





# CITIES ALIVE

*Jane Jacobs, Christopher Alexander,  
and the Roots of the  
New Urban Renaissance*

MICHAEL W. MEHAFFY

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New Urban Renaissance

By Michael W. Mehaffy, Ph.D.

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## INTRODUCTION:

### *Why cities are the problem, but cities are the answer too*

*“A growing number of people have begun, gradually, to think of cities as problems in organized complexity--organisms that are replete with unexamined, but obviously intricately interconnected, and surely understandable, relationships...”*

— *Jane Jacobs, The Death and Life of Great American Cities (1961)*

*“People used to say that just as the 20th century had been the century of physics, the 21st century would be the century of biology... We would gradually move into a world whose prevailing paradigm was one of complexity, and whose techniques sought the co-adapted harmony of hundreds or thousands of variables. This would, inevitably, involve new technique, new vision, new models of thought, and new models of action. I believe that such a transformation is starting to occur... To be well, we must set our sights on such a future.”*

— *Christopher Alexander, The Nature of Order*

In December 2016, the 193 member states of the United Nations adopted by consensus a document known as the “New Urban Agenda.” This historic declaration, the outcome of the UN’s “Habitat III” conference in October of that year, crystallizes several generations of reform in our thinking about cities and towns. It also focuses our attention on the daunting challenges ahead, in which cities and towns will play such an increasingly important role.

In a sense, the New Urban Agenda only formalizes a set of reforms that are already well under way, and that are the subject of this book. (The Agenda itself is also discussed in more detail in Chapter IV.1.) Thankfully, the benefits of these changes can already be seen in many cities and towns around the world, where once-dangerous or polluted neighborhoods are now thriving with activity; once-empty historic districts, formerly with little to offer but ugliness and despair, are now thriving and beautiful; and once-sprawling suburbs are now more diverse, more walkable, and more ecologically sustainable.

These are clear and hopeful signs that an urban renaissance is under way — a revival of our ability to make more beautiful, more

**Opposite:** *Cities at night, seen from the International Space Station. Photo: NASA*

ecological, and more successful places, from a human point of view. Moreover, there is intriguing evidence that the connection between the ecological quality of a settlement, its beauty, and its success from a human point of view, are all structurally inter-connected — a topic we will explore later in this book. Of course, much more remains to be done, and that too will be a subject of the book.

It is of course easy to focus on the many problems of cities — over-gentrification, displacement, ugly new developments, gated communities, sprawling suburbs, car dependence, pollution, habitat destruction, and all the other things we have gotten so wrong about cities in the last half-century or so. This book will discuss these things in due course. But it will do so from the perspective of what we have more recently gotten *right* about cities, with a focus on two people who have articulated these improvements with remarkable lucidity. Their work, along with many others', has paved the way for the urban renaissance that is now well under way.

Even so, from a longer historic perspective this remarkable transformation has barely begun, and its future course remains to be shaped (I hope by readers of this book, among others). As I will discuss, its achievements are far from secure, and the book will discuss some of its more notable threats, both external and self-induced (over-gentrification is a troubling example of the latter). But I aim to show that what is already happening is tapping into something deep and powerful about cities, and about human settlements in general — about the nature of life in general, and city life in particular.

So to tell the story of this renaissance, I will focus on two of its most interesting and, I think, revealing figures: the American-Canadian urbanist Jane Jacobs, and the English- American architect Christopher Alexander. I will do this for two reasons: first, each of them played a notable role in helping to bring about these changes, with highly influential works on the nature of cities beginning in 1961 and 1965, respectively. Secondly, each of them is a deep thinker about the nature of settlement, planning, design, technology — and the other related issues that we still face today. Together, their thinking has intriguing and revealing overlaps and synergies. They will serve as very good guides to our present challenges, I think.



