So why did this happen? Using additional information collected through surveys, they provided some possible explanations. They found, first, that high- and low-ability students in the mixed group separated themselves into two homogeneous subgroups: one formed by high-ability students and another by low-ability students. At the end, there was not much interaction between the two subgroups. Second, students in the middle-ability homogeneous group performed better because they no longer interacted

with low-ability students. This means that students reacted to the “policy” by choosing to internally reorganize themselves into subgroups, with limited interaction across different types of students. So, we might be able to design what appears to be a good and sound policy, but the “organized complexity” of social interactions may lead to situations that were not completely anticipated.

5.5 Other studies

As mentioned earlier, it is also very important to carefully study the characteristics of the social structure in order to better understand some of the observed policy outcomes. I will now examine some research work that has followed such an approach.

5.6 Strong vs. weak ties

Some research work evaluates the quality of the information obtained through different types of connections in the network. The work by Calvó-Armengol, Verdier, and Zenou (2007), for example, differentiates between strong ties and weak ties. Strong ties are typically defined as close and regular relationships, such as friends, family, and even close neighbors. Weak ties are random, irregular relationships that may include individuals who do not reside close by. The paper finds that weak ties are superior to strong ties. The justification is straightforward. In a close network, everyone knows each other and information is immediately shared. The network quickly becomes redundant. When this happens, weak ties will offer new sources of fresh information.

5.7 Geographical vs. social space

Other studies attempt to separately identify the role of the neighborhood and the role of the social network. The few papers that attempt to do so use the National Longitudinal Survey of Adolescent to Adult Health (Add Health) data on high schools. This dataset is quite interesting because, among other things, it contains information on friendship. This information is collected by a series of survey questions in which students are asked to identify their best friends from school. The data also provide information about where students live, so it is possible to separately identify friends from school and friends from the neighborhood. Del Bello, Patacchini, Zenou (2015), for example, find that, concerning education outcomes, social interactions between friends at school (those who define the individual’s social space) are more important than the social interactions between friends who also reside close to each other (those who determine the geographical space).

5.8 Refugee resettlement programs

The composition of the network has also been shown to play a remarkable role in determining social and economic outcomes. The work by Lori Beaman (2012) examines this issue using data from various refugee resettlement programs in different U.S. cities implemented by the International Rescue Committee during the period 2001-2005. This type of

research assumes that the destination upon arrival in a new country (and neighborhood) is exogenous. Beaman develops a model that explains how job information is transmitted through the network. In general, one expects that as the size of the network increases, individual labor market outcomes should also improve. However, she finds that this is not always the case: an increase in network size can negatively impact some cohorts in a network and benefit others. In fact, she shows that the relationship between the size of the social network and labor market outcomes depends on the vintage of network members. Specifically, employment outcomes for newly arrived refugees decline when the size of the network members resettled in the same year or one year prior is larger, but employment outcomes improve when the number of older and tenured members in the network is larger.

Using data from similar resettlement programs, some studies have focused on other effects of social interactions, including the role of neighborhood effects on labor market outcomes, educational attainment, and the likelihood of participating in criminal activities.

6. FINAL REMARKS

So there are a few things I would like to emphasize from the previous discussion. First, the cost of changing networks may not be negligible. We might be familiar with the pecuniary effects of networks, such as information sharing, risk sharing (in-kind and in-cash), and so on. But individuals also derive utility from the networks they belong to (using economic jargon, networks may be an “argument” of the utility function). Second, many studies of neighborhood effects do not incorporate information about social networks and vice versa. Much is unknown, as a result, about how neighborhood and network effects mediate, moderate, or overpower one another. Researchers have claimed that social networks may be the transmitters of neighborhood effects and that neighborhoods are crucial incubators of social networks. And third, establishing the relationship between neighborhood and network effects and the resulting outcomes should precede policy prescriptions. New available data might be useful for this purpose.

Endnotes

1 Part of this presentation is based on Pinto, Santiago M., "Social Interactions and the Effectiveness of Urban Policies," *Review of Regional Studies* 46, no. 2 (2016): 117-26.

2 Rosenthal, Stuart S., and Stephen L. Ross, "Change and Persistence in the Economic Status of Neighborhoods and Cities," in *The Handbook of Regional and Urban Economics*, Vol. 5, ed. Gilles Duranton, J. Vernon Henderson, and William C. Strange (Amsterdam: North-Holland, 2015), 1047-1120.

3 The Stanford Center on Poverty and Inequality.

4 Chetty, Raj, Nathaniel Hendren, and Lawrence F. Katz, "The Effects of Exposure to Better Neighborhoods on Children: New Evidence from the Moving to Opportunity Experiment," *American Economic Review* 106, no. 4 (2016): 855-902.

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The Possibility of Work and Place

Peter L. Laurence

Jane Jacobs was always interested in concepts of work. Having moved to New York during the Great Depression, her first writing about the city was a series of essays, written in the mid-1930s, about what she called the “working districts” of Manhattan—neighborhoods like the Fur, Leather, Diamond, and Flower Districts—that were known for particular enterprises and specializations. Even as a young adult, at nineteen and twenty years old, she was interested in *how these places worked* in social, geographical, and economic terms, and *how they worked* as enterprises and processes.

The Death and Life of Great American Cities, which Jacobs wrote twenty-five years later, was a treatise about *how cities worked*—how they worked functionally. As discussed in *Becoming Jane Jacobs*, she was a functionalist: she first described the book that became *Death and Life* as “a study of the relationship of design to function in large cities,” and in the book, the first time that she used the word “work” was to say that her book was about “how cities work in real life, because this is the only way to learn what principles of planning and what practices in rebuilding can promote social and economic vitality in cities, and what practices and principles will deaden these attributes.”

