10TH ANNIVERSARY EDITION

THE RISE OF THE CREATIVE CLASS

Revisited

RICHARD FLORIDA

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BASIC BOOKS

A Member of the Perseus Books Group

New York

PREFACE TO THE ORIGINAL EDITION

This book describes the emergence of a new social class. If you are a scientist or engineer, an architect or designer, a writer, artist, or musician, or if your creativity is a key factor in your work in business, education, health care, law, or some other profession, you are a member. With 38 million members, more than 30 percent of the nation's workforce, the Creative Class has shaped and will continue to shape deep and profound shifts in the ways we work, in our values and desires, and in the very fabric of our everyday lives.

As with other classes, the defining basis of this new class is economic. Just as the feudal aristocracy derived its power and identity from its hereditary control of land and people, and the bourgeoisie from its members' roles as merchants and factory owners, the Creative Class derives its identity from its members' roles as purveyors of creativity. Because creativity is the driving force of economic growth, the Creative Class has become the dominant class in society in terms of its influence. Only by understanding the rise of this new class and its values can we begin to understand the sweeping and seemingly disjointed changes in our society and begin to shape our future more intelligently.

Like most books, this one did not spring to life fully formed. Rather, my ideas evolved gradually from things I saw and heard that seemed to be at odds with conventional wisdom. In my work on regional economic development, I try to identify the factors that make some cities and regions grow and prosper, while others lag

behind. One of the oldest pieces of conventional wisdom in this field says the key to economic growth is attracting and retaining companies—the bigger the company, the better—because companies create jobs and people go where the jobs are. During the 1980s and 1990s, many cities in the United States and around the world tried to turn themselves into the next "Silicon Somewhere" by building high-tech office parks or starting up venture capital funds. The game plan was to nourish high-tech start-up companies or, in its cruder variants, to lure them from other cities. But it quickly became clear that this wasn't working.

I saw this firsthand in the mid-1990s with Lycos, a Carnegie Mellon spin-off company. Lycos's Internet search technology was developed in Pittsburgh. But the company eventually moved its operations to Boston to gain access to a deep pool of skilled managers, technologists, and businesspeople. These departures were happening repeatedly, in Pittsburgh and elsewhere. All too often the technologies, the companies, and even the venture capital dollars flowed out of town to places that had bigger and better stocks of talented and creative people. In a curious reversal, instead of people moving to jobs, I was finding that companies were moving to or forming in places that had the skilled *people*.

Why was this happening? This was the basic puzzle that ultimately led to this book. Frustrated by the limits of the conventional wisdom and even more by how economic development was actually being practiced, I began asking people how they chose where to live and work. It quickly became clear to me that people were not slavishly following jobs to places. Their location choices were based to a large degree on their lifestyle interests and these, I found, went well beyond the standard quality-of-life amenities that most experts thought were important.

Then came the real stunner. In 1998 I met Gary Gates, then a doctoral student at Carnegie Mellon. While I had been studying

the location decisions of high-tech industries and talented people, Gates had been exploring the location patterns of gay people. My list of the country's high-tech hotspots looked an awful lot like his list of the places with the highest concentrations of gay people. When we compared the two lists with greater statistical rigor, his Gay Index turned out to correlate very strongly with my measures of high-tech growth. Other measures I came up with, like the Bohemian Index—a measure of the density of artists, writers, and performers in a region—produced similar results. My conclusion was that rather than being driven exclusively by companies, economic growth was occurring in places that were tolerant, diverse, and open to creativity—because these were places where creative people of *all* types wanted to live. While some in academe were taken aback by my findings, I was amazed by how quickly city and regional leaders began to use my measures and indicators to shape their development strategies.

As I delved more deeply into the research, I came to realize that something even bigger was going on. Though most experts continued to point to technology as the driving force of broad social change, I became convinced that the truly fundamental changes of our time had to do with subtler alterations in the way we live and work—gradually accumulating shifts in our workplaces, leisure activities, communities, and everyday lives. Everything from the kinds of lifestyles we seek to the ways in which we schedule our time and relate to others was changing. And yes, there was a common thread: the role of creativity as the fundamental source of economic growth and the rise of the new Creative Class.

Despite the giddy economic euphoria so prevalent in the late 1990s, it became increasingly evident to me that the emerging Creative Economy was a dynamic and turbulent system—exciting and liberating in some ways, divisive and stressful in others. My thinking was reinforced by earth-shaking events that occurred while I was

writing this book. First came the bursting of the stock-market bubble, the rapid fall of technology stocks, and the subsequent recession of 2000. This put an end to the naive optimism of the so-called New Economy and to the always unfounded notion that new technology is a magic elixir that will make us rich, eliminate our economic problems, and cure pressing social ills. The NASDAQ's plummet was an early signal that it was time for people to get serious.

Then came the tragic events of September 11, 2001. For me and for many others, the stunning attack on the United States was a potent wake-up call. In addition to showing us how vulnerable we are, it brought home the message that too many of us, particularly the members of the Creative Class, had been living in a world of our own concerns—selfishly pursuing narrow goals with little regard for others or for broader social issues. We had grown complacent, even aimless, but also discontent at having become so.

Here I found myself confronting a great paradox. Even as I was chronicling their rise and impact, it struck me that the members of the Creative Class do not see themselves as a *class*—a coherent group of people with common traits and concerns. Emerging classes in previous times of great transition had pulled together to forge new social mechanisms and steer their societies. But not this group. We thus find ourselves in the puzzling situation of having the dominant class in America—whose members occupy the power centers of industry, media, and government, as well as the arts and popular culture—virtually unaware of its own existence and thus unable to consciously influence the course of the society it largely leads.

The Creative Class has the power, talent, and numbers to play a big role in reshaping our world. Its members—in fact, all of society—now have the opportunity to turn their introspection and soul searching into real energy for broader renewal and transformation. History shows that enduring social change occurs not during economic boom times, like the 1920s or 1990s, but in periods of crisis

and questioning such as the 1930s—and today. The task before us is to build new forms of social cohesion appropriate to the new Creative Age—the old forms don't work, because they no longer fit the people we've become—and from there, to pursue a collective vision of a better and more prosperous future for all.

This is easier said than done. To build true social cohesion, the members of the Creative Class will need to offer those in other classes a tangible vision of ways to improve their own lives, either by becoming part of the Creative Economy or, at the very least, by reaping some of its rewards. If the Creative Class does not commit itself to this effort, the growing social and economic divides in our society will only worsen, and I fear that we will find ourselves living perpetually uneasy lives at the top of an unhappy heap.

It's time for the Creative Class to grow up and take responsibility. But first, we must understand who we are.

INTRODUCTION

CHAPTER 1

The Transformation of Everyday Life

Something's happening here but you
don't know what it is, do you, Mr. Jones?
—***Bob Dylan***

Here's a thought experiment. Take a typical man on the street from the year 1900 and drop him into the 1950s. Then take someone from the 1950s and move him Austin Powers–style into the present day. Who would experience the greater change?