When I speak of cities in this book, I am not only speaking of the big dense cores of major cities. Cities come in a wide range of sizes, and always have. Athens in the time of Pericles was barely 70,000 people, whereas Rome in the time of Julius Caesar was closer to one million. We focus perhaps too much of our attention on the largest cities of modernity, and especially, too much on their cores. Although these are important, so are the smaller cities and towns that have always shaped human life for a large percentage of humanity. For that reason, our purview in this book — perhaps even more than Alexander’s, and certainly more than Jacobs’ — will include *all* kinds of cities and suburbs and towns, large and small.

Just now almost everyone is aware that we face enormous challenges in the years ahead, including the depletion of critical resources, alarming changes in climates and ecosystems, toxic effects of production, geopolitical and economic instability, and — less obvious but no less serious — chaotic transformations in our technologies, in our cultures, and ultimately in the capacities of human civilizations. This is a daunting set of difficulties, to be sure. But human life has been full of no less existential threats, and we have persevered — even after nearing the brink of extinction, as the evidence now shows. We seem to have an innate capacity to survive, by adapting, innovating, and reforming our technology. That is a hopeful trait.

In all of our current challenges, cities — again, in the broad sense of urban settlements — loom very large. It is within the structures of these urban settlements that we consume, interact, create, and ultimately generate the impacts that now prompt such growing concern. But it is also within them that we develop as human beings and as a species — that we create, innovate, adapt and problem-solve. It is in these settlements that we create a civic framework by which we may work together on shared opportunities and challenges.

The renaissance of which I speak is ultimately just this: a revival of our capacity to live well together in settlements, to work together to adapt to our constraints, to create and develop new and well-ordered structures, to improve our quality of life, and to provide the likely basis for the vast majority of humanity to be well in the future.

The hopeful message of both Jane Jacobs and Christopher Alexander is that we *do* have the inherent capacity to grow and adapt in just this way. Their shared message is that we have a particular capacity within our settlements, our cities, that we can put to work

for us, and that is far stronger than we yet realize. We have the ability to develop new solutions, combined with the genius of old and even ancient ones.

As I hinted earlier, this book will take note of one interesting and surprisingly important fact. In this renaissance, as in the more famous one half a millennium ago, the phenomenon of beauty will play an outsized role. It is the deeper beauty of a life well lived, of a street full of people and vegetables and sunlight and energy. It is something much deeper than the superficial and manipulative beauty of a consumer product or even an exotic artwork. In fact, I will suggest that the treatment of beauty as a superficial or “psychological” quality is a sign of the obstructions we have let creep into our lives — the powerful but damaging forces of industrialized, consumer-marketed built environments, and the objectivist pseudo-sciences on which they are based. As Christopher Alexander has argued, their ugliness is a sign of a much deeper structural dysfunction. But it is a dysfunction that can be repaired, a pathology that can be healed. That is what this renaissance is all about, in the end.

I will argue that this renaissance is, in fact, a transformation in the way we think of beauty, of quality, and of life. It is a determined mastery of the technological abstractions that are, on the one hand, our powerful agents, but if we are not careful — and we have not been nearly careful enough — our destructive masters. This situation compels our ethical responsibility as professionals and as citizens. But even more important, it compels our understanding, of what Jane Jacobs called “the kind of problem a city is.” We could add, following historically recent scientific advancements, that we need to understand “the kind of problem that *life* is,” as a form of “organized complexity.” That too was a point that Jane Jacobs made, in her early and insightful observation in the brilliant last chapter of her first book, *The Death and Life of Great American Cities*.

This is a common theme for both authors, and so it will be a notable theme of this book. While both Jacobs and Alexander have celebrated and promoted the life and beauty of cities, each of them has also articulated powerful critiques of the traps we have laid for ourselves within modernity, and modern city-making. Each of them has also appealed to a rigorous, evidence-based kind of science to work our way through our challenges. Each of them has expressed a willingness to stand or fall on the evidence, to be falsified, and thereby

to transcend the pseudo-scientific weakness of so much “modern” planning and design theory. (Although this point is poorly understood, and each in turn has been accused of precisely the opposite — a point we will come back to later in the book.) Both of them are confident that we *can* learn from our mistakes as we have done in the past, and that we can harness the power of cities for the future. These two aspects of cities — what is good about them, and what has also gone wrong in critical respects, and must be put right — are the twin sides of the story this book will tell. Along the way it will tell a deeper story too, about design, technology, science, and culture.