Jacobs used the word “work,” or some variation of it, more than 350 times in *Death and Life*, typically to mean function. “Function” and “functional” were also words she used often (we find 117 variations), but she sometimes substituted the word “use.” For example, she titled the first chapters of *Death and Life*, “The Uses of Sidewalks” (three chapters, concerned with safety, contact, and assimilating children, chapters 2–4), “The Uses of Neighborhood Parks” (chapter 5), and “The Uses of City Neighborhoods” (chapter 6). She could have titled these chapters “The Functions of Sidewalks,” “The Functions of Parks,” and “The Functions of Neighborhoods,” but she chose not to—although she was immersed in the architecture culture of the 1950s, she was addressing a broader audience. In later writing and remarks specifically addressed to architects, she criticized them for failing to live up to the promise and meaning of functional architecture and for failing to be interested in the functions of cities. In *Death and Life* one of Jacobs’s harshest architectural and social criticisms was, “It may be that we have become so feckless as a people that we no longer care about *how things do work*, but only what kind of quick easy outer impression they give. If so, there is little hope for our cities or probably for much else in our society.”

Aside from ideas about how things work, it is a mistake not to see Jacobs’s interest in economic work, and city economies, as an important part of *Death and Life*. Once again, we can count some many uses or variations of the word “economic” in the book (219), and in its introduction, she stated that Part II of *Death and Life*, “The Conditions for City Diversity”—the part concerned with primary mixed uses, small blocks, the need for aged buildings, and the

need for concentration—was “principally about the economic behavior of cities and is the most important part of this book.” While this aspect of *Death and Life*, may have been underappreciated (by designers in particular), for Jacobs, good urbanism was simultaneously good socially and economically. To give a negative example, she said of the modernist, superblock urbanism that she was criticizing, “The whole idea of doing away with city streets, insofar as that is possible, and downgrading and minimizing their social *and their economic part* [emphasis added] in city life is the most mischievous and destructive idea in orthodox city planning.” In other words, city streets were important to her for social and economic reasons—although she would include nonprofit and low-profit enterprises in one or the other categories.

So although we typically think of *Death and Life*, as a book about urban design and city planning, Jacobs wrote there that “big cities are the natural economic homes of immense numbers and ranges of small enterprises,” and moreover that cities were the “natural economic generators of diversity and natural economic incubators of new enterprises.” It is therefore no surprise that she knew, soon after that book was published, that her next book would be *The Economy of Cities*.

In that next book, published in 1969, Jacobs explained “How New Work Begins” (chapter 2) and “How Cities Start Growing” (chapter 4) through import replacement and the innovations of adding new work to old work. But one of the most striking aspects of *The Economy of Cities* is how it anticipates some of her later books. In reflecting on the need to protect fledgling enterprises from the predations of larger, more powerful, and more well-established ones, she wrote that structures were needed to protect “weak and still incipient interests.” In the conclusion of *The Economy of Cities*, she wrote, “Only governments can play this economic role,” and she added that the need for government to keep open the opportunities for economic and technological development, instead of closing them off, was “one of the most pressing and least regarded problems.”

Although Jacobs continued the work started in *The Economy of Cities* in her next book, *Cities and the Wealth of Nations* (published in 1984), her comments on the relationship between economics and government anticipated her subsequent major book, *Systems of Survival: A Dialogue on the Moral Foundations of Commerce and Politics* (published in 1992).

If *The Economy of Cities* helped to explain the economic emergence of the diverse and vital cities that she described in *Death and Life*, and if *Cities and the Wealth of Nations* helped to explain the essential and critical significance of cities and city economies to nations, then *Systems of Survival* helped to explain the possibility of functioning economies and civilizations at large. Inspired by and expanding on Plato’s *Republic*, *Systems* is a Socratic dialogue similarly concerned with Plato’s concept of justice, which examines what Jacobs identified as two distinct but symbiotic moral systems, which she described as the commercial (or exchange) moral system and the guardian (or governing) moral system. She explained how both were necessary but that when the actions and activities appropriate to one system were

mixed with the other, the result was a “monstrous moral hybrid” and sometimes “systemic moral corruption.” For example, organized crime, when engaged in protection rackets and other forms of territoriality appropriate to government’s policing role, was a monstrous hybrid that corrupted accepted and acceptable business practices. Oligarchies and crony capitalism, when engaged in or enabled by political leaders charged with protecting the rights and opportunities of all of their constituents, was another monstrous moral hybrid where the power of government was used for private profit. For these and related reasons, Jacobs observed that it was a great mistake for commercially oriented people to suppose that governments should be run like businesses, let alone by businessmen, and let alone by corrupt businessmen. Civilization, she argued in the conclusion to *Systems of Survival*, rested on the “reasonably workable guardian-commercial symbiosis,” the mutual support of one system by the other, where commercial life relied on guardians to prevent fraud, the use of force, and unconscionable greed in economic activities, and where guardians, supported by taxes and claims on some personal rights, respected private plans, property, and civil and other individual rights.

As I wrote in *Becoming Jane Jacobs*, she first encountered conflicts between the exchange and guardian moral systems during the Cold War. As a writer and propagandist during World War II, she understood her role in supporting the guardian activities of the war effort. However, during her work as a writer for the State Department during the Cold War, her natural instincts for trade, open exchange, shunning force, being honest, and collaborating easily with strangers and aliens came into conflict with the guardian mission and the other behaviors expected of government employees in that time and those circumstances. She was inclined to pursue an open exchange with the Soviet people she wrote for, not so much propaganda, and this contributed to suspicions of her that led to a long FBI investigation and the eventual closure of her office in the McCarthy era.