At first glance the answer seems obvious. Thrust forward into the 1950s, a person from the turn of the twentieth century would be awestruck by a world filled with baffling technological wonders. In place of horse-drawn carriages, he would see streets and highways jammed with cars, trucks, and buses. In the cities, immense skyscrapers would line the horizon, and mammoth bridges would span rivers and inlets where once only ferries could cross. Flying machines would soar overhead, carrying people across continents and oceans in a matter of hours rather than days or weeks. At home, our 1900-to-1950s time-traveler would grope his way through a

strange new environment filled with appliances powered by electricity: radios and televisions emanating musical sounds and moving images, refrigerators to keep things cold, washing machines to clean his clothes automatically, and much more. A massive new supermarket would replace daily trips to foodmongers, offering an array of technologically enhanced foods, such as instant coffee and frozen vegetables that come overcooked and oversauced in a box. Life itself would be dramatically extended. Many once-fatal ailments could be prevented with an injection or cured with a pill. The newness of this time-traveler's physical surroundings—the speed and power of everyday machines—would be profoundly disorienting.

On the other hand, someone from the 1950s would have little trouble navigating the physical landscape of today. Although we like to think that ours is the age of boundless technological wonders, our second time-traveler would find himself in a world not all that different from the one he came from. He would still drive a car to work. If he took the train, it would likely be on the same line leaving from the same station. He could probably board an airplane at the same airport. He might still live in a suburban house, though a bigger one. Television would have more channels, color pictures, and bigger, flatter screens, but it would basically be the same, and he could still catch some of his favorite 1950s shows on reruns. He would know how, or quickly learn how, to operate most household appliances—even the personal computer, with its familiar QWERTY keyboard. In fact with just a few exceptions, such as the Internet, CD and DVD players, the cash machine, and wireless phones, computers, and entertainment systems that slip into his pocket, he would be familiar with almost all current-day technology. Perhaps disappointed by the pace of progress, he might ask: "Why haven't we conquered outer space?" or "Where are all the robots?"

On the basis of big, obvious technological changes alone, surely the 1900-to-1950s traveler would experience the greater shift,

whereas the other might easily conclude that we'd spent the second half of the twentieth century doing little more than tweaking the great innovations that had so transformed its first half.[1]

But the longer they stayed in their new homes, the more each time-traveler would become aware of subtler dimensions of change. Once the glare of technology had dimmed, each would begin to notice their respective society's changed norms and values, the different ways in which everyday people live and work. And here the tables would be turned. In terms of adjusting to the social structures and the rhythms and patterns of daily life, our second time-traveler would be much more disoriented.

Someone from the early 1900s would find the social world of the 1950s remarkably similar to his own. If he worked in a factory, he might find much the same divisions of labor, the same hierarchical systems of control. If he worked in an office, he would be immersed in the same bureaucracy, the same climb up the corporate ladder. He would come to work at 8:00 or 9:00 AM and leave promptly at 5:00, his life neatly segmented into compartments of home and work. He would wear a suit and tie. Most of his business associates would be white and male. Their values and office politics would hardly have changed. He would seldom see women in the workplace except as secretaries, and almost never interact professionally with someone of another race. He would marry young, have children quickly thereafter, stay married to the same person and probably work for the same company for the rest of his life. In his leisure time, he'd find that movies and TV had largely superseded live stage shows, but otherwise his recreational activities would be much the same as they were in 1900: taking in a baseball game or a boxing match, maybe playing a round of golf. He would join the clubs and civic groups befitting his socioeconomic class, observe the same social distinctions, and fully expect his children to do likewise. The tempo of his life would be structured by the values and norms of

organizations. He would find himself living the life of the "company man" so aptly chronicled by writers from Sinclair Lewis and John Kenneth Galbraith to William Whyte and C. Wright Mills.[2]

Our second time-traveler, however, would be quite unnerved by the dizzying social and cultural changes that had accumulated between the 1950s and today. At work he would find a new dress code, a new schedule, and new rules. He would see office workers dressed like folks relaxing on the weekend, in jeans and open-necked shirts, and be shocked to learn that some of them occupy positions of authority. People at the office would seemingly come and go as they pleased. The younger ones might sport bizarre piercings and tattoos. Women and even nonwhites would be managers. Individuality and self-expression would be valued over conformity to organizational norms—and yet these people would seem strangely puritanical to this time-traveler. His ethnic jokes would fall embarrassingly flat. His smoking would get him banished to the parking lot, and his two-martini lunches would raise genuine concern. Attitudes and expressions he had never thought about would cause repeated offense. He would continually suffer the painful feeling of not knowing how to behave.

Out on the street, this time-traveler would see different ethnic groups in greater numbers than he could ever have imagined—Asian, Indian, Afro and Latin Americans, and others—mingling in ways he found strange and perhaps inappropriate. There would be mixed-race couples, and same-sex couples carrying the upbeat-sounding moniker "gay." Although some of these people would be acting in familiar ways—a woman shopping while pushing a stroller, an office worker eating his lunch at a counter—others, such as grown men clad in form-fitting gear, whizzing by on high-tech bicycles, or women on strange new roller skates with their torsos covered only by "brassieres," would appear to be engaged in alien activities.

People would seem to be always working and yet never working when they were supposed to. They would strike him as lazy and yet obsessed with exercise. They would seem career conscious yet fickle—doesn't anybody stay with a company more than three years?—and caring yet antisocial: What happened to the ladies' clubs, Moose Lodges, and bowling leagues? Why doesn't everybody go to church? Even though the physical surroundings would be relatively familiar, the *feel* of the place would be bewilderingly different.

Although the first time-traveler had to adjust to some drastic technological changes, it is the second who experiences the deeper, more pervasive transformation. It is the second who has been thrust into a time when lifestyles and worldviews are most assuredly changing—a time when the old order has broken down, when flux and uncertainty themselves seem to be part of the everyday norm.

The Force Behind the Shift

What caused this transformation? What happened between the 1950s and today that did not happen in the earlier interval? Scholars and pundits have floated many theories, along with a range of opinions on whether the changes are good or bad. Some bemoan the passing of traditional social and cultural forms; others herald a rosy future based largely on new technology.

The real driving force is the rise of human creativity as the key factor in our economy and society. Both at work and in other spheres of our lives, we value creativity more highly and cultivate it more intensely than we ever have before. The creative impulse—the attribute that distinguishes us, as humans, from other species—is now being unleashed on an unprecedented scale. The purpose of this book is to examine how and why this is so, and to trace its effects as they ripple through our world.

Many say that we now live in an information economy or a knowledge economy. But what's more fundamentally true is that for the first time, our economy is powered by creativity. Creativity—"the ability to create meaningful new forms," as *Webster's* dictionary puts it—has become the decisive source of competitive advantage. In virtually every industry, from automobiles to fashion, food products, and information technology itself, the long-run winners are those who can create and keep creating. This has always been true, from the days of the Agricultural Revolution to the Industrial Revolution. But in the past few decades we've come to recognize it clearly and act upon it systematically.