The term “iconoclast” has been applied to both Jane Jacobs and Christopher Alexander more than once, and for good reason. Both were icon-smashers within the sacred iconographies of modern architecture and urbanism, although each did so with a distinct emphasis. Jacobs opened her first and most influential book, *The Death and Life of Great American Cities* (1961), by describing it as an “attack” on conventional city planning. Alexander opened one of his most influential papers, “A City is Not a Tree” (1965), by noting that most non-architects, “instead of being grateful to architects for what they do, regard the onset of modern buildings and modern cities everywhere as an inevitable, rather sad piece of the larger fact that the world is going to the dogs.”

Nor did either author confine their criticisms to architecture or urban planning, as this volume will explore. Each confronted broader issues of technology and culture, delving more deeply into those issues as their careers progressed — finding and reporting results that surprised even them. Both also explored deeper themes of modernity and its promises, and at the same time, both offered detailed structural critiques of the failures of modern industrial civilization, always with a focus on its systems of design, planning and building, especially the systems of city-building.

Neither, however, was an anti-modernist reactionary, or a despairing postmodernist. Both were, in an important sense, believers in the “project of modernity” — the treasury of thousands of years of philosophical reasoning and scientific advancement in understanding nature, culture, justice, and ethics, in the face of life’s challenges

to humanity. Both saw paths forward, rooted in science and reason, but also informed by a rich new sense of nature and its awesome, even transcendent complexities. In both cases, their iconoclasm was not an attack upon the progress of the Enlightenment, but a demand that its promises be fulfilled, that its failings and its dishonesties be confronted: that we learn and grow from our painfully evident mistakes.

It should be remembered that both Jacobs and Alexander spent their formative periods as members in good standing of the architectural establishment of their day. This is particularly easy to forget, since today they are both seen as quintessential outsiders and critics. But it was Jacobs who had been a respected journalist for *Architectural Forum*, writing admiringly about the modernist urban projects she later criticized. It was Alexander who was awarded the first Ph.D. in architecture at Harvard University, and who, as he tells it, interacted very happily with the then-elderly Walter Gropius — the man who brought the modernist architectural establishment to Harvard, and arguably, to the world.

That Jacobs and Alexander became two of the most influential critics of the same architectural establishment is an interesting and I think revealing story, with implications of great value to us even today. In both cases, they did not become critics by virtue of adopting contrarian “outsider” ideologies, but rather, by working *within* the logic of the establishment, and following their own quests for the truth within it — wherever those quests may have led them. When the result was inconsistency and evident failing, each in their own way confronted their assumptions, and each was forced by their own experiences — often painfully and slowly — to develop new ideas. That these new ideas were also at odds, often violently at odds, with the reigning orthodoxies, was clearly a surprise to them as much as to anyone.

But there is much more to the story than architectural or urban criticism. As this volume will explore, each felt compelled to develop broader ideas about history, culture, and ultimately nature — ideas with an intriguing overlap, as we will explore. In each case, the ideas have since turned out to be remarkably useful to many people outside the architecture and planning worlds. There is reason to think that much more use remains to be found in their partially overlapping, partially complementary ideas.

In a broader sense, each offers us a useful “critique of modernity” — a map of where we have begun to go wrong in our built environment, and in the cultural systems that produce it, and what we can actually do about this state of affairs. Each draws remarkably specific conclusions about what we will need for the future — the strategies, tools, habits of thinking, and notably, safeguards against the limits of reason and our common fallacies of thought and action. While each is known as a theorist — a term that has earned, in the era of modern design, a reputation as mere idle speculation — in reality each offers a most practical basis for confronting the challenges ahead.

