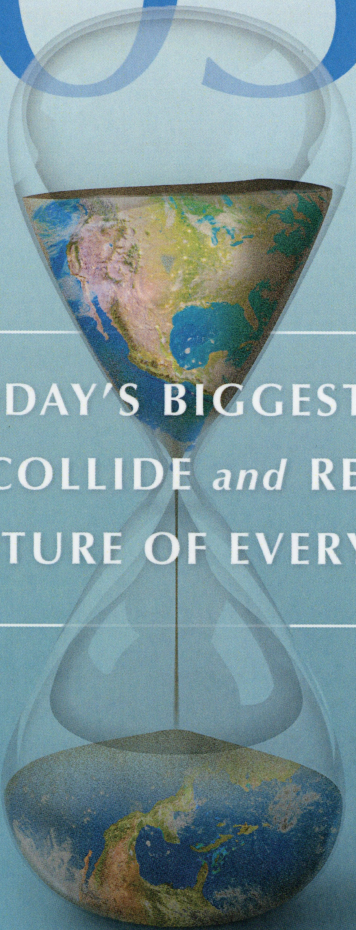


THE INTERNATIONAL BESTSELLER

2030

'Brilliant'
ANGELA
DUCKWORTH

'Bold, provocative'
ADAM GRANT



HOW TODAY'S BIGGEST TRENDS
WILL COLLIDE *and* RESHAPE
THE FUTURE OF EVERYTHING

'Thought-
provoking'
FINANCIAL
TIMES

'A must-read'
DAMBISA MOYO

MAURO F. GUILLÉN

About the Author

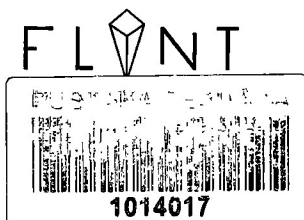
Mauro F. Guillén is Dean of Cambridge Judge Business School at the University of Cambridge and Professorial Fellow, Queens' College, Cambridge. An expert on global market and social trends, he is a part Fulbright and Guggenheim Fellow, and a recipient of the Aspen Institute's Faculty Pioneer Award. His previous books include *The Architecture of Collapse*, *Global Turning Points* and *Emerging Markets Rule*.



2030

**HOW TODAY'S BIGGEST TRENDS
WILL COLLIDE AND RESHAPE
THE FUTURE OF EVERYTHING**

MAURO F. GUILLÉN



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Praise for 2030

The international bestseller

A *Wall Street Journal* bestseller

Named one of the Best Books of 2020 by the *Financial Times*

'Now more than ever, it's clear that the future will be radically different to the present. Join Mauro Guillén on a brilliant exploration of trends that will change the way we live, work and play'

Angela Duckworth, author of *Grit*

'We do not know what the world will look like in 2030. But we do know the underlying trends that will shape it, argues Guillén ... This thought-provoking book illuminates the most important: demographic shifts, notably the African baby boom; the changing nature of ageing and retirement; the emergence of a new global middle class; the rise of women as entrepreneurs and leaders; the challenges to cities; "more cell phones than toilets"; the sharing economy; and the future of money. It is fun. Enjoy'

Martin Wolf, *Financial Times*

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Adam Grant, author of *Originals*

'A convincing and compelling strategy for successfully navigating the seismic changes in our demography, economy, technology and culture that will define the next decade'

Cal Newport, author of *Deep Work* and *Digital Minimalism*

'2030 is a one-stop list of the most transformational trends that, in a decade, will fundamentally alter the way we live, work and interact forever ... Mauro Guillén reminds us of

303.49

our interconnectedness and vulnerabilities, and as such this is a must-read book, which we simply cannot afford to ignore'

Dambisa Moyo, author of *Edge of Chaos*

'Global change accelerates every decade, meaning from now to 2030 will be a roller-coaster ride as we have never witnessed before. In this wide-ranging and illuminating book, Mauro Guillén covers a range of important megatrends to capture a world that lies right around the corner'

Parag Khanna, author of *The Future is Asian*

'2030 is a book that will stimulate the imagination of everyone who reads it'