Dean Keith Simonton, a leading scholar of the subject, describes creativity as the act of bringing something useful, that works, and is non-obvious into the world, or as he succinctly puts it, that is the "conjunction of novelty, utility and surprise."[3] It is a mistake to think, as many do, that creativity can be reduced to the creation of new blockbuster inventions, new products, and new firms. In today's economy, creativity is pervasive and ongoing: it drives the incremental improvements in products and processes that keep them viable just as much as it does their original invention. Moreover, technological and economic creativity are nurtured by and interact with artistic and cultural creativity. This kind of interplay is evident in the rise of whole new industries, from computer graphics to digital music and animation. Creativity also requires a social and economic environment that can nurture its many forms. Max Weber said long ago that the Protestant ethic provided the underlying spirit of thrift, hard work, and efficiency that motivated the rise of early capitalism. In a similar fashion, the shared commitment to the creative spirit in all its many manifestations is what underpins the new creative ethos that powers our age.

Thus, creativity has come to be the most highly prized commodity in our economy—and yet it is not a "commodity." Creativity comes

from people. And it annihilates the social categories we have imposed on ourselves. A Creative Economy requires diversity because every human is creative—creativity cannot be contained by categories of gender, race, ethnicity, or sexual orientation. And though people can be hired and fired, their creative capacity cannot be bought and sold, or turned on and off at will. Thus, our workplaces have changed and continue to do so. Schedules, rules, and dress codes have become more flexible to cater to how the creative process works. Creativity must be motivated and nurtured in a multitude of ways, by employers, by creative people themselves, and by the places we live. Capitalism has expanded its reach to capture the talents of heretofore excluded groups of eccentrics and nonconformists. In doing so, it has pulled off yet another astonishing mutation: taking people who would once have been viewed as bizarre mavericks operating at the bohemian fringe and placing them at the very heart of the process of innovation and economic growth. These changes in the economy and in the workplace have in turn helped to propagate and legitimize similar changes in society at large. The creative individual is no longer viewed as an iconoclast. He—or she—is the new mainstream.

In tracing economic shifts, I often say that our economy is moving from an older corporate-centered system defined by large companies to a more people-driven one. This view should not be confused with the unfounded and silly notion that big companies are dying off. Nor do I buy into the fantasy that our economy is being reorganized around small enterprises and independent "free agents."[4] Companies, including very big ones, obviously still exist, are still influential, and almost certainly always will be. I simply mean to stress that as the fundamental source of creativity, people are the critical resource of the new age. This has far-reaching effects—for instance, on our economic and social geography and the nature of our communities.

It has often been said that in this age of globalization and modern communication technology, "geography is dead," "the world is flat," and place no longer matters.[5] Nothing could be further from the truth. Place has become the central organizing unit of our time, taking on many of the functions that used to be played by firms and other organizations. Access to talented and creative people is to modern business what access to coal and iron ore was to steelmaking. It determines where companies will choose to locate and grow, and this in turn changes the ways that cities must compete. As I once heard Carly Fiorina tell this nation's governors when she was CEO of Hewlett-Packard: "Keep your tax incentives and highway interchanges; we will go where the highly skilled people are."[6] In this environment, it is geographic place rather than the corporation that provides the organizational matrix for matching people and jobs.

The New Class

The economic need for creativity has registered itself in the rise of a new class, which I call the Creative Class. More than 40 million Americans, roughly one-third of all employed people, belong to it. I define the core of the Creative Class to include people in science and engineering, architecture and design, education, arts, music, and entertainment whose economic function is to create new ideas, new technology, and new creative content. Around this core, the Creative Class also includes a broader group of *creative professionals* in business and finance, law, health care, and related fields. These people engage in complex problem solving that involves a great deal of independent judgment and requires high levels of education or human capital. In addition, all members of the Creative Class—whether they are artists or engineers, musicians or computer sci-

entists, writers or entrepreneurs—share a common ethos that values creativity, individuality, difference, and merit.

The key difference between the Creative Class and other classes lies in what its members are primarily paid to do. Members of the Working Class and the Service Class are primarily paid to do routine, mostly physical work, whereas those in the Creative Class are paid to use their minds—the full scope of their cognitive and social skills. There are gray areas and boundary issues in my scheme of things, to be sure. And though some may quibble with my definition of the Creative Class and the numerical estimates that are based on it, I believe it has a good deal more precision than existing, more amorphous definitions of knowledge workers, symbolic analysts, or professional and technical workers.

The class structure of the United States and other advanced nations has been the subject of great debate for well over a century. For a host of writers in the 1800s and 1900s, the big story was the rise, and then the decline, of the Working Class, which peaked at roughly 40 percent of the US workforce before beginning its long slide to roughly one in five workers today.[7] For writers like Daniel Bell and others in the mid to later twentieth century, a second big story was the rise of a postindustrial society, in which many of us shifted from making goods to delivering services.[8] The Service Class, which includes such fields as personal care, food services, and clerical work, is the largest class today, with some 60 million members, more than 45 percent of the entire US workforce. The big story unfolding now—and it has been unfolding for some time—is the rise of the Creative Class, the great emerging class of our time.

Although the Creative Class remains somewhat smaller than the Service Class, its crucial economic role makes it the most influential. The Creative Class is dominant in terms of wealth and income, with its members earning nearly twice as much on average as members

of the other two classes and as a whole accounting for more than half of all wages and salaries.

Creativity in the world of work is not limited to members of the Creative Class. Factory workers and even the lowest-end service workers have always been creative in valuable ways. Also, the creative content of many Working and Service Class jobs is growing—a prime example being the continuous-improvement programs on many factory floors, which call on line workers to contribute their ideas as well as their physical labor. On the basis of these trends, I expect that the Creative Class, which is still emergent, will continue to grow in coming decades, as more traditional economic functions are transformed into Creative Class occupations. And, as I will argue in the last chapter of this book, I strongly believe that the key to improving the lot of underpaid, underemployed, and disadvantaged people lies not in social welfare programs or low-end make-work jobs, nor in somehow bringing back the factory jobs of the past, but rather in tapping their innate creativity, paying them appropriately for it, and integrating them fully into the Creative Economy.

The Creative Class is the norm-setting class of our time. And the norms of the Creative Class are different from those of more traditional society. Individuality, self-expression, and openness to difference are favored over the homogeneity, conformity, and "fitting in" that defined the previous age of large-scale industry and organization. Our private lives are different than they once were. During the *Leave It to Beaver* era of the 1950s and early 1960s, roughly eight in ten Americans lived in married households, but by 2010, less than half did. In 1960, almost half of all Americans were part of a nuclear family, with a mom, a dad, and kids in the house; by 2010, that number had fallen to just one in five. These profound changes are not, as commonly portrayed, signs of the reckless self-indulgence of a spoiled people. They are undergirded by powerful economic forces that are reshaping our society and our lives.

The Creative Class is also the key force that is reshaping our geography, spearheading the movement back from outlying areas to urban centers and close-in, walkable suburbs. A relatively mobile class, it is much more concentrated in some cities and metros areas than in others. As of 2010, the Creative Class composed more than 40 percent of the workforce in larger metro areas like San Jose, the fabled Silicon Valley, greater Washington, DC, and Boston, as well as smaller college towns such as Durham, North Carolina; Ithaca, New York; and Boulder and Ann Arbor. These places are prospering, distinguished by a new model of economic development that takes shape around the 3T's—technology, talent, and tolerance. The most successful and prosperous metros excel at all three.