Only a short number of years later, while working as an architectural journalist writing about government-funded urban renewal, Jacobs observed monstrous moral hybrids when guardians used their police powers to take private property, often from the poor and working class, and to destroy public streets and spaces and then engage in trade by handing over the seized land to private developers for suspect and often outright corrupt public-private partnerships—deals that often served the white middle and upper classes at the expense of others. Her outrage at these corruptions—in particular the destruction of the public realm by the guardians charged with protecting it—led to her writing *Death and Life*, to her activism, and eventually to writing *Systems of Survival*. As she wrote there, mixing the moral systems together “breeds endless chains of injustice: great wickedness, great harm.”

So as we look back on Jane Jacobs’s work at her centennial, we can admire that she not only offered us enduring ideas about the design and functioning of complex, social, and diverse cities, she offered ideas about how and why cities were productive. She made the case for local economies as much as for local self-government, and she articulated a system for thinking about the foundations of public life and civilization itself—a system which, if respected, would yield justice and equity.

In conclusion, it cannot be avoided that in her later books, both *The Nature of Economies* (2000) and *Dark Age Ahead* (2004), Jacobs examined how and why systems—moral, social, economic, and otherwise—failed. In *The Nature of Economies*, in a chapter titled “Evading Collapse,” she observed that “Human settlements, business enterprises, governments, nations, civilizations—they’re all dynamically stable systems. . . [But] All dynamic systems are in danger of succumbing to instability, which is why they need constant self-correction.” In *Dark Age Ahead*, Jacobs warned us of vicious spirals of decline, but she concluded the book—her last book—by offering that Lincoln’s articulation of American democracy, “government of the people, by the people, and for the people,” was a core value that, if clung to, would provide a basis for self-correction from transactions of decline. Even in dark times, this idea gave her hope. But so, too, would great cities—lively, diverse, intense, open, great cities, “with energy enough to carry over for problems and needs outside themselves.” Going back to where her work started, she would want us to recommit to the serious study of how cities, just cities, work—both socially and economically.

CONCLUSION

Jane Jacobs Redux

Suzanne Morse Moomaw

I had the pleasure of meeting Jane Jacobs when she visited the University of Virginia in 1996 to receive the Thomas Jefferson Medal in Architecture. She had a particular fondness for the university, not only because of her admiration of our founder, but because her father was an alumnus of the medical school at UVA and her brother, the law school. While her talk dealt mainly with her newer works, she was quite clear about her prior writings and ideas and how they were still at play.

It is these older writings that have captured the most attention. Certainly, *The Death and Life of Great American Cities*, published in 1961, is the most well-known, but it is a later work, *The Economy of Cities*, that was the focus of this symposium. While no conversation about Jacobs escapes the inevitable reference to *Death and Life*, the symposium focused on the body of her work and its lasting impact. While the centennial of her birth was the impetus for the symposium, there was an additional milestone, the publication of *The Economy of Cities* in 1969, that was highlighted.

This book and Jacobs's perspective garnered both admiration and skepticism then and now. Writing in *Commentary* in August 1969, reviewer Peter Schrag said "the book was nostalgic formalizing about what people liked about cities rather than the reality on the ground." While there is certainly truth to that with her attention focused on the human scale rather than the impact of mega and interrelated global corporations, she was very right about one thing: diversification. She had seen in her hometown of Scranton, in nearby

Pittsburgh, and in Detroit the whittling of blue collar jobs and the decline of the small firm. Further, she predicted quite accurately the impact of the downward trend in manufacturing and called for cities to continue to "make." Whether hindsight bears out all her observations is not the point; rather, it is that she observed quite rightly that the economy of the future would not be the economy of the past. In fact, it would be dramatically different.

By the time she wrote *The Economy of Cities*, Scranton, Pittsburgh, and Detroit already shared the moniker of three of the most economically challenged cities, with their unemployment rates referred to as "substantial and persistent" by the Department of Labor. She was trying to get our attention by calling for the use of innovations applied to older work to create new work and by questioning the conventional wisdom that location was the primary factor of production. This symposium, and the scholars and practitioners who both knew and followed Jacobs's work, provided new perspectives, new insights, and new admiration for this remarkable observer of urban life.

IV. Appendix

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Mona El Khafif, Dr. techn., is an associate professor of architecture at the University of Virginia School of Architecture, coauthor of the award-winning publication *URBANbuild: Local/Global* (with Ila Berman), and author

of *Staged Urbanism: Urban Spaces for Art, Culture and Consumption in the Age of Leisure Society* (German edition). Her research operates at multiple scales, examining the interdisciplinary aspects of urban design, temporary urbanism, urban prototyping, and strategies for the smart city. At the University of Virginia, El Khafif serves as the RCN director of the recently funded NSF Grant entitled "MainStreet21" supporting a network of small and midscale cities in Virginia and codirects the school's initiative on smart environments. El Khafif is also the director for the school's Urban Design Certificate and teaches graduate and undergraduate courses in urban architecture studios and urban research seminars.

Sheila R. Foster is a professor of law and public policy (joint appointment with the McCourt School) at Georgetown University. Prior to joining Georgetown, she was a university professor and the Albert A. Walsh Professor of Real Estate, Land Use and Property Law at Fordham University. She also codirected the Fordham Urban Law Center and was a founder of the Fordham University Urban Consortium. She served as associate dean and then vice dean of Fordham Law School from 2008-14. Prior to joining Fordham, she was a professor of law at Rutgers University in Camden, New Jersey. Foster writes in the areas of environmental law and justice, urban land use law and policy, and state and local government. Her most recent work explores questions of urban law and governance through the lens of the "commons" exemplified by her article, "The City as a Commons," *Yale Law and Policy Review* (2016), and her forthcoming MIT Press Book, *The Co-City*. She serves as the chair of the advisory committee of the Global Parliament of Mayors and is an advisory board member of the Marron Institute for Urban Management at NYU. She also served a three-year term on the New York City Panel on Climate Change, helping to shape city policy on equitable adaptation to climate change. As codirector with Christian Iaione of the Laboratory for the Governance of the Commons (LabGov), she is currently engaged in the "Co-Cities Project," an applied research project on public policies and local projects from over one hundred cities around the world.