Russell Whitehouse, *International Policy Digest*

'Shifts in the way we live and work, our politics and culture, and our time on Earth add up to the most massive disruption in human history ... A veritable guidebook for this brave new world'

Richard Florida, author of *The Rise of the Creative Class*

'Mauro's book will be a must-read for those looking to understand the what, why and so what of transformational global change – that is, new trends that are emerging in a decisive, durable and impactful fashion; why they are doing so; and what this means not just for countries and companies, but also for households and communities'

Mohamed A. El-Erian, author of *The Only Game in Town*

'Lively, important, and urgent, 2030 is a must-read for anyone who wants to truly understand the biggest trends of the coming decade'

William P. Lauder, Executive Chairman of the
Estée Lauder Companies

'This sharp, well-informed analysis of present-day trends and future outcomes provides valuable insights to investors, business owners and policy makers'

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Figure 7, page 115, from United Nations, World Population Prospects 2019
Revision

Figure 8, page 128, from NASA

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Trees for Life



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Some Facts and Figures

Birthplace of the next industrial revolution: sub-Saharan Africa

The reason: 500 million acres of fertile yet undeveloped agricultural land

The size of Mexico: 500 million acres

Percentage of the world's wealth owned by women in 2000: 15

Percentage of the world's wealth owned by women in 2030: 55

If Lehman Brothers had been *Lehman Sisters*: global financial crisis averted

Worldwide, the number of people who went hungry in 2017: 821 million

Worldwide, the number of people who will go hungry in 2030: 200 million

Worldwide, the number of people who were obese in 2017: 650 million

Worldwide, the number of people who will be obese in 2030: 1.1 billion

Percentage of Americans projected to be obese in 2030: 50

Percentage of the world's land occupied by cities in 2030: 1.1
Percentage of the world's population living in cities in 2030: 60
Percentage of worldwide carbon emissions produced by cities
in 2030: 87
Percentage of world's urban population exposed to rising sea
levels in 2030: 80

The largest middle-class consumer market today: United
States and Western Europe

The largest middle-class consumer market in 2030: China
By 2030, the number of people entering the middle class in
emerging markets: 1 billion

The number of people currently in the middle class in the
United States: 223 million

The number of people in the middle class in the United States
in 2030: 209 million

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Introduction: The Clock Is Ticking

People generally see what they look for,
and hear what they listen for.

—JUDGE TAYLOR IN HARPER LEE'S *TO KILL A MOCKINGBIRD*

The year is 2030.

From Paris to Berlin, Western Europe is unusually warm, with no end in sight to the summer's record temperatures, a fact the international press reports with increasing alarm. Rehema has just landed in her native Nairobi on a return flight from London, where she spent a couple of weeks with some distant relatives. She was disappointed to see fewer stores open than during her previous trip, perhaps because so many people had become used to buying online during the pandemic. Seeing Britain through the eyes of immigrants



afforded her great insight into the diversity of the world around her. Walking through the Nairobi airport, she reflects on how her homeland differs from Britain, which she found to be behind Kenya in areas like tele-medicine and mobile payments. Later, she jokes with her cousin on the trip home at how strangely the British reacted when she told them she had been “attending” an online school since she was six, along with most of her neighborhood friends.

Thousands of miles away, Angel is waiting to clear customs at JFK Airport in New York City. In two weeks’ time, she will begin a two-year master of science program at New York University. As she waits, she reads the day’s *New York Times*, which opens with a report that the United States, for the first time in its history, has more grandparents than grandchildren—a reality in stark contrast to the situation back home in the Philippines. As it turns out, tens of thousands of American senior citizens, under the care of robots for their basic needs, are renting out spare rooms in their homes to make ends meet, especially since their pensions are no longer providing the financial safety net they once expected. Angel turns to a rather reactionary op-ed decrying the fact that American women now outpace men in terms of their share of wealth, a trend the author somehow finds disturbing for the future of the U.S. economy. Angel has time to read most of the newspaper, as the line for foreigners is long and slow-moving. Meanwhile, the line for citizens and permanent residents is moving quite quickly, and she overhears a conversation detailing how Americans can now clear passport control using some fancy blockchain technology, which is a breakthrough with a wide range of benefits: it can assess a sales tax on goods purchased abroad and arrange for the arrival of a self-driving vehicle shortly after you’ve retrieved your luggage.