As the philosopher Bertrand Russell put it, “there is nothing so practical as a good theory”.



This book assumes a general familiarity with Jacobs and Alexander as personages without assuming detailed knowledge of their works or ideas. For those readers who already have detailed familiarity with one or both, some of the material will necessarily cover old ground. However, the goal will be to provide a sufficiently fresh enough perspective to make the book interesting for any reader, regardless of their level of familiarity.

This book will focus on the ideas of each author, and their overlapping relationships. I will not consider biographical details except as they are required to tell this story. There are a number of excellent biographies of both Jacobs and Alexander, some of them included in the “Further Reading” section at the end of the book.

Readers looking for incisive critiques of the shortcomings of these two authors (real or imagined) can also find them in a great many other books and articles elsewhere. There is surely ample material to discuss regarding their shortcomings (as with any author), but the purpose of this book is different. While not a hagiography, it will forthrightly consider what positive (and interrelated) contributions these two authors have made to our understanding of cities, and how their work has been beneficial — and may be more so in the future. If that is not your interest, this book is probably not for you.

The structure of the book will include a section to assess each thinker’s ideas in detail, starting with Jacobs and then proceeding to Alexander. In some ways that allows us to start at the largest scale of

cities, with Jacobs, and proceed to the scale of buildings, crafts, and the detailed shaping of human environments, about which Alexander has had more to say than Jacobs. At the same time, it should be remembered that both had considerable overlap at almost all scales, from the regional to the crucial scale of human beings and their experiences of built environments. Indeed, the connectivity of urban structure across scales is another theme that is common to both authors.

The third section will consider the philosophical implications, making the argument that both authors point to a new form of “structuralism” — that is, a deeper understanding of nature as a kind of structural network between events as we experience them, and as we apply the tool of language, both to model and to regenerate them. In some ways, this “neo-structuralism” helps us to resolve age-old dualities between the subjective and objective, “matter” and “spirit”, and perhaps most importantly, “fact” and “value”. This potential re-unification of the worlds of value and fact has its echoes in the writings of many other authors as well, as I will briefly discuss. No less so, their “critique of modernity” certainly has many echoes in the writings of prominent philosophers from the Enlightenment up to the present day.

The fourth section explores several key challenges and opportunities in the contemporary world considering what Jacobs’ and Alexander’s insights contribute to those discussions. It is here that we will explore the UN’s “New Urban Agenda,” the possibilities of a “new” (or revived) urbanism, the impacts of climate change, the challenges of the current rapid urbanization, and the problems of gentrification, affordability, displacement, inequality, and related contemporary issues.

The fifth section considers the practical conclusions to be drawn from both authors, and presents several practical “takeaways” for the challenges ahead. That section also includes hopeful examples of cities and towns that are demonstrating aspects of this new urban renaissance, including photos and notes. A concluding chapter makes note of some unresolved questions, and topics for further exploration.



**SECTION I:**

JANE JACOBS ON “THE KIND OF  
PROBLEM A CITY IS”



# 1. CITIES OF DIVERSITY

*There is a quality even meaner than outright ugliness or disorder, and this meaner quality is the dishonest mask of pretended order, achieved by ignoring or suppressing the real order that is struggling to exist and to be served."*

— *Jane Jacobs, The Death and Life of Great American Cities*

Jane Jacobs began her first and most influential book with these words: "This book is an attack on current city planning and rebuilding." *The Death and Life of Great American Cities* (1961) was indeed a frontal assault on then-current urban orthodoxy, and by all accounts an effective one. But the book was also a passionate defense, of human life and of the human processes that were going on in the urban places she observed. Many of these places were under grave threat in the era of "urban renewal," when the older, messier parts of cities were supposed to be replaced with fresh new "modern" environments. That benign-sounding name, "urban renewal," obscured the fact that there was very little renewal, and much more wholesale destruction of the life of large parts of cities, to be replaced by something else: an abstract idea about life, perhaps.