Kathy Galvin has been a member of the Charlottesville City Council since 2011 and served on the Charlottesville City School Board from 2008-11. As a city councilor, she served on the Thomas Jefferson Planning District Commission (as vice chair) and the School Capital Improvement Projects Committee, and she now serves on the Rivanna Water and Sewer Authority, Rivanna Solid Waste Authority, Piedmont Workforce Network, and the Placemaking, Livability and Community Engagement (PLACE) design task force. Her focus on the council has been: creating career pathways out of poverty for low-income residents; revitalizing city areas so as to provide more jobs, amenities, and affordable housing without displacing existing low-wealth residents (e.g., the Strategic Investment Area Plan, which won the 2018 Congress for New Urbanism Award for the Neighborhood, District and Corridor); working with the Friendship Court Community to realize their

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vision for a healthy, safe, revitalized neighborhood with new public parks, an early childhood development center, retention of all 150 existing Section 8 publicly assisted units with a mix of new workforce and market rate units as deemed appropriate by the existing residents (which won the 2018 Virginia Governor's Inclusive Community Award); transforming the West Main Street corridor with 400 percent more tree canopy, wider sidewalks, and protected bike lanes so that it is safe and attractive for all users; and making city government more effective. A licensed architect, she has owned an urban design and architectural practice since 1993. In that capacity, she was the lead urban designer for the Crozet Master Plan (which won the 2005 Congress for New Urbanism Charter Award for the Region) and the Places29 Master Plan and Transportation Study. Galvin received a bachelor's degree in economics and geography from Boston University in 1978 and a master's degree in architecture from the University of Virginia in 1986. Since 2001, she has been an adjunct faculty member in the University of Virginia's School of Architecture. In 2017, she received the Virginia American Institute of Architects Award for Distinguished Achievement.

Roberta Brandes Gratz is an award-winning journalist and urban critic, lecturer, and author. In 2005, in collaboration with Jane Jacobs and a small group of like-minded urbanists, Gratz founded the Center for the Living City to build on Jacobs's pioneering work. Among her books are *The Battle for Gotham: New York in the Shadow of the Robert Moses and Jane Jacobs*, *We Are Still Here Ya Bastards: How the People of New Orleans Rebuilt Their City*, *The Living City: Thinking Small in a Big Way*, and *Cities Back From the Edge: New Life for Downtown*.

Margaret Haltom is a master's candidate in urban planning at the Harvard Graduate School of Design and a Gramlich Fellow at the Joint Center for Housing Studies. She serves as the editor of the *Harvard Urban Forum*, conducts research for the Boston Housing Authority, and directs a youth-driven design initiative in Lowell, Massachusetts. Haltom received her BA in political and social thought as a Jefferson Scholar at the University of Virginia. As an undergraduate, she chaired the Madison House Board of Directors and facilitated the Friendship Court youth leadership development program.

Sonia Hirt is the dean and Hughes Professor in Landscape Architecture and Planning at the College of Environment + Design at the University of Georgia. Prior to joining the University of Georgia, she served as dean of the School of Architecture, Planning and Preservation at the University of Maryland, College Park; associate dean for academic affairs at the College of Architecture and Urban Studies at Virginia Tech; and visiting associate professor at Harvard's Graduate School of Design. Hirt is the author or coauthor of more than 75 publications. She is an elected fellow of the American Institute of Certified Planners. Among her books are *Zoned in the*

USA: The Origins and Implications of American Land-Use Regulation (Cornell University Press, 2014) and *The Urban Wisdom of Jane Jacobs*, coedited with Diane Zahm (Routledge, 2012). Hirt focuses on the interactions between social and cultural values and the urban built environment. Through her scholarship and teaching, she aims to advance understanding of the relationships between social processes, cultural values, and urban forms and to create opportunities to make cities more equitable, beautiful, and sustainable.

Katie Lang is an intern in the Department of Neighborhood Development Services for the city of Charlottesville. During the symposium, she was the Community Design Research Center's undergraduate fellow. While studying for a degree in Urban Planning at UVA, she focused on design and processes that promote health, equity, and sustainability. She was also the curator of the exhibit *Jane Jacobs on the Street*.

Peter L. Laurence, PhD, is an architectural and urban historian and associate professor of architecture at Clemson University's College of Architecture, Arts, and Humanities. He has published extensively on Jane Jacobs's life and ideas in addition to authoring *Becoming Jane Jacobs* (University of Pennsylvania Press, 2016). His other publications and research interests include the histories of urban design, architectural criticism, architecture education, and midcentury modernism, as well as intersections of science and urbanism in architectural history and theory. He is a founder of theurbanismproject.org, which seeks to improve architecture students' understanding of cities and urban design.

George "Mac" McCarthy, is president and chief executive officer of the Lincoln Institute of Land Policy, an independent, nonpartisan, private operating foundation based in Cambridge, Massachusetts. The organization helps solve global economic, social, and environmental challenges to improve the quality of life through creative approaches to the use, taxation, and stewardship of land. Before joining the Lincoln Institute of Land Policy, McCarthy directed Metropolitan Opportunity at the Ford Foundation, which sought to provide disadvantaged people with better access to jobs and other opportunities in both the United States and developing countries in Asia, Africa, and Latin America.

AUTHORS

Shannon McKay is a former research manager in the regional and community analysis unit of the research department at the Federal Reserve Bank of Richmond. She managed community development publications and research projects, as well as community polling, data, and mapping initiatives. Her research at the Bank included small business lending, foreclosures, neighborhood stabilization, and homelessness, as well as workforce development and worker displacement. Her doctoral research at MIT focused on the intersection of politics and economics in the development and implementation of land use regulations, specifically those addressing growth management issues.