2020: “China will be number one at everything.”

That’s a phrase one hears frequently nowadays. Another is that the United States and China will battle for global supremacy for the foreseeable future. There is some truth to these statements, but they hardly reveal the whole picture. In 2014, India stunned the world by successfully placing a space probe in orbit around Mars—the first country to accomplish the feat in its maiden attempt. Since the dawn of the space age, fewer than half of the missions launched by the United States, Russia, and Europe have been successful, making India’s accomplishment truly extraordinary. What’s more, the Indian Space Research Organisation made history with the mission’s low \$74 million budget.

Now, exactly how much money should it take to set a satellite orbiting around the red planet? Well, a single space shuttle mission might burn as much as \$450 million, and it cost \$165 million to produce the movie *Interstellar* and \$108 million to bring *The Martian* to a theater near you.

The Indians demonstrated that they too have the “right stuff,” as Tom Wolfe once put it. They showed they are a world-class technological powerhouse and can get things done efficiently and on time. The Mars mission wasn’t a fluke. In fact, it was the second time that India had surged ahead of the world’s established superpowers. Back in 2009, its maiden mission to the Moon produced the first evidence of the existence of water, “apparently concentrated at the poles and possibly formed by the solar wind,” as *The Guardian* reported. It took NASA ten years to independently confirm India’s finding.

Most of us grew up in a world in which the exploration of the cosmos was an expensive endeavor conceived by rocket scientists, funded by global superpowers with vast resources, and carried out by heroic astronauts and capable mission specialists. The comparative complexity and cost of space missions (and which countries had the capacity to accomplish them) were taken for granted. But that reality is now part of history.

Once upon a time, not only was the world neatly divided into prosperous and backward economies, but babies were plentiful, workers outnumbered retirees, and people yearned to own homes and cars. Companies didn't need to see any farther than Europe and the United States to do well. Printed money was legal tender for all debts, public and private. In school they told us how we were supposed to "play the game," and we grew up thinking that the rules would remain the same as we took our first job, started a family, saw our children leave the house, and went into retirement.

That familiar world is rapidly vanishing as we encounter a bewildering new reality driven by a new set of rules. Before we know it there will be more grandparents than grandchildren in most countries; collectively, middle-class markets in Asia will be larger than those in the United States and Europe combined; women will own more wealth than men; and we will find ourselves in the midst of more industrial robots than manufacturing workers, more computers than human brains, more sensors than human eyes, and more currencies than countries.

That will be the world in 2030.

I have conducted research on the outlook ten years down the road over the last few years. As a professor at the Wharton School, I worry not only about the future state of business but also about how workers and consumers might be affected by the avalanche of change coming our way. I've made countless presentations on the material contained in this book to audiences as diverse as executives, policymakers, middle managers, and college and high school students. I have also reached out to tens of thousands of people through social media and online courses. Invariably, my audiences react with a mix of bewilderment and apprehension to the future I outline to them.

This book offers a road map to navigate the turbulence ahead.

Nobody knows for sure what the future will bring. If you do, please let me know—together we can make truckloads

of money. But while predictions are never fully accurate, we can certainly make a series of relatively safe assumptions about what might happen in the decade to come. For example, the majority of people impacted by the forecasts in this book have already been born. We can perhaps describe in general terms what we can expect of them as consumers, given their likely educational attainment or current patterns of social media activity. We can also calculate with reasonable accuracy how many people will live to be eighty or ninety years old. And we may even be in a position to predict with some acceptable degree of confidence that a certain percentage of seniors will need a care provider—whether it's another human or a robot. When it comes to the latter, imagine that these robots speak different languages with a variety of accents, aren't opinionated, don't take days off, and don't abuse their patients financially or otherwise.

The clock is ticking. The year 2030 isn't some remote point in the unforeseeable future. It's right around the corner, and we need to prepare ourselves for both the opportunities and the challenges. Simply put, the world as we know it today will be gone by 2030.