Not all is rosy in this emerging mainstream of the Creative Age. People today bear much more personal risk than did the corporate and working classes of the Organizational Age—as has become all too obvious with the onset of the economic crisis. Stress levels, too, are high. The technologies that were supposed to liberate us from work have invaded our lives. Our increasingly unequal society has become deeply divided, sorted, and segmented by level of education, the kinds of work we do, and where we live, and this in turn shapes ever more divisive culture wars and politics. One of the most significant fault lines of our age is the growing geographic segregation of the Creative Class and the other classes.

Although the immediate occasion for the crash of 2008 was the bursting of the real estate bubble, economic historians will see it as the last crisis of the old Fordist industrial order—the tipping point when an outmoded, exhausted set of social and institutional structures could no longer contain or harness the productive power of the new Creative Age. We have seen this happen before—in the earth-shattering religious, political, intellectual, and social upheavals that accompanied the shift from feudalism to capitalism; in the catastrophic Panic and Long Depression of 1873, which coincided

with the rise of modern industry; and in the Great Depression of 1929, which followed the rise of mass-production capitalism.

These powerful economic and social shifts are altering the structure of everyday life. As witnessed by our two time-travelers, the deepest and most enduring changes of our age are not technological, but economic, cultural, and geographic. These changes have been building for decades and are only now coming to the fore, driven by the rise of the Creative Economy and of the Creative Class.

PART ONE

THE CREATIVE AGE

CHAPTER 2

The Creative Economy

Powering the great ongoing changes of our time is the rise of human creativity as the defining feature of economic life. Creativity has come to be valued—and systems have evolved to encourage and harness it—because it is increasingly recognized as the font from which new technologies, new industries, new wealth, and all other good economic things flow. As a result, our lives and society have begun to resonate with a creative ethos. An ethos is defined as the fundamental spirit or character of a culture, and it is our commitment to creativity in its varied dimensions that forms the underlying spirit of our age. To grasp the spirit and character of the emerging Creative Age, this chapter takes a closer look at creativity itself: what it is, and where it comes from. In order to structure the arguments that follow, I start with three basic points.

First, creativity is essential to the way we live and work today, and in many senses it always has been. As the economist Paul Romer has said, the biggest advances in standards of living—not to mention the biggest competitive advantages in the marketplace—have always come from "better recipes, not just more cooking."[1] Second, human creativity is not limited to technological innovation or new business models. It is multifaceted and multidimensional; it is not something

that can be kept in a box and trotted out when one arrives at the office. Creativity involves distinct habits of mind and patterns of behavior that must be cultivated on both an individual basis and in the surrounding society. The creative ethos pervades everything from our workplace culture to our values and communities, reshapes the way we see ourselves as economic and social actors and molds the core of our very identities. It reflects norms and values that both nurture creativity and reinforce its role. Furthermore, it requires a supportive environment—a broad array of social, cultural, and economic stimuli. Creativity is thus associated with the rise of new work environments, lifestyles, associations, and neighborhoods, which in turn are conducive to creative work. Such a broadly creative environment is critical for generating technological creativity and the commercial innovations and wealth that flow from it.

The third, and perhaps the most critical, issue is the ongoing tension between creativity and organization. The creative process is social, not just individual; forms of organization are necessary. But organizations can and frequently do stifle creativity. A defining feature of life in the early to mid-twentieth century—a period referred to as the Organizational Age—was the dominance of large-scale and highly specialized bureaucracies. Writing in the 1940s, the economist Joseph Schumpeter deplored the stifling effect of large organizations on creativity. In his landmark book *Capitalism, Socialism and Democracy,* Schumpeter noted that capitalism's great strength had long been the "function of entrepreneurs" who "revolutionize the pattern of production." And then he gloomily predicted its demise. "Technological progress is increasingly becoming the business of teams of trained specialists who turn out what is required and make it work in predictable ways," he wrote. The perfectly bureaucratized giant industrial unit not only ousts the small or medium-sized firm and "expropriates" its owners, but in the end

it also ousts the entrepreneur.[2] In an interview I conducted in 2000, a young woman described this chilling effect in stark and memorable terms: "Where I grew up, we were conditioned to play the roles that we were dealt. We were not encouraged to create and build our visions, but rather to fit into the visions of a select few. I like to say that we were 'institutionalized' individuals—because institutions defined our lives."[3]

The ascent of creativity as an economic force over the past few decades has brought new economic and social forms into existence that mitigate this tension to a certain degree, but they have not fully resolved it. Everything from the rise of the entrepreneurial start-up company and the formal venture capital system to the loosening of traditional cultural norms regarding work and life reflects attempts to elude the strictures of organizational conformity. But this doesn't mean that creativity has won the day or that large organizations are going the way of the dinosaurs. We still need large organizations to do many things; bureaucracies continue to play dominant roles in our society. Whereas one person can write brilliant software, it takes large organizations to consistently upgrade, produce, and distribute that software. Large organizations may be more nimble and flexible than they once were, but they are still evolving, still developing new ways to foster creativity while providing a structure in which to produce and manage work.

Our new creative economic system is far from fully formed. Furthermore, it is not a panacea for the myriad social and economic ills that confront modern society. The emerging Creative Economy will not magically alleviate poverty, eliminate unemployment, overcome the business cycle, and lead to greater happiness and harmony for all. In some respects, left unchecked and without appropriate forms of human intervention, this creativity-based system may well make some of our problems worse.

Creative Dimensions

Creativity is often viewed as a rather mystical affair. Over the past few decades, however, systematic studies have considerably enlarged our understanding of it. Researchers have observed and analyzed creativity in subjects ranging from eminent scientists and artists to preschoolers and chimpanzees. They have pored through the biographies, notebooks, and letters of great creators of the past; modeled the creative process by computer; and tried to get computers to *be* creative.[4] Occasionally but notably, they have studied its workings across entire human societies. From this body of literature I will abstract several main themes that surface repeatedly. As we trace these themes and begin to see what creativity really is, we will also begin to get a deeper sense of how and why the creative ethos has emerged with such force in our lives today.