Suzanne Morse Moomaw is an associate professor and director of undergraduate programs for urban and environmental planning at the University of Virginia School of Architecture. Moomaw is also the director of the Community Design Research Center at the University of Virginia School of Architecture. Her teaching and research focus on community economic development, affordable housing, and neighborhood design in postindustrial cities. Prior to the University of Virginia, she was the president and chief executive officer of the Pew Partnership for Civic Change, a national research organization dedicated to discovering and validating community-based solutions. She is a trustee of the Kettering Foundation. Among her books are *Smart Communities: How Citizens and Local Leaders Can Build a Brighter Future* Second Edition (Jossey-Bass, 2014) and the forthcoming *Cities Without Work: The Long Road from Boom to Bust* (Harvard University Press, 2020). She was the symposium director.

Santiago Pinto is senior policy economist in the research department at the Federal Reserve Bank of Richmond. He joined the Richmond Fed in 2012 after serving as an associate professor of economics at West Virginia University, where he had worked since 2002. He previously taught at Syracuse University and several institutions in Argentina. Pinto earned his doctorate from the University of Illinois at Urbana-Champaign in 2001. His research interests include applied microeconomics, specifically in the fields of urban and regional economics, public economics, and state and local finance. His research work has focused on issues related to household mobility, local labor markets, regional assistance to poor households when their income is not observed, and on the equality of opportunity of access to specific goods.

Reid Saunders is the planning and development coordinator at Community Rebuilds in Moab, Utah. During the symposium, she was the Community Design Research Center's graduate fellow. Her undergraduate studies focused on urban planning and sociology. She also has a master's degree in urban and environmental planning from the University of Virginia. Her interests include historic preservation, urban design, culture, and community development.

Richard Schragger is the Perre Bowen Professor of Law and Joseph C. Carter Jr. Research Professor of Law at the University of Virginia School of Law. He teaches property, local government law, urban law and policy, and church and state. His scholarship focuses on the intersection of constitutional law and local government law, federalism, urban policy, and the constitutional and economic status of cities. Schragger received an MA in legal theory from University College London and received his JD, magna cum laude, from Harvard Law School. He was a supervising editor of the *Harvard Law Review*. After clerking for Dolores Sloviter, then-chief judge of the U.S. Court of Appeals for the Third Circuit, Schragger joined the Washington, DC, firm Miller, Cassidy, Larroca & Lewin, where he practiced for two years. Schragger has been a visiting professor at Quinnipiac University, Georgetown University, NYU, the University of Chicago, and Tel Aviv University. He was the Samuel Ruben Visiting Professor at Columbia University. He is the author of *City Power: Urban Governance in a Global Age* (Oxford University Press, 2016).

June Manning Thomas, PhD, FAICP, is the Centennial Professor of Urban and Regional Planning at the University of Michigan Taubman College of Architecture and Urban Planning. She has been named the Mary Frances Berry Distinguished University Professor effective September 1, 2016. Thomas writes about diversification of the planning profession, planning history, and social equity in neighborhoods and urban revitalization. Recent research explored the relationship between the concept of social equity and the civil rights movement and examined the land use reactions of community organizations to vacant land in Detroit. She was the Porter Visiting Professor in Urban and Environmental Planning at the University of Virginia for the fall of 2016. Among her books are *Redevelopment and Race: Planning a Finer City in Postwar Detroit* (Johns Hopkins Press, 1997/Wayne State University Press, 2013) and *Cities After Abandonment*, coedited with Margaret Dewar (University of Pennsylvania Press, 2013).

Shannon Wright is an intern architect having received her master's degree in architecture from the University of Waterloo in 2017. Her interests and focus during her thesis, "Claiming the Sky, Rethinking High-Rise Development in the City of Toronto," addressed the rapid high-rise development and the potential for a community-focused model. The main goal was to ensure that public space is a mandatory driver in the new high-density fabric. Consistent with her passion for public-driven spaces, her current career focuses on projects within the public sector such as hospitals and community and government facilities.

Risa Goluboff is the dean of the UVA School of Law, the Arnold H. Leon Professor of Law, and a professor of history. She is a nationally renowned legal historian whose scholarship and teaching focuses on American constitutional and civil rights law, and especially their historical development in the 20th century. Her books include: *The Lost Promise of Civil Rights* (Harvard University Press, 2007) and *Vagrant Nation: Police Power, Constitutional Change, and the Making of the 1960s* (Oxford University Press, 2016).

Roberta Gratz is an award-winning journalist and urban critic, lecturer, and author. In 2003, in collaboration with Jane Jacobs and a small group of like-minded urbanists, Gratz founded the Center for the Living City to build on Jacobs' pioneering work. Among her books are: *The Battle for Gotham: New York in the Shadow of the Robert Moses and Jane Jacobs* (Nation Books, 2010), and *We Are Still Here Ya Bastards: How the People of New Orleans Rebuilt Their City* (Nation Books, 2015).

Sonia Hirt, Dipl., UAP CAUS, is the dean and professor at the School of Architecture, Planning and Preservation at the University of Maryland. Before assuming the deanship in 2016, she was associate dean for academic affairs and professor at the College of Architecture and Urban Studies at Virginia Tech. Her focus as a researcher and educator is on the interactions between social and cultural values and the urban built environment. Among her books are: *Zoned in the USA: The Origins and Implications of American Land-Use Regulation* (Cornell University Press, 2014) and *The Urban Wisdom of Jane Jacobs* co-edited with Diane Zahm (Routledge, 2012).