For many of us these trends are not only confusing but profoundly unsettling. Do they spell our downfall? Or might they actually represent more boom than doom? This book provides a guide to help readers grasp the implications of so many moving parts, and it offers a message of optimism about the future while we are managing the anxieties of the present. It presents a tool to help navigate the epochal transformations ahead, suggesting what to do and what not to do under these new and unfamiliar circumstances.

The basic point is this: every finale signifies the dawn of a new reality replete with opportunity—if you dare to dig beneath the surface, anticipate the trends, engage rather than disconnect, and learn how to make effective decisions for yourself, your children, your partner or spouse, your

future family, your company, and so forth. Everyone will be impacted.



It's useful to think about epochal transformations as a slow process, with each tiny change bringing us closer to a paradigm shift when, all of a sudden, everything is different. We tend to forget that these small changes are cumulative. Think about it as a slow drip filling up a container, where the *drip-drip-drip* conveys a sense of time passing. When the water suddenly overflows, we're caught by surprise.

Consider that by 2030, South Asia and sub-Saharan Africa will be vying for the title of the world's most populous region. That's a far cry from the final years of the twentieth century, when East Asia—comprising China, South Korea, and Japan, among other countries—was the region that could make that claim. It's true that as time goes on, fewer babies are being born in countries like Kenya and Nigeria, but they're still arriving in far greater numbers compared to most of the world. In addition, people in those regions are seeing their life expectancy lengthen significantly.

You might think that sheer population size doesn't matter much. Well, multiply those additional people by how much money they might have in their pockets in the years to come. You'll see that around 2030 Asian markets, even excluding Japan, will be so large that the center of gravity of global consumption will shift eastward. Companies will have no choice but to follow market trends in that part of the world, with most new products and services reflecting the preferences of Asian consumers.

Pause for a moment and think about that.

Then consider what it means as we add a few more intertwined trends.



Fewer babies in most parts of the world means that we are steadily marching toward a rapidly aging population. Much of that demographic shift is driven by women, who more and more are remaining in school and pursuing careers (not merely jobs) outside of the home—and bearing fewer children. Before you realize it, there will be more female millionaires than male millionaires. Wealth is also becoming more urban: the population of cities is growing at a rate of 1.5 million per week. While cities occupy just 1 percent of the world's land area, they are home to 55 percent of the population and account for 80 percent of energy consumption (and carbon emissions). That's why cities are on the front lines of efforts to combat climate change.

Meanwhile, different generations of people are displaying divergent longings and aspirations. Millennials are spearheading the sharing economy (while eschewing ownership), but they're getting more attention than they deserve. Within a decade, the largest generation will be the population above age sixty, which today owns 80 percent of the wealth in the United States and is giving rise to the “gray market”—the largest consumer bloc of all. Companies large and small should redirect some of their attention to senior citizens if they wish to remain relevant as time goes on.

Look at Figure 1. It depicts a process of concatenated small changes. In isolation, none of them will result in a shift of truly global proportions. You might be perfectly capable of coping with the changes if you keep each of them separate from the others. Humans are great at mental compartmentalization. It's a subconscious psychological defense mechanism. We use it to avoid cognitive dissonance—the discomfort and anxiety caused by conflicting trends, events, perceptions, or emotions. The whole point of mental compartmentalization is to keep things apart so that we are not overwhelmed by the interactions among them.



Population aging is becoming the norm in America and Western Europe. Meanwhile, the younger generations are driving the ascendancy of the middle class in most emerging markets. They are a very different type of consumer from the one the world has seen so far; more aspirational in their habits, for example. As the middle classes expand, more and more women will accumulate wealth like never before, with both genders adopting urban lifestyles and driving the largest influx of migration we've ever witnessed to cities around the world. And cities create a critical mass of inventors and entrepreneurs intent on disrupting the status quo with innovation and technology.

For their part, technologies alter old habits and lifestyles, bringing forth new ways to think about and engage with everything from homes and offices to cars and personal items. This, in turn, will lead to alternative conceptions of money that are more distributed, more decentralized, and easier to use. Some of these trends are already under way, but they will not reach critical mass until around 2030. (All of these trends, however, accelerate and intensify when an epochal event occurs, like the COVID-19 pandemic, which I explore in detail in the Postscript.)