Let's start with the basics. Creativity is not the same as "intelligence." One study summarized the difference this way: "Many studies recognize creativity as cognitive ability separate from other mental functions and particularly independent from the complex of abilities grouped under the word 'intelligence.' Although intelligence—the ability to deal with or process large amounts of data—favors creative potential, it is not synonymous with creativity."[5]

Creativity involves the ability to synthesize. Albert Einstein captured this nicely when he characterized his own work as "combinatory play." It is a matter of sifting through data, perceptions, and materials to come up with combinations that are new and useful. A creative synthesis might result in such different outcomes as a practical invention, a theory or insight that can be applied to solve a problem, or a work of art that can be appreciated aesthetically.[6]

Creativity requires self-assurance and the ability to take risks. In her book *The Creative Mind,* Margaret Boden noted that creativity

requires the combination of passion and confidence. "A person needs a healthy self-respect to pursue novel ideas, and to make mistakes, despite criticism from others," she wrote. "Breaking generally accepted rules, or even stretching them, takes confidence. Continuing to do so, in the face of skepticism and scorn, takes even more."[7]

Small wonder that the creative ethos marks a strong departure from the conformist ethos of the past. Creative work in fact is often downright subversive, because it disrupts existing patterns of thought and life. It can feel unsettling even to its creator. One famous definition of creativity is "the process of destroying one's gestalt in favor of a better one." Schumpeter wrote about the "creative destruction" that transforms existing industries and creates entirely new ones. The economic historian Joel Mokyr notes: "Economists and historians alike realize that there is a deep difference between *homo economicus* and *homo creativus*. One makes the most of what nature permits him to have. The other rebels against nature's dictates. Technological creativity, like all creativity, is an act of rebellion."[8]

Yet creativity is not the province of just a few select geniuses who can get away with breaking the mold because they possess superhuman talents. It is a capacity inherent to varying degrees in virtually all of us. According to Boden, who sums up a wealth of research: "Creativity draws crucially on our ordinary abilities. Noticing, remembering, seeing, speaking, hearing, understanding language, and recognizing analogies: all these talents of Everyman are important."[9] And she explodes the idea of the lone "creative genius."

> The romantic myth of "creative genius" rarely helps. Often it is insidiously self-destructive. It can buttress the self-confidence of those individuals who believe themselves to be among the chosen few (perhaps it helped Beethoven to face his many troubles). But it undermines the self-regard of those who do not. Someone who believes that creativity is a rare or special power cannot

> sensibly hope that perseverance, or education, will enable them to join the creative elite. Either one is already a member, or will never be. Monolithic notions of creativity, talent, or intelligence are discouraging in the same way. Either one has got "it" or one hasn't. Why bother to try if one's efforts can lead only to a slightly less dispiriting level of mediocrity? . . . A very different attitude is possible for someone who sees creativity as based in ordinary abilities we all share, and in practised expertise to which we can all aspire.[10]

Creativity is multidimensional and experiential. Simonton writes that "creativity is favored by an intellect that has been enriched with diverse experiences and perspectives," and that it is "associated with a mind that exhibits a variety of interests and knowledge."[11] The varied forms of creativity that we typically regard as different from one another—technological creativity (or invention), economic creativity (entrepreneurship), and artistic and cultural creativity, among others—are in fact deeply interrelated. Not only do they share a common thought process, they reinforce each other through cross-fertilization and mutual stimulation. This is one reason that historical and present practitioners of different forms of creativity have tended to congregate and feed off one another in teeming, multifaceted creative centers—Florence in the early Renaissance; Vienna in the late 1800s and early 1900s; the many fast-growing creative centers across the United States today.

Stimulating and glamorous as it may sometimes be, creativity is in fact hard work. Both Thomas Edison (a paragon of technological creativity) and George Bernard Shaw (a cultural creative) liked to say that genius is 90 percent perspiration and 10 percent inspiration.[12] Or as the journalist Red Smith once said of the demands of his craft: "There's nothing to writing. All you do is sit down at the typewriter and open a vein." Here we have an inventor, a playwright, and a sportswriter sounding a common theme: the

creative ethos is built on discipline and focus, sweat and blood. As Boden put it: "A person needs time, and enormous effort, to amass mental structures and to explore their potential. It is not always easy (it was not easy for Beethoven). Even when it is, life has many other attractions. Only a strong commitment to the domain—music, maths, medicine—can prevent someone from dissipating their energies on other things."[13]

Creativity can take a long time before it bears fruit—there are many stories of great mathematicians and scientists mulling a problem for months or more, only to be finally "illuminated" while stepping onto a bus or staring into a fireplace—but even this apparent magic is the result of long preparation. Thus Louis Pasteur's famous dictum: "Chance favors only the prepared mind." Or as Wesley Cohen and Daniel Levinthal have put it in their studies of firm-based innovation: "Fortune favors the prepared firm."[14]

Because of the all-absorbing nature of creative work, many great thinkers of the past were people who "formed no close ties." They had lots of colleagues and acquaintances, but few close friends and often no spouse or children. In fact, muses the psychiatrist Anthony Storr, "if intense periods of concentration over long periods are required to attain fundamental insights, the family man is at a disadvantage." Quoting the famous bachelor Isaac Newton on his process of discovery—"I keep the subject constantly before me, and wait till the first dawnings open slowly by little and little into the full and clear light"—Storr notes that "If Newton had been subject to the demands of a wife for companionship or interrupted by the patter of tiny feet, it would certainly have been less easy for him."[15]

Surely some creative people are inspired by money, but studies find that truly creative individuals, from artists and writers to scientists and open-source software developers, are driven primarily by internal motivations, by the intrinsic rewards and satisfactions of their pursuits. Too much pressure from the outside might even

inhibit them. In a study of motivation and reward, Harvard Business School psychologist Teresa Amabile observed, "Intrinsic motivation is conducive to creativity, but extrinsic motivation is detrimental. It appears that when people are primarily motivated to do some creative activity by their own interest and enjoyment of that activity, they may be more creative than when they are primarily motivated by some goal imposed upon them by others."[16]

Although creativity is often viewed as an individual phenomenon, it is an inescapably social process. Even the lone creator relies heavily on contributors and collaborators. Successful creators have often organized themselves and others into teams for systematic effort. When Edison opened his laboratory in Menlo Park, New Jersey, he called it an "invention factory" and announced his intention to produce "a minor invention every ten days and a big thing every six months or so."[17] The artist Andy Warhol similarly dubbed his Manhattan studio The Factory. Warhol liked to cultivate a public image of bemused indifference, but he was a prolific organizer and worker—mobilizing friends and colleagues to publish a magazine and produce films and music, pursuing his own art all the while.

Creativity flourishes best in a unique kind of social environment: one that is stable enough to allow for continuity of effort, yet diverse and broad-minded enough to nourish creativity in all its subversive forms. Simonton identifies four key characteristics of the times and places where creativity flourishes the most: "domain activity, intellectual receptiveness, ethnic diversity, [and] political openness." In a study of the history of Japanese culture—a culture that has been "highly variable in its openness to outside influences"—Simonton found that "those periods in which Japan was receptive to alien influx were soon followed by periods of augmented creative activity."[18]

One final cautionary note: Mokyr, a historian, notes that technological creativity has tended to rise and then fade dramatically

at various times and places, when social and economic institutions turn rigid and act against it. Spectacular fade-outs occurred, for instance, in late medieval times in the Islamic world and in China. Both societies, which had been leaders in fields from mathematics to mechanical invention, then proceeded to fall far behind Western Europe economically. When one takes the long view of human history, Mokyr writes, one sees that "technological progress is like a fragile and vulnerable plant, whose flourishing is not only dependent on the appropriate surroundings and climate, but whose life is almost always short. It is highly sensitive to the social and economic environment and can easily be arrested."[19] A continual outpouring of creativity "cannot and should not be taken for granted," Mokyr warns—even today. Creativity doesn't automatically sustain itself over long periods, but requires constant attention to and investment in the economic and social forms that feed the creative impulse. This is all the more reason to study the institutions of the Creative Economy closely, so that we can understand their inner workings and nourish them appropriately.