David Imbroscio is a professor in the Department of Political Science and Urban and Public Affairs at the University of Louisville, where he currently directs the PhD Program in Urban and Public Affairs. His fields of specialization include urban political economy, urban politics, regional development, urban policy, community and economic development, normative policy analysis, and housing policy. Among his books are: *Urban America Reconsidered: Alternatives for Governance and Policy* (Cornell University Press, 2010), *Reconstructing City Politics: Alternative Economic Development and Urban Regimes* (Sage, 1997), and *Theories of Urban Politics*, 2nd Edition co-edited with Jonathan Davies (Sage, 2009).

Katie Lang is the Community Design Research Center's undergraduate fellow. In her fourth-year studying Urban Planning at UVA, she is passionate about design and the processes that promote health, equity, and sustainability. She is the curator of the exhibit, "Jane Jacobs on the Street."

Peter Laurence is an associate professor and Graduate Director, Clemson University College of Architecture, Arts, and Humanities. He is an architectural historian and theorist. In addition to his research and writing in urban design, he is interested in intersections of architectural theory and the history and philosophy of science. In 2006, Professor Laurence's writing on Jane Jacobs and the history of urban design contributed to the establishment of the Rockefeller Foundation's Jane Jacobs Medals. He is the author of *Becoming Jane Jacobs* (University of Pennsylvania Press, 2016).

George "Mac" McCarthy, is president and chief executive officer of the Lincoln Institute of Land Policy, an independent, nonpartisan private operating foundation based in Cambridge, MA. The organization helps solve global economic, social, and environmental challenges to improve the quality of life through creative approaches to the use, taxation, and stewardship of land. Before joining the Lincoln Institute of Land Policy, Mac directed Metropolitan Opportunity at the Ford Foundation, which sought to provide disadvantaged people with better access to jobs and other opportunities in both the United States and developing countries in Asia, Africa, and Latin America.

Shannon McKay is the research manager in the Community Development Department at the Federal Reserve Bank of Richmond. She manages the department's publications and research projects, as well as, its community polling, data and mapping initiatives. Her research at the Bank includes small business lending, foreclosures, neighborhood stabilization, homelessness as well as workforce development and worker displacement. Her doctoral research at MIT focused on the intersection of politics and economics in the development and implementation of land use regulations, specifically those addressing growth management issues.

Suzanne Morse Moomaw is an associate professor of Urban and Environmental Planning and the director of the Community Design Research Center at the UVA School of Architecture. Her teaching and research focus on community economic development, affordable housing, and neighborhood design in post-industrial cities. Prior to UVA, she was the president and chief executive officer of the Pew Partnership for Civic Change, a national research organization dedicated to discovering and validating community based solutions. She is a trustee of the Kettering Foundation. Among her books is *Smart Communities: How Citizens and Local Leaders Can Build a Brighter Future Second Edition* (Jossey-Bass, 2014). She is the symposium director.

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Reid Saunders is the Community Design Research Center's graduate fellow. This is her fifth year at the university, having studied urban planning and sociology during her undergraduate career. She returned for a Masters in Urban and Environmental Planning. She is interested in historic preservation, urban design, culture, and community development.

Richard Schragger is the Perre Bowen Professor of Law and Joseph C. Carter, Jr. Research Professor of Law at the UVA Law School. He teaches property, local government law, urban law and policy, and church and state. His scholarship focuses on the intersection of constitutional law and local government law, federalism, urban policy and the constitutional and economic status of cities. He is the author of *City Power: Urban Governance in a Global Age* (Oxford University Press, 2016).

Daphne Spain is the James M. Page Professor in the Department of Urban and Environmental Planning at UVA. Spain's scholarship addresses the relationship between the built environment and social structure, with an emphasis on gender. Her latest book, *Constructive Feminism: Women's Spaces and Women's Rights in the American City* (Cornell University Press, 2016) explores how the 1970s Women's Movement established new places in the city in pursuit of women's rights.

June Manning Thomas, FAICP, is the Centennial Professor of Urban and Regional Planning at the University of Michigan Taubman College of Architecture and Urban Planning. Her recent research explores the relationship between the concept of social equity and the civil rights movement and land-use reactions to vacant land in Detroit. She is the Porter Visiting Professor in Urban and Environmental Planning at UVA for fall 2016. Among her books are: *Redevelopment and Race: Planning a Finer City in Postwar Detroit* (Johns Hopkins Press, 1997/Wayne State University Press, 2013) and *Cities After Abandonment*, co-edited with Margaret Dewar (University of Pennsylvania Press, 2013).

Matt Tyrnauer is the director-producer of *Citizen Jane: Battle for the City*, a new, yet unreleased feature length documentary on Jane Jacobs. His productions include the feature film, *Valentino: The Last Emperor*. *Valentino* premiered at the 2008 Venice Film Festival and won the top documentary prize at the Chicago Film Festival. It was one of the highest-grossing documentaries in 2010 and was short-listed for an Academy Award for best documentary feature.

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JANE JACOBS SYMPOSIUM

THE MODERNITY OF WORK AND PLACE: JANE JACOBS AND THE DESIGN OF THE 21ST CENTURY CITY

Nov. 18-19, 2016
Charlottesville, VA

www.arch.virginia.edu/jane-jacobs-symposium

Friday 11.18.16

(UVA School of Architecture, Campbell Hall)

8:30am
Book Signing

9:00am
Welcome—**Ila Berman**
Dean, UVA School of Architecture

9:10am
Cities That Work: Knowledge, Scope, & Scale

Moderator:
Daphne Spain
Professor of Urban and Environmental Planning, UVA

Presenters:
- **Sonia Hirt**
Dean, School of Architecture, Planning, and Preservation, University of Maryland

- **Stephen Goldsmith**
Associate Professor, University of Utah, Director, Center for the Living City

- **June Manning Thomas**
Centennial Professor of Urban and Regional Planning, University of Michigan