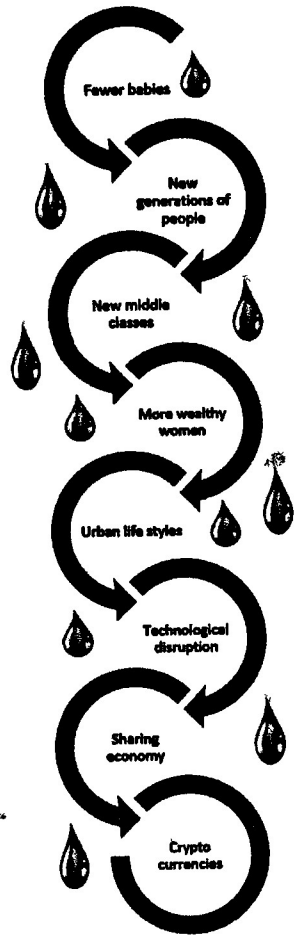


Figure 1

Such a *linear* representation of the changes taking place around us provides for a neat and convenient sequence of chapters for this book. But that's not how the world really works.

Anthropologists and sociologists have long established that we reduce the complexity of the world by breaking it into categories, which enables us to sort things out, develop strategies, make decisions, and carry on with our lives. Those categories serve as frames of reference, helping us navigate the often ambiguous nature of our surrounding landscapes. They reassure us that we remain in control.

Companies and organizations also think this way. They compartmentalize everything. They put customers into little boxes such as “lead users,” “early adopters,” or “laggards.” They classify products as “stars,” “cash cows,” “dogs,” or “question marks,” depending on their present market share and future potential growth. And they consider employees to be “team players” or “ladder-climbers,” depending on their attitudes, behavior, and potential.

Compartmentalizing, however, blinds you to new possibilities.

Let me offer you an example. In addition to the electric lightbulb, the telephone, and the car, one of the great inventions of the late nineteenth century was the concept of retirement: a period dedicated to our hobbies and our families, and our chance to reflect on all that we've accomplished. We inherited from that century a concept of life as a progression of distinct stages—childhood, work, and retirement—that we, hopefully, enjoy along the way.

With the decline in the number of babies and the new dynamics between generations, our future society may well have to rethink quite a few assumptions of how we have traditionally lived. Senior citizens are also consumers, with distinctive lifestyles, and they can be technological early adopters as much as millennials, if not more so. Think about virtual reality, artificial intelligence, or robotics and how these technologies will revolutionize the tail end of our lives. We may

have to dispel the old order. Unlike in the past, we may re-enroll in school and develop new skills many times over before we're done. Consider this headline that ran in the *New York Times* in 2019: "Running Out of Children, a South Korean School Enrolls Illiterate Grandmothers."

I urge that we avoid linear thinking, sometimes called "vertical" thinking, as in Figure 1. Instead, I suggest we approach change laterally. Developed by inventor and consultant Edward de Bono, the concept of lateral thinking "is concerned not with playing with the existing pieces but with seeking to change those very pieces." It essentially involves reframing questions and attacking problems sideways. Breakthroughs occur not when someone works within the established paradigm but when assumptions are abandoned, rules are ignored, and creativity runs amok. The artists Picasso and Braque pioneered Cubism by departing from accepted assumptions and rules about proportion and perspective. Le Corbusier launched modernist architecture by eliminating walls to create large open spaces, letting windows run the full length of a building's façade, and exposing the intrinsic elegance of steel, glass, and cement without attempting to hide it behind superfluous ornaments. "The real voyage of discovery consists not in seeking new landscapes," Marcel Proust once wrote, "but in having new eyes."

Indeed, lateral thinking can be further augmented through "peripheral vision," a concept developed by my Wharton colleagues George Day and Paul Schoemaker. Very much as with human vision, companies and other types of organizations cannot be effective if they do not sense, interpret, and act on the weak signals coming from the periphery of their immediate area of focus.