The Ultimate Source of Creativity

Creativity is not only inherent in humans, it is literally what distinguishes us, economically speaking, from other species. "We produce goods by rearranging physical objects, but so do other animals, often with remarkable precision," notes the economist Paul Romer. "Where people excel as economic animals is in their ability to produce ideas, not just physical goods. An ant will go through its life without ever coming up with even a slightly different idea about how to gather food. But people are almost incapable of this kind of rote adherence to instruction. We are incurable experimenters and problem solvers."[20]

"We are not used to thinking of ideas as economic goods," he continues, "but they are surely the most significant ones that we produce. The only way for us to produce more economic value—and thereby generate economic growth—is to find ever more valuable ways to make use of the objects available to us." Ideas, he notes, are especially potent because they are not like other goods, such as mineral deposits and machines, which deplete or wear out with use.[21] A good idea, like the concept of the wheel, "can be used over and over again" and in fact grows in value the more it is used. It offers not diminishing returns, but *increasing returns.* Moreover, an idea can be built upon. As other people apply their own creativity to a new scientific theory or product design, they can tinker with it, improve it, and combine it with other ideas in growing proliferations of new forms. This is what has happened in recent centuries. The early 1900s were a time when waves of invention—the accumulated fruits of that creativity—were being harnessed, mass-produced, and widely promulgated through society as never before. What we are living through now is the next step. Now it is not just the fruits or artifacts of creativity, but creativity itself that is being harnessed on a truly massive scale and promulgated as never before.

Today we like to think that we clearly understand creativity as a source of economic value. Many commentators, for instance, trumpet the point that "intellectual property"—useful new knowledge embodied in computer programs, or patents, or formulas—has become more valuable than any kind of physical property. It's no surprise that we litigate over intellectual property and argue about the proper means of protecting it as fiercely as miners battled over claims during the California Gold Rush. But as Lawrence Lessig has powerfully argued, our penchant for overprotecting and overlitigating intellectual property may well serve to constrain and limit the creative impulse.[22] In the long run, we cannot forget

what the fundamental cornerstone of our wealth is. Although useful knowledge may reside in programs or formulas, it does not originate in them, but in people. The ultimate intellectual property—the one that really replaces land, labor, and capital as the most valuable economic resource—is the human creative faculty.

Karl Marx had it more than partly right when he foresaw that workers would someday control the means of production. This is beginning to happen to a certain degree, although not as Marx thought it would, with the proletariat rising up and taking over factories. If workers control the means of production today that is because it is inside their own heads; they *are* the means of production. Thus, the ultimate "control" issue is not who owns the patents or whether the creative worker or the employer holds the balance of power in labor market negotiations. While those battles swing back and forth, the ultimate control issue—the one we have to stay focused on, individually and collectively—is how to keep the creative furnaces that burn inside each and every human being fully stoked.

Creativity Versus Organization

This brings us back to one of the core tensions or contradictions of our time—that between creativity and organization. Creative people come in many different forms. Some are mercurial and intuitive in their work habits, others methodical. Some prefer to channel their energies into big, radical ideas; others are tinkerers and improvers. Some like to move from job to job, whereas others prefer the security of a large organization. Some are at their best when they work in groups; others like nothing better than to be left alone. Moreover, many people don't fall at the extremes—and their work and lifestyle preferences may change as they mature.

What all of these people have in common is a need for organizations and environments that will allow them to be creative—that value their input, challenge them, have mechanisms for mobilizing resources around ideas, and that are receptive to both small changes and the occasional game changer. Companies and places that can provide this kind of environment, regardless of size, will have an edge in attracting, managing, and motivating creative talent. The same companies and places will also tend to enjoy a flow of innovation, reaping competitive advantage in the short run and evolutionary advantage in the long run.

Although certain environments promote creativity, others most certainly kill it. Adam Smith noted this as early as 1776, in *The Wealth of Nations.* In his famous description of the pin factory, Smith praised the division of labor, a concept that allowed pins to be made efficiently by splitting the process into eighteen distinct steps, with each worker or group of workers typically doing only one step. "The man whose whole life is spent in performing a few simple operations," he also noted, "has no occasion to exert his understanding or to exercise his invention," adding: "He naturally loses, therefore, the habit of such exertion, and generally becomes as stupid and ignorant as it is possible for a human creature to become. The torpor of his mind renders him, not only incapable of relishing or bearing a part in any rational conversation, but of conceiving any generous, noble, or tender sentiment."[23]

In their insightful book *The Social Life of Information,* John Seely Brown and Paul Duguid describe the inherent tug-of-war between the ways that organizations generate knowledge and creativity, and the means by which they translate those assets into actual products and services.[24] Creativity comes from individuals working in small groups, which Brown and Duguid refer to as "communities of practice." These communities emphasize exploration and discovery. Each develops distinctive habits, customs, priorities, and insights that are the secrets of its creativity and inventiveness. But process

and structure are required to link these communities to one another, transfer knowledge, achieve scale, and generate growth. Practice without process becomes unmanageable, but process without practice damps out the creativity required for innovation; the two sides exist in perpetual tension. Only the most sophisticated and aware organizations are able to balance these countervailing forces in ways that lead to sustained creativity and long-run growth.

This fundamental tension between organization and creativity is reflected in a remarkable dialogue between two of the greatest chroniclers of everyday life in the mid-twentieth century, William Whyte and Jane Jacobs. Whyte's classic book, *The Organization Man,* published in 1956, documented the stifling effect of organization and bureaucracy on individuality and creativity.[25] A journalist at *Fortune* magazine, Whyte showed how the big corporations of the time selected and favored the type of person who goes along to get along, rather than someone who might go against the grain. The result, he wrote, was "a generation of bureaucrats." Even research and development, though lavishly funded, was becoming bureaucratized: "Money, money everywhere . . . but not a cent to think." Whyte's organization man had an average workweek of fifty to sixty hours, was more interested in work than in his spouse, and depended on the corporation for his very identity. He often lived in prepackaged suburban developments like Park Forest, Illinois, a place Whyte studied exhaustively. The new suburban communities were seen as more progressive and liberating than the old small towns. But as Whyte showed, they came to exert strong pressures of their own for social adaptation and conformity. In Park Forest, as in the corporations for whom many of its upwardly mobile residents worked, the idiosyncratic individual was quickly stigmatized.

In contrast, Jacobs's monumental work, *The Death and Life of Great American Cities,* published just five years later in 1961, celebrated the creativity and diversity of urban neighborhoods like her own Greenwich Village in New York City.[26] The creative

community, Jacobs argued, required diversity, an appropriate physical environment, and a certain kind of person to generate ideas, spur innovation, and harness human creativity. In contrast to the conformity, homogeneity, and insularity that Whyte had deplored, Jacob's neighborhoods were veritable fountainheads of individuality, difference, and social interaction. The miracle of these places, she argued, was found in the hurly-burly life of the street, which provided the venue for a more or less continuous conversation, a source of both civility and creativity. People of all classes and educations, with all kinds of ideas, were constantly jostling against each other and striking intellectual sparks. Jacobs documented in painstaking detail the way this worked in and around Hudson Street, where she lived, a neighborhood of tenement apartments and town houses, shops, and bars, among them the famed White Horse Tavern, where workers, writers, musicians, and intellectuals gathered for relaxation, conversation, and the occasional new idea.