10:30am
Break

10:45am
City Complexities: Streets, Neighborhoods, & Economies

Moderator:
Jennifer Giovannitti
Manager, Regional Community Development, Federal Reserve Bank of Richmond

The Failure of America's First City Plan
- **Maureen Brady**
Associate Professor of Law, UVA

Jane Jacobs#Toronto#2041
- **Mona El Khafif**
Associate Professor of Architecture and Urban and Environmental Planning, UVA

Jane Jacobs: Credentials, Education, & Economic Growth
- **Stuart Andreason**
Senior Advisor, Community and Economic Development, Federal Reserve Bank of Atlanta

(Jefferson School African American Heritage Center)

12:45pm
Welcome & Introductions—
- **Andrea Douglas**
Executive Director, Jefferson School African American Heritage Center

- **Kathy Galvin**
Charlottesville City Council

1:00pm
Keynote—**Cities of Equity: Environmental Justice & the City**

- **Sheila Foster**
University Professor and Co-Director, Urban Law Center, Fordham University

2:00pm
Cities That Exclude: Jacobs on Race, Redlining, & Renewal

- **Roberta Gratz**
Urban critic, author, and journalist, Founder of Center for the Living City with Jane Jacobs

3:30pm
FILM
(Newcomb Hall Theatre)
Citizen Jane: Battle for the City
- **Matt Tyrnauer**
Director-Producer

A new, yet unreleased feature length documentary on Jane Jacobs will be screened for conference attendees by special arrangement with the film's underwriters.

Saturday 11.19.16

(UVA School of Law, Caplin Pavilion)

9:00am
Welcome—**Risa Goluboff**
Dean, UVA School of Law

9:10am
Cities and New Work: Local Economies and Their Limits

Moderator:
Shannon McKay
Research Manager, Community Development, Federal Reserve Bank of Richmond

Presenters:
- **Peter Laurence**
Graduate Director and Associate Professor, School of Architecture, Clemson University

- **Santiago Pinto**
Senior Policy Economist, Federal Reserve Bank of Richmond

10:15am
Break

10:30am
Can Cities Govern? A Discussion of Rich Schragger's *City Power: Urban Governance in a Global Age*

Moderator:
Rich Schragger
Professor of Law, UVA

Presenters:
- **Michelle Wilde Anderson**
Professor of Law, Stanford University

- **David Imbroscio**
Professor of Political Science and Urban and Public Affairs, University of Louisville

- **Sheila Foster**
University Professor and Co-Director, Urban Law Center, Fordham University

1:00pm
Jane Jacobs Walk

- **Stephen Goldsmith**
Associate Professor, University of Utah

- **Reid Saunders**
Fellow, Community Design Research Center

Speakers and Moderators

Michelle Wilde Anderson is a professor of law at Stanford Law School. She is a public law scholar and practitioner with degrees in both law and regional and urban planning. Her focus is on state and local government, including urban policy, city planning, local democracy, and public finance. Her work combines legal analysis with the details of human experience to understand the local governance of high poverty areas, both urban and rural, and the legal causes of concentrated poverty and fiscal crisis. Her current research explores legal restructuring (such as bankruptcy, disincorporation, and receiverships) for cities and counties in distress.

Stuart Andreason is the senior community and economic development adviser, specializing in human capital and workforce development, at the Federal Reserve Bank of Atlanta. His major fields of study are workforce and human capital development policy and economic development policy, with a specialization in labor market and socioeconomic conditions in metropolitan areas.

Ila Berman, DDes MRAIC, is the dean of the UVA School of Architecture and the Edward E. Elson Professor. Before coming to UVA, she was the associate dean of the Tulane School of Architecture, director of architecture at California College of the Arts in San Francisco, and, most recently, the O'Donovan director of the School of Architecture at the University of Waterloo. She is an architect and theorist whose research explores the relationships between contemporary culture and the manifold material and spatial practices in architecture, urbanism and landscape. She is a principal at the design firm SCALESHIFT located in Toronto. She is the co-author with Douglas Burnham of *Expanded Field: Architectural Installation Beyond Art* (Applied Research and Design, 2014).

Maureen Brady is an associate professor at the UVA School of Law. Her primary teaching and research interests are in property law, land use law, local government law, legal history, and intellectual property law. Her scholarship undertakes historical analyses of legal rules and land use policies, using these analyses to account for developments in eminent domain law, to illuminate connections between property and other doctrinal areas, and to explore how different institutions respond to problems in city planning and governance.

Andrea Douglas is the executive director of the Jefferson School African American Heritage Center. The Center's mission is to honor and preserve the rich heritage and legacy of the African-American community of Charlottesville-Albemarle, Virginia and to promote a greater appreciation for, and understanding of, the contributions of African Americans and peoples of the Diaspora locally, nationally and globally. An art historian, she was curator of collections and exhibits and the curator of contemporary art at the UVA Art Museum from 2004-2010.