For that reason, it mattered a great deal whether the agents of urban renewal had sensible ideas about these parts of cities: how well they understood what was good about these neighborhoods, and how well, under their stewardship, the new projects were able to regenerate those qualities. On the evidence, it seemed that they understood these qualities very poorly indeed. As a consequence, the new projects were, in many ways, dismal failures (as extensive research literature demonstrates).

In a deeper sense, the book was an incisive critique of that era's (and perhaps still this era's too) dominant way of thinking about cities. "Functional segregation" was supposed to be the way to cure the ills of cities: sort out the tangle of problems by segregating potential conflicts from one another, with housing in one place, workplaces in another, and civic uses in still another. Create a "rationally ordered" structure, not unlike an early industrial machine. The fuel goes in

**Opposite:** *The weekend street market in the San Telmo neighborhood of Buenos Aires draws residents from all over the city.*

here, the ignition happens there, the motion happens over there, and so on. The result is smooth, orderly, predictable.

It was not a coincidence that the personal automobile, the apotheosis of the 20th Century machine age, came to dominance in this same period — or that the sleek futuristic architecture that everyone so admired in the most popular exhibit in the 1939 World's Fair was built by General Motors, the world's largest car company. Futurama held out a utopian vision of a highly ordered and powerful civilization, a kind of gigantic machine packaged in sleek minimalist design. Everyone would be whisked almost effortlessly to whatever destination they chose in their own personal car. The city itself would become a kind of machine for serving up whatever we needed or wanted. This was the well-ordered consumer paradise that awaited, like a promise, beyond the suffering and the irrational chaos of the war years.

By the mid-1950s, General Motors and other US companies were working with the government to deliver on the promise. In 1956, the year that the Federal-Aid Highway Act was passed creating the US Interstate Highway System, General Motors also ran a revealing featurette on American television called *Design for Dreaming*. It showed a couple flying along on an uncrowded freeway, over a silent nighttime city, full of fantastic lights and forms, like children's toys:

*Tomorrow, tomorrow, our dreams will come true!  
Together, together, we'll make the world new!  
Strange shapes will rise out of the night,  
but our love will not change, dear —  
It will be like a star burning bright,  
lighting our way, when tomorrow meets today!*

By today's standards, that earnest featurette is laughably absurd: the jet-like tail fins on the cars, the empty freeways, the sheer naïveté of starry-eyed utopianism. A mere decade later, the real nature of the modern post-war city had begun to reveal itself: ugly monotonous development, chaotic traffic jams, relentless suburban sprawl, and the accelerated decline of once-vibrant urban cores, into cities of poverty, unrest and protest.

This was where urban renewal was supposed to do some good. Visionaries like Robert Moses, New York's powerful Parks Commissioner — later notorious for his freeway-building proposals through Greenwich Village, New Orleans' French Quarter and other treasured

neighborhoods — saw the cores of cities as “slums” to be cleared and replaced with the beneficially “strange shapes” of the architects, making the world new. Everyone would have a clean and sanitary dwelling, with light and air and all the other benefits of modernity.

It didn’t work, of course, and in just a few decades, once-utopian projects like Pruitt Igoe and Cabrini Green had fallen into dystopian ruin, plagued by vandalism, crime and despair. Worse, the urban fabric that had once existed, and provided an under-appreciated network of social connections, was now gone — and with it, any ideas about what could make a good place to live.

This is where Jacobs was more than a critic, and where she offered a solid idea of what made a city work for people. In place of machine-like functional segregation, she advocated diversity and mixing. In place of “loose sprawls” and “project land oozings” around towering modernist art-objects, she argued for coherent public space systems shaped by well-formed streetscapes, squares and parks. In place of super-block “projects” isolated by “border vacuums” she advocated a continuous fabric of interconnected urbanism.