What made Hudson Street so fertile was its combination of physical and social environments. It had short blocks that generated the greatest variety in foot traffic. It had a wide diversity of people, from virtually every ethnic background and walk of life. It had broad sidewalks and a tremendous variety of types of buildings—apartments, stores, even small factories—which meant that there were always different kinds of people outside and on different schedules. There were lots of old, underutilized buildings, ideal for individualistic and creative enterprises ranging from artists' studios to small entrepreneurial businesses. Hudson Street also fostered and attracted exemplars of a certain type of person: Jacobs's all-important "public characters." These people—shopkeepers, merchants, and neighborhood leaders of various sorts—were the antitheses of Whyte's organization men. Utilizing their positions in social networks, they connected and catalyzed people and ideas, playing critical roles in resource mobilization.

Ironically but not surprisingly, Jacobs and Whyte were the closest of friends. When asked in March 2001, on the fortieth anniversary of the publication of *The Death and Life of Great American Cities*, to name her most admired contemporaries, Jacobs had this to say: "Holly Whyte, William H. Whyte. . . . He was an important person to me and he was somebody whose ideas, yes, were on the same wavelength. And it was through Holly that I met my . . . publisher. . . . I told him what I wanted and he agreed to publish it and gave me a contract."[27]

This bond is also evident in their work. Whyte lamented the rise of organizational society and the alienation, isolation, and conformity it engendered. Jacobs showed the possibility of an alternative, a setting where difference, nonconformity, and creativity could thrive. Who at the time could have guessed what verdict history would render? For much of the past half century, intelligent observers of modern life believed it was Whyte's world that had triumphed. But now it appears that Jacobs's world may well be carrying the day. Not only are urban neighborhoods similar to Hudson Street reviving across the country, but many of the principles that animated Hudson Street are diffusing throughout our economy and society. Personal lives and workplaces, whole industries and geographic regions are beginning to operate on the principles of constant, dynamic, creative interaction.

The Rise of the Creative Economy

I certainly agree with those who say that the advanced nations are shifting to information-based, knowledge-driven economies. The always-prescient Peter Drucker, who outlined the rise of the so-called knowledge economy, was one of the first and most noted exponents of this view: "The basic economic resources—'the means of production,' to use the economist's term, is no longer capital,

nor natural resources . . . nor 'labor.' It is and will be knowledge," he wrote.[28] Yet rather than knowledge, I see creativity—the faculty that enables us to derive useful new forms from knowledge—as the key driver of today's economy. In my formulation, knowledge and information are merely the tools and the materials of creativity. Innovation, whether in the form of a new technological artifact or a new business model or method, is its product.

None of this is totally new, of course; human beings have been engaged in creative activities since antiquity, often with spectacular results. But what we are doing now is mainstreaming these activities; building an entire economic infrastructure around them. Scientific and artistic endeavors, for instance, have become industries unto themselves, and they have combined in new ways to create still newer industries. The joint expansion of technological innovation and creative content work has increasingly become the motor force of economic growth.

As far as I can tell *BusinessWeek* was the first to introduce the concept of the Creative Economy, in August 2000.[29] Not long afterward, John Howkins documented its global impact in his aptly titled book *The Creative Economy,*[30] though he used the term in a somewhat different sense than I do. Whereas I define the Creative Economy in terms of occupations, Howkins defines it to include fifteen creative industry sectors such as software, R&D and design, and creative-content industries like film and music. These industries produce intellectual property in the form of patents, copyrights, trademarks, and proprietary designs.[31]

The Creative Factory

Not just the start-up company, the research laboratory, and the artist's studio, but the factory itself can be and often is an arena for

creative work. In fact, my studies of high performance factories in the 1980s and 1990s served as the inspiration for my theory of the Creative Class. Given the chance factory workers are often the ones who come up with basic improvements in productivity and performance.[32] I saw this time and again in my studies of Japanese and US factories. Even in areas such as environmental quality, it was line workers doing little things—like putting in drip pans—who were the key to making factories greener and more productive at the same time.[33] Today more and more factory jobs require creativity as a condition of employment. In many advanced manufacturing plants, even candidates for entry-level assembly jobs must pass a battery of tests screening them for aptitudes such as problem solving and the ability to work in self-directed teams.[34] Increasing numbers of factory workers no longer touch the products they make but essentially monitor, control, and at times program the computers that run the production processes.[35] The manager of a fully automated steel mill in the American Midwest summed it up best when he told me: "The result is the rise of the creative factory, where factory workers contribute their ideas and intellectual talent as well as their physical labor."

I first came to understand the enormous power of creativity at work not from economic textbooks or from my research, but very early in life, from my father, Louis Florida. Born to Italian immigrant parents in Newark, New Jersey, he quit school at age fourteen and took a job in a factory that made eyeglass frames to help support his family during the Great Depression. After fighting in World War II—he was one of those who stormed the beaches at Normandy—he returned to his previous line of work at a place called Victory Optical. By the early 1960s, when I was a small boy, he had worked his way up from laborer to a supervisory post. On some Saturdays he had to put in a few hours at work; occasionally, he would give in to my pants-tugging pleas and let me tag along. My

eyes ablaze with curiosity, we drove through Newark's sprawling, industrial Ironbound Section, so called because it was latticed with railroad lines, to the giant brick factory. Inside the plant, I would race on small legs to keep up with my father as he strode past the presses, the lathes, the vats of plating solutions, and huge bins of eyeglass frames of every kind.The energy was incredible; it was a phantasmagoria of rapidly moving people, set amid the sounds of whirring machines and foreign-accented English, and the smells of cutting fluids, melted plastic, and finely shaved metal chips.

My father and his colleague Karl, a German-born machinist, would talk about the latest machinery from Italy and Germany and the advanced production systems used by their European competitors. But my father would always remind me that the real productive power of the factory came not from its machines and presses but from the intelligence and creativity of its workers. "Richard," he would say, "the factory does not run itself. It is those incredibly skilled men who are the heart, soul, and mind of this factory."

My most vivid lesson on that score occurred when I was a Cub Scout and I entered my first Pinewood Derby, a racing event for small model cars. Each scout was given the same basic materials to work with: a rectangular block of wood, plastic wheels, and metal axles. The instructions were to fashion a car from the materials supplied, and not to add additional weight in excess of five ounces. The cars would race by rolling down a sloped track. The week before my first race, I worked on the car with my father. We basically fastened the wheels to the block of wood, added a coat of paint and showed up. Suffice it to say, we were badly beaten. Our primitive clunker literally fell apart, its wheels flying in all directions, as the sleek cars of the other scouts flew by. Those sharp-looking cars fascinated me, and I made my father promise to help me build one.