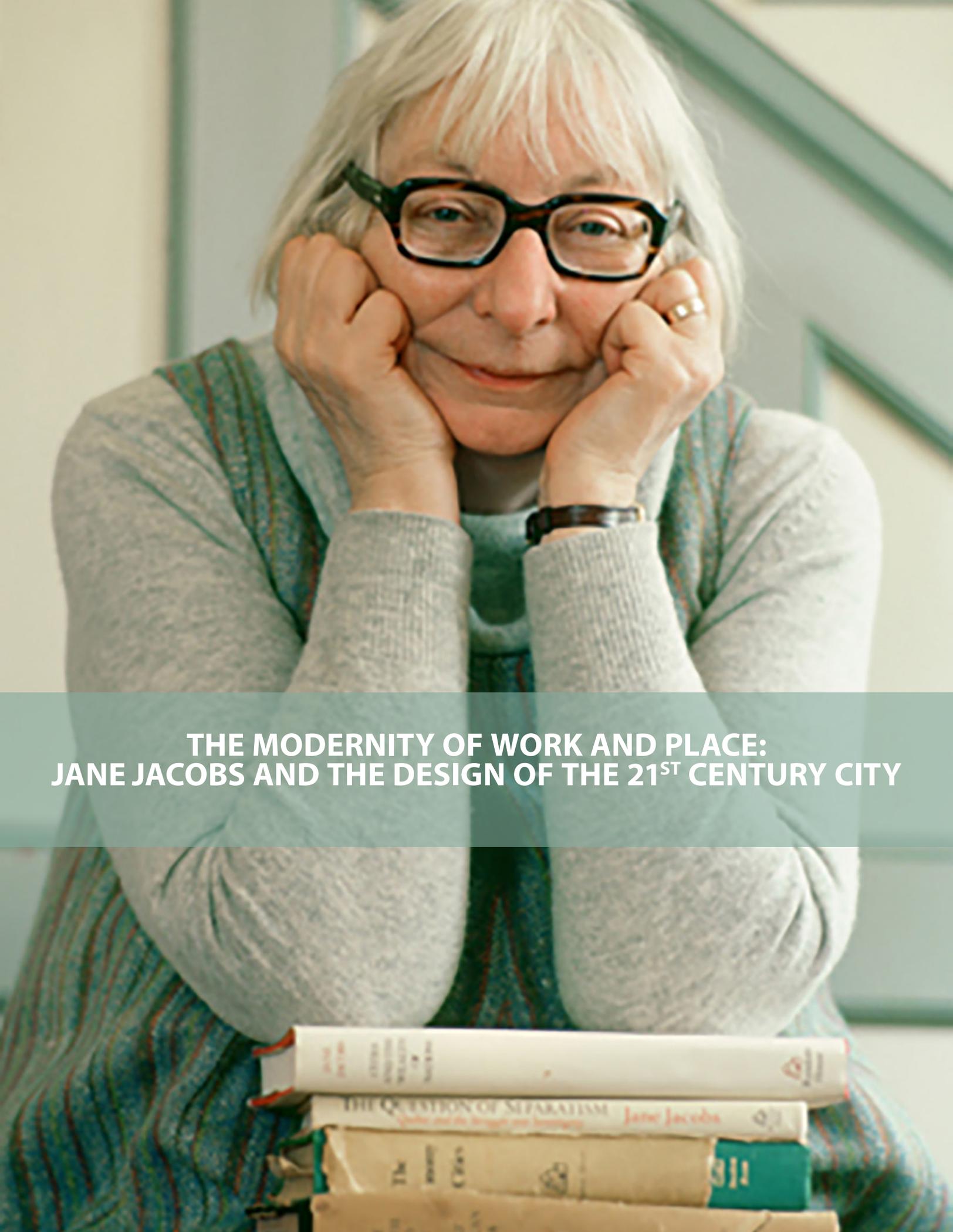
Mona El Khafif, Dipl. Ing. bei CCA, is an associate professor of Architecture and Urban and Environmental Planning at UVA. Before coming to the University, she was an associate professor at the School of Architecture at the University of Waterloo and co-director of the school's DATAlab. Her current research operates at multiple scales, examining the interdisciplinary aspects of urban regeneration strategies, place making, and urban ecologies. She is a principal in the design firm SCALESHIFT located in Toronto. She is the author of *Staged Urbanism: Urban Spaces for Art, Culture and Consumption in the Age of Leisure Society* (published in German in 2009 under the title "Inszenierter Urbanismus").

Sheila Foster is University Professor and the Albert A. Walsh Professor of Real Estate, Land Use and Property Law at Fordham University. She is also the faculty co-director of the Fordham Urban Law Center. She served as vice dean of the Law School from 2011-2014 and associate dean for academic affairs from 2008-2011. Among her books are: *The Law of Environmental Justice: Theories and Procedures to Address Disproportionate Risks* (2nd Edition) co-edited with Michael B. Gerrard (American Bar Association, 2008); and *From the Ground Up: Environmental Racism and the Rise of the Environmental Justice Movement* with Luke Cole (NYU Press, 2001).

Kathy Galvin has been a member of the Charlottesville City Council since 2011. She serves on the Thomas Jefferson Planning District Commission (vice-chair), Rivanna Water and Sewer and Solid Waste Authorities, Piedmont Workforce Network, School Capital Improvement Projects Committee, and the Charlottesville Development Corporation, and the Placemaking, Livability and Community Engagement (PLACE) design task force. A licensed architect, she has owned an urban design and architectural practice since 1993.

Jennifer Giovannitti, AICP, CEcD, is the Regional Community Development Manager with the Federal Reserve Bank of Richmond where she works to identify and address challenges confronting low- and moderate-income communities. Jen specializes in engaging communities in Central Appalachia and focuses much of her attention on issues related to small business lending, community financing, and workforce development. In addition to planning in the United States, Jen conducted research on the household economy in Ho Chi Minh City, Vietnam through a graduate research fellowship.

Stephen Goldsmith is the director of the Center for the Living City, an organization that advances the observations of Jane Jacobs. He is also an associate professor in the Department of City and Metropolitan Planning at the University of Utah. He served as Planning Director of Salt Lake City during the preparations for the 2002 Winter Olympic Games. A sculptor, he was the founding director of Artspace, a community development corporation creating affordable housing and workspace for artists. He is the co-editor with Lynne Elizabeth of *What We See: Advancing the Observations of Jane Jacobs* (New Village Press and the Center for the Living City, 2010).



**THE MODERNITY OF WORK AND PLACE:
JANE JACOBS AND THE DESIGN OF THE 21ST CENTURY CITY**