The city was thus a place where contacts and connections were possible, where human presence made people safer, and where interactions between diverse people of diverse capabilities could create new opportunities. It was a kind of living tissue of urbanism, a network of people and spaces, from the most public to the most private.

Most important, this kind of city maintained a continuous level of connectivity right across its fabric, from the largest regional scales right down to the scales of sidewalks and building entries. Where an urban use interrupted this continuous fabric, it was critical to find ways to weave it back together, at a minimum spacing. That was true for rivers, railroad tracks and freeways, but it was no less true for parks, campuses and even neighborhoods.

When we allowed the city to be fragmented, the result was a phenomenon she called a “border vacuum” — a dead zone, not unlike the dead zone around a hole eaten by a caterpillar through a leaf. As the capillaries get cut off and the nutrients no longer flow, the tissue around the hole also dies. So it was for urban neighborhoods at these border vacuums: as the flow of people and goods gets interrupted — the so-called “movement economy” — the activities at the edges also decline. Businesses close, shopfronts get boarded up, and neighborhoods enter a death spiral.

This is precisely what Jacobs observed at the edges of Robert Moses' freeway projects, but also at the edges of many other kinds of single urban uses. It happened when Le Corbusier's gigantic monocultural housing projects were inserted into the urban fabric (like the aforementioned Cabrini Green and Pruitt Igoe). It also happened when the City Beautiful advocates created monocultural "civic campuses" composed of government buildings, libraries, museums and the like. And it also happened when the Garden City advocates created suburban "new towns" with segregated "wards" of housing here, commercial there, workplaces over there.

In all these cases, functional segregation — and the disruptive effect it had on mixing across scales, down to the finer grains — had the effect of fragmenting the parts of the city, creating discontinuities and border vacuums. In all the cases, the answer was to restore the continuous urban fabric, and the diversity of mixing that it allowed and supported.

For Jacobs, diversity was the crucial ingredient of all great cities: diversity of people, of activities, of building ages and types, of kinds of contact and interaction. The structure of the city needed to support this diversity, by supporting physical connectivity and access at all scales, at a minimum threshold of compactness, with a minimum scale of connectivity across relatively small blocks.

At the same time, many people had responsibility, at different scales, to shape the growth of the city — from mayors to local shop owners. Their actions had to support and encourage urban diversity, as a process as well as a product. This overlapping system of stewardship would later be called "polycentric governance" by the economist Elinor Ostrom. Formal *government*, in this view, needs to be supplanted with many other forms of *governance*, formal and informal, across many scales. They might include overlapping government jurisdictions, but also NGOs, neighborhood associations, business districts, business owners, and residents, all acting at a variety of scales to support the health of their neighborhoods and cities.

This process is hardly harmonious, of course. Cities are full of conflicts, as Jacobs pointed out, just as humanity is full of conflicts. Our actions in meeting our own needs frequently come into conflict with others' actions. Cities are especially prone to these conflicts because of their concentration of diversity. We disturb one another

with noise; we crowd one another out; we block one another's access to light, air, view, free movement.

These things have to be sorted out, so that there is a reasonably equitable and just mediation between these conflicting freedoms of access, manifested in the built form of the city. In that sense, the structure of the city itself manifests a just (or as just as possible) mediation between conflicting freedoms (as my friend Paul Murrain has put it). This is, in fact, the political system of the city, the *polis*.

We go to the considerable trouble of making this arrangement because cities offer us something extremely important. It is commonly supposed that cities attract people because "that's where the jobs are." But that begs the question, *why* the jobs are in cities. Why is all employment not scattered across the countryside, as, say, agricultural employment typically is? This question consumed a large portion of Jane Jacobs' later work on cities, and she concluded that the city was far more than a cluster of convenience. Her answer was, in essence, that cities extend to the people within them a very special capacity for creative interaction and human development. This capacity has to do primarily with the kinds of networks of interaction that people can establish, rooted in the spatial networks of the city, and especially, its public spaces.