The next year we set to work early, designing a streamlined racer. We started by talking to the machinists and machine-tool designers

at Victory Optical, taking the car to the factory on weekends to seek their advice. We honed that block of wood into an efficient aerodynamic design. We added a precise amount of lead weight, per the guidelines, to gain additional speed. We fashioned a little test track. In trial runs, the front axle began to crack under the strain of repeated impact with the stopping barrier at the bottom. With the help of the machinists, we developed an innovative solution, carving a bit of wood from the rear of the car and gluing it to its nose to protect the axle. We added a metallic paint job, decals, a roll bar, and the pièce de résistance—a little plastic driver. The finished car looked like a Formula One racer. With the collective ingenuity of Victory Optical in our corner, we went on to win every Pinewood Derby championship for the remainder of my Cub Scout career, at which point the dynasty passed along to my younger brother's racers. The creativity of the workers in the eyeglass-frame factory was multidimensional: it could be applied to my world, too.

My father's factory also taught me about the consequences of bad management—and the squelching of creativity—in the age of high Fordism. For years, the Victory Optical plant had been an exception to the Organizational Age rule: it was operated entirely by foremen and self-made managers like my father, who had worked their way up from the shop floor. These managers had tremendous respect for the ideas of the factory workers. I can remember the workers looking at samples of the latest designer eyeglass frames from overseas and coming up with their own designs to improve on the high-priced imports. Then, in the late 1960s and 1970s, the plant owners began to hire college-educated engineers and MBAs to oversee the factory's operations. With considerable book knowledge but little experience in the actual workings of the factory, these new recruits proposed complex new ideas and systems that inevitably failed and, at worst, brought production to a grinding halt. Their ideas not only were ineffective but created growing animosity

among the workforce. The bitter standoff between workers and management finally became intolerable. One day in the late 1970s, when I was at college, my father called me on the phone and said, "Today, I quit."

At the time, I was a little skeptical about my father's version of events: could college-educated experts really have ruined his factory? I was a college student myself, after all, trying to use education to move up the socioeconomic ladder. But within a couple of years, I realized how right he had been. As the workforce grew more demoralized, problems mounted. Skilled people quit. Machinists left in droves. The foremen and supervisors who had come up from the floor quickly followed. Without their storehouse of knowledge and institutional memory, the factory could not operate. Less than three years after my father's departure, Victory Optical was bankrupt. The huge, vibrant factory that had captivated me in my youth was shuttered, vacant, abandoned. It was as heartbreaking as it was ironic. Just when the leading edge of the corporate world had begun moving toward the creative factory concept—the concept that Victory had been run by all along—Victory had moved in the opposite direction: back to the past, to the deadening paradigm that delegated creativity to the men at the top and denied it to the rank and file.

The image of the factory as an arena for rote physical labor alone has always been wrong. It never gave a complete picture of the economic activity that went on inside. Workers have always used their intellects and creative capabilities to get things done. And though they were stifled for long periods in many industries, factory workers today are coming to be valued more for their ideas about quality and continuous improvement than for their ability to perform routine manual tasks. Across the board, in a multitude of jobs, work has taken on an explicitly creative component.

complex, self-organizing, self-governing system of peer review that works much like that in academic science.[14] Most are paid nothing for the time they devote to such work. They post their contributions for free so that their peers will recognize them as competent and successful developers.

The intrinsic nature of my work is what keeps me at my keyboard for hours, hardly noticing that it's long past bedtime and hardly caring that I've missed the chance to go to a party or have some other kind of fun. The work itself is the reward. The psychologist Mihaly Csikszentmihalyi dubs this feeling a state of "flow"[15] that is both productive and rewarding. Can this kind of passion for work and flow come dangerously close to workaholism? Of course it can. But for me and many others, it is far better than work that has you counting the minutes until it's time to stop.

Location and Community

For a long time, people have been arguing—wrongly, I believe—that globalization and technology are rendering community and location obsolete and irrelevant. Showing the limits of that kind of thinking and the ongoing role of place, community, and location in the economy and in our lives has been a key focus of my research over the past several decades. Virtually all of the creative workers I talked to when I was first writing this book, those I have interviewed since, and my empirical studies underline the fact that location and community are more important than ever. My interview subjects continually recounted their desire and *need* to live in places that offer stimulating, creative environments. Many would not even consider taking jobs in certain cities or regions—a stark contrast to the Organizational Age, when people gladly let firms shuttle them from one backwater to another as part of the price of climbing the corporate ladder. Some told me they used location as their primary criterion in a proactive sense: they picked the place they

wanted to live and then focused their job search there. Many subsequent studies have noted this tendency as well.

Almost one in five of the workers in the 2000 and 2001 *InformationWeek* surveys reported that the geographic location of their workplace (18.7 percent) and the amount of time they had to commute to get there (18.8 percent) had been important factors in their choice of jobs—more important than the potential for promotion, bonus opportunities, financial stability, company prestige, stock options, on-site child care, telecommuting, and the ability to work from home. Research proves that long commutes are truly misery inducing. When the behavioral economist and Nobel laureate Daniel Kahneman and the economist Alan Krueger asked 900 women to rate their favorite activities, commuting came in dead last.[16]

People not only want to live near their workplace; they want to *like* living there. In the original edition of this book, I noted that picking a location simply for economic reasons can and often does backfire. My focus groups and interviews provided many examples of people who moved strictly for a job and later quit in quest of a location that was a better fit for their lifestyle. Back then I often heard from former students who were looking to leave the high-paying consulting jobs they'd landed for improved quality of life. Economic conditions have become even more unequal since the crash of 2008, making location more important still, both for access to jobs and quality of life.

Numerous Creative Class people I interviewed noted their desire to become actively engaged in the places they live—to contribute to their communities and to have some latitude in their jobs to do so. Of course, executives have long been enlisted to lead charitable campaigns or to serve on the boards of nonprofit institutions. But Creative Class people don't just dutifully add their names to blue-ribbon committees; they seek direct involvement on their own

terms, in part because it is an expression of who they are, of their essential creative identity—a point I will return to later in this book.

The idea that young creatives might care as much about where they live as who they work for seemed a bit strange to some readers a decade ago. But more and more—and not just in the United States, but around the world—it has become the norm, so much so that I now teach a graduate course at the Rotman School of Management in which I challenge my students to develop locational strategies for selecting and being involved in their communities. The key point is that people use these extracurricular activities as a way of cultivating their interests, values, and identities, both in the workplace and in society more generally. In my view, they reflect a broader process of self-actualization and an attempt to use work as a platform for pushing forward an overall creative identity.

Money and More

Compensation, of course, still matters, and compensation involves more than base pay. The decade before this book was first published, the 1990s, saw a rapid run-up in the use of alternative forms of compensation, such as stock options and bonuses. Workers, it was understood, were trading job stability and security for bigger paydays. Although the kinds of outsized bonuses that executives in the financial industry paid themselves have fallen into justifiable disrepute, many commentators still believe that bonuses can provide an effective means of aligning company and individual interests.

So how do workers value these various forms of compensation? The 2000 and 2001 *InformationWeek* survey data offered a number of insights. Job stability was more highly valued than any form of direct compensation. More than 40 percent of workers chose it as a key factor. Base pay was slightly less important, with 38.5 percent