For example, Kodak, founded in 1888, made massive profits selling photographic film and other related products throughout the twentieth century. In the early 1990s, its

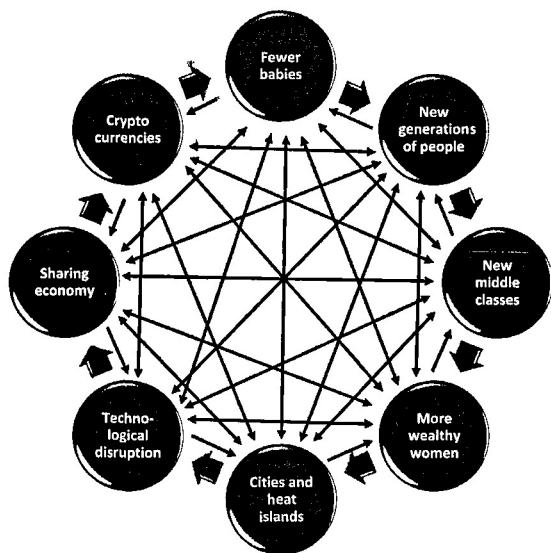


Figure 2

engineers became aware of the possibilities of digital photography, but top management was more focused on the short term, believing that people would continue to prefer printed pictures. The result? In 2012, Kodak filed for bankruptcy. They were a victim of a phenomenon well expressed by Judge Taylor in Harper Lee's *To Kill a Mockingbird*: "People generally see what they look for, and hear what they listen for"—they're blind to the unexpected, the unusual, the periphery.

Consider Figure 2, above, an alternative graphical representation of what's going on in the world.

The thicker block arrows pointing clockwise around the rim of the chart depict the linear representation of the chain of concatenated trends; it's essentially the same as in Figure 1, but arranged in circular fashion. Focusing only on the linear connections around the chart is misleading. Each of the trends

in the eight bubbles interacts with the other seven. I'll explore each of those lateral connections in the chapters that follow, guiding readers through these intertwined trends and showing them how these trends are occurring around the globe—and especially how they'll converge in 2030.

Here's an example of lateral thinking in action. Airbnb competes for business with hotels, but it also seeks to steal customers away from banks. How? Many senior citizens realize at some point that their savings will not suffice to carry them through retirement. But they do possess a very valuable asset: their home. There are two conventional ways to monetize your house without selling it. The old-fashioned approach is to obtain a home equity loan from a bank, but that carries the stigma of debt and the stress of monthly payments. Another possibility is to obtain a reverse mortgage (relinquish equity), but then the children won't inherit the family home.

Enter Airbnb. Empty-nesters can rent the extra rooms they don't use to travelers who will be in the area for a short while, an arrangement that gives both parties more flexibility. Or, if the empty-nesters travel or visit their children a lot and frequently aren't home, they can choose to rent the whole house for short-term stays. Either way, they're getting money *and* keeping their home. Airbnb wouldn't be so successful if it weren't for a number of converging trends: declining fertility, longer life expectancy, doubts about the future viability of public pensions, expanded use of smartphones and apps, and a growing interest in sharing rather than owning. I will guide you through these interrelated developments, showing how they unfold, and how they will all reach critical mass by 2030. This new world presents opportunities and threats; individuals, companies, and organizations will each have their own strengths and weaknesses in confronting them. Yet, as I show in the conclusion, all of us will need to approach this new world differently

than we have approached things in the past. The closing pages offer principles and approaches we can use to make sense of this new reality—and prosper from the opportunities it creates.

Remember, it's all unfolding in our lifetime, and it's right around the corner.



THE WORLD IS CHANGING DRASTICALLY BEFORE OUR EYES – WILL YOU BE PREPARED FOR WHAT COMES NEXT?

2030 is a groundbreaking analysis by one of the world's foremost experts on global trends – from the shifting nature of retirement to the emergence of a new middle class, the rise of women as entrepreneurs and the end of modern banking. This essential guide to the future ends with insight into how COVID-19 will amplify and accelerate each of these changes.

'A brilliant exploration of trends that will change the way we live,
work and play'

Angela Duckworth, author of Grit

'This bold, provocative book illuminates why we're having fewer babies, the middle class is stagnating, unemployment is shifting and new powers are rising'

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