It is the opportunity that such spatial networks afford us that looms especially large in Jacobs' later work on economics.





## 2. CITIES OF OPPORTUNITY\*

*“Lowly, unpurposeful, and random as they may appear, sidewalk contacts are the small change from which a city’s wealth of public life may grow.”*

— Jane Jacobs, *The Death and Life of Great American Cities*

It is a remarkable phenomenon, bordering on miraculous, that a city like, say, 19th Century New York, can take penniless immigrants from Ireland or Italy or Poland, and in the space of a few decades, turn them (or their children) into shopkeepers and factory owners and lawyers and senators — and poets and artists and professors. This is what ultimately draws people to cities: not simply to secure “jobs” but to develop as human beings, which is to say, to improve health and well-being, to increase opportunities for women and (often smaller) families, and to expand the creative capacities and the wealth of human culture.

This is not a random process. Education is surely a part of it, but so is the expansion of opportunity within physical networks of potential collaboration. This human development can happen because there is something in the network of connections within cities that allows these opportunities to occur, manifested within real physical space occupied by real people. That physical space includes, at its most fundamental level, the public space of the city: its streets, squares, parks and plazas, where friends, strangers and (importantly) near-strangers can encounter one another.

Jacobs’ observations about how successful cities actually worked led her inevitably into the subject of urban economics. How do people create new knowledge, and new work? What is it about cities that makes this possible? Her answer was that people develop and exchange knowledge with one another within cities — not only with people they know well, in their own industries, but with other people they know less well, in other businesses or other entire industries. The subject of her work in this field came to be known as a “knowl-

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\* Portions of this essay were drawn from an essay written for the Congress for the New Urbanism blog “Public Square”. I am grateful to editor Rob Steuteville for his assistance.

**Opposite:** A woman tends her small shop on the street in Hanoi. Many shops are part of “shop houses” where shop owners live in the relatively affordable residences above.

edge spillover,” and her particular observation is now known in economics as a “Jacobs spillover.”

It was this, she found, that lay at the heart of the capacity that cities have to support the growth of knowledge exchanges and combinations, producing innovation and economic growth. This is how a city like 19th Century Detroit, for example, could become a new hub of economic expansion in the early 20th, in the entirely new and unheard-of field of automobile manufacturing.

In her book *The Economy of Cities* (1969), Jacobs noted that Detroit had two things going for it. One, the city was already a center of a diverse network of businesses related to of shipbuilding, which meant there was a great diversity of enterprises that would serve the new automobile industry well — makers of motors, wheels, pulleys, carriages and the like. Two, just as important, the city had a network of spatial connections between all these individuals and enterprises, not only within the existing companies, but outside of them. Workers could meet up and form new connections within a broad range of urban spaces, both private and public. This “mixing network” provided fertile conditions for the growth of new enterprises, and even a new industry — which is precisely what happened in due course.

Earlier, in *The Death and Life of Great American Cities*, Jacobs had spent a lot of time talking about “lowly” sidewalks, and their importance for creating safety, assimilating children, and providing the essential contacts on which the life of the city is built. It was not that sidewalks were the only place for making such contacts, but that sidewalks form an essential strand of what Robert Putnam has referred to as “multi-stranded” social connections.

This understanding of diverse networks, built on human-scaled public spaces including sidewalks and their edges, is the foundation on which her economic work was built. At heart, hers became an economic vision of the city — an understanding of the “organized complexity” of human activities and creations of wealth that the city makes possible. As we now understand from network science, this system gets its power not from a “command and control” approach from the top, but from a broadly interconnected, partly self-organizing network.

In essence, she argued, most of the economic benefits for the city are not generated by any kind of concentrated power center, but are actually the result of a broad form of socio-economic interaction all

across the city network, involving many small and mid-sized businesses and as well as start-ups. (And yes, a few big businesses too — though if they become too dominant the city can stagnate.) The many small-scale innovations within this mixing network compound to generate the wealth of the city, in part by replacing imports and eventually creating new exports, and in part by making possible creative synergies that are often unexpected.

It is this capacity that offers opportunity for many different people at many different scales — and not only at the top, in the form of either big companies or big government programs. (These large extremes dominate the attention of today's most prominent "right" and "left" ideologies, but for Jacobs, both of these ideological fixations miss the deeper point.) This inherent dynamic of cities can, if we put it to work for us, take penniless immigrants (as it did, say, in the example of New York that I gave earlier) and turn them into middle-class shopkeepers and manufacturers and professors and artists — and all the other economically and culturally creative people of the city.

It is true that much of the wealth of a city is temptingly visible at the top — and often in the city core, especially of late — but that does not mean it is wholly or even mostly generated there. But over-concentration of attention at the top, and in the core, not only fuels the wealth gap and the dynamics of gentrification, it distracts from the real engine of urban growth, according to Jacobs. The result is likely to be stagnation, loss of affordability, increasing segregation by income, declining quality of life, and a spiral of urban failure and re-crimination. I will have more to say about this problem later in the book.

For Jacobs, however, the real engine of growth is powered by many diverse people interacting within the continuous fabric of physical spaces of the city, including the crucial public realm — the sidewalks and other spaces where people encounter one another, share information, pass along contacts, and create the "knowledge spillovers" that are essential to innovative expansion. Within this continuous fabric, private social spaces are important too, of course, but the "glue" that binds them all together is the critical public realm. Cities are, in effect, "socio-economic reactors" that generate wealth, in the broadest sense of the term (including cultural wealth).

This is a more diffuse and less visible form of wealth production, but it is ultimately a more powerful one. In fact Jacobs argues that

this is the real wellspring of human development. Simultaneously, it is a way of increasing resource efficiency (because efficiency is financially rewarded) and reducing ecological impacts. This efficiency-trending dynamic goes a long way to explaining why compact mixed use cities can be, on a per capita basis, so much “greener” than more sprawling places, as my own research and many others’ has shown.

There is another, related implication. Of course it is possible, up to a point, to replace the diversified, continuous public realm of urbanism, and the catalytic growth it produces, with a system of segregated, machine-like capsules: automobiles, isolated offices and campuses, suburban housing monocultures, and the like. It is possible, in other words, to trade away a “natural human-capital city,” for an artificial kind of city that is nonetheless economically productive, at least in the short term. Indeed, we can see many examples in the US and other countries.

But this economic development is only possible with massive injections of resources — notably fossil fuels — at unsustainable rates. We could think of this this model as the “crack cocaine” of urban development: it will certainly produce a very quick and intense high, but one followed by a disastrous (in this case planetary) hangover.

This is the urban crisis that we now face. The world is rapidly urbanizing according to precisely this addictive model. We are on track to produce more urban fabric by area in the first five decades of the 21st Century than we have produced in all of human history. What will be the model, if not this one? How will we avert the catastrophic collapse that seems inevitable under the current unsustainable path? Those in the urban professions will certainly be challenged to respond to this crisis (for example, in implementing the “New Urban Agenda” that has just emerged from the UN conference on housing and sustainable development).

Will we continue to stake our entire future on this economic “crack cocaine high”? Or will we take a more hopeful view, and see the city (and town) as an engine of sustainable regeneration, taking the steps needed to unleash the powerful urban dynamics on offer?

The latter choice will demand of us a more subtle, more catalytic approach to urban growth — one more focused on harnessing and directing the self-organizing capacities of cities, towns, and neighborhoods. It will demand that we avoid pursuing the latest “silver bullet” — the big employer or big sports stadium — and focus on a

broader and more diversified form of urban economic development. It demands that we pay more attention to what Jacobs called “the kind of problem a city is” — and it is not the kind that we have too often supposed.