

How to Spark New Ideas and Create Your Company's Future

— THE —

IMAGINATION

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MACHINE

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Chapter One

INTRODUCTION

Corporations have changed the world radically in so many areas: medicine, consumer goods, transport, finance, agriculture, entertainment, communications. And they've done so by combining organizational abilities with the unique human capacity to imagine: the ability to see and create things that had never existed.

Who in the 1500s would have thought it would be possible to manufacture so many shoes and distribute them around the world? Who would have thought that writing and staging plays would turn into the television and movie industries, with performers given the same status as the nobility in ancient Rome? Who would have thought that a few people and a team of machines could run farms the size of small countries? If we had never imagined, we would have never taken the steps that led us to these once unimagined realities.

Imagination is needed now more than ever. Since competitive advantage is increasingly short-lived, driven by rapid evolution of the technological and business environment, companies constantly risk stagnation. Since the 1960s, the

average number of companies exiting the *Fortune* 500 has increased by 36 percent annually, and the proportion of industries in which the top player has led for more than five years has nearly halved. Outperformance more quickly fades to the mean (see figure 1-1).¹

Companies also face declining market growth, driven by maturing demographics. Since 1970, worldwide GDP growth

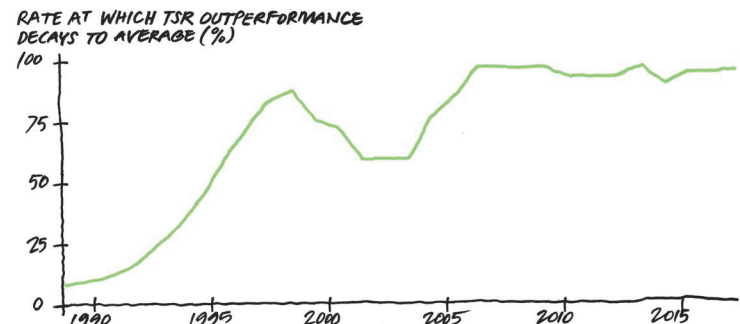


Figure 1-1 Outperformance more quickly fades to the mean

Source: Data from S&P Capital IQ; BCG Henderson Institute analysis.

2 THE IMAGINATION MACHINE

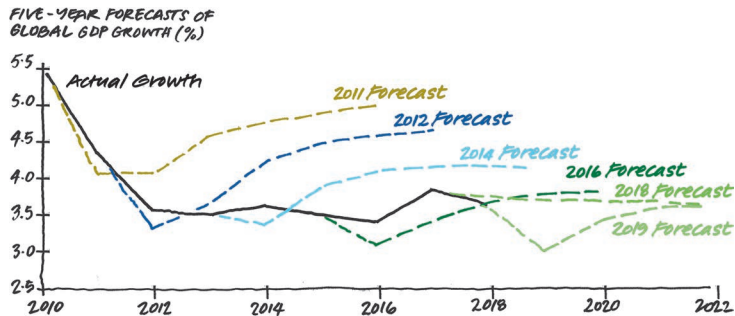


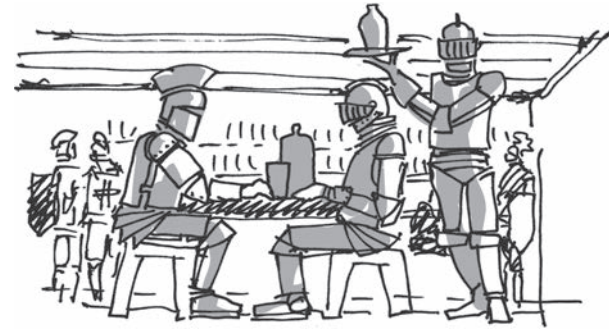
Figure 1-2 Global growth projections have shifted downward

These projections are from the fall IMF outlooks of each year; 2020 projections are not shown due to impact from Covid-19. *Source:* “A Bad Time to Be Average,” by Hans-Paul Bürkner, Martin Reeves, Hen Lotan, and Kevin Whitaker, July 22, 2019. Used by permission of the BCG Henderson Institute, a division of Boston Consulting Group. All rights reserved.

has fallen from 5.5 percent to 3.3 percent, and over the last decade, expectations have consistently fallen (see figure 1-2).

When everything is growing, it’s harder to see the need to imagine, explore, and experiment. Companies float on a rising tide. People have more money to buy more of your product, or an increasing population means there are more people who buy. But if you are in Europe, for instance, which grew at 5.5 percent in the 1970s and is growing at 2 percent today, you need good ideas. Participation in aggregate growth becomes harder, so growth has to be created through imagination.

And this has to happen at a higher frequency than ever. Companies need to reinvent themselves and their offerings again and again. A great model for making money and meeting people’s needs may quickly become unexceptional or



Who would ever have imagined that one day suits of armor would be affordable for all!

even a liability, as yesterday’s assets and procedures become a source of inertia.

Corporations today all started as scrappy, entrepreneurial efforts, guided by imagination. Retaining or recovering this capacity in today’s ever larger corporations is the basis for their ongoing vitality and success.

At the same time, the world is facing a range of complex, collective problems:

- Epidemics
- Climate change
- Inequality
- Populism and social polarization
- Lack of fresh water
- Mental health issues

- Cognitive overload
- And so on

No business can afford to operate as though it is a world unto itself, independent of the systems of society and nature it is embedded in. As we have seen in the Covid-19 crisis, things seemingly far removed from a business's concerns can suddenly undermine its ability to function. The problems listed above impact all humanity and our institutions. To address them, we will need to draw on our capacity for imagination. And business can play a central role in this.

As a side note, it is interesting to reflect that imagination itself is partly responsible for our troubles. Yuval Noah Harari, historian and author of *Sapiens*, points out that since the beginning of agriculture, humans have been solving



Who knew, 15,000 years ago, how much trouble the imagination would cause?

Source: Courtesy of Philippe Psaila.

problems with their imagination, but that reimagining often merely sets the stage for new problems.² We figured out how to cultivate wheat and invented ways to store it, but then wheat attracted scavengers and rivals, so we invented walls and defenses, but then settlements fostered infectious disease . . . and so on.

Any imaginative solutions will surely lead to further unexpected problems. But there is not much we can do about this, other than notice the species-level irony and make the next wave of imagination a productive one, sharpening our approach to harnessing this unique power.

Finally, although artificial intelligence (AI) is still developing, its transformational power is clear. Unlike previous waves of technology, AI threatens to replace not routine physical work but routine cognitive work, much of which we call “management.” This raises the question: What will the humans do? The answer is that we will be left with the skills that are still unique to humans. Competitive advantage will accrue to firms that can shift focus to these skills, that develop ways of working to get the most out of human imagination and higher-level cognition, while lower-level analysis and decision making are increasingly automated.

Like the revolutions that followed from steam, steel, electricity, and the combustion engine, we won't get the full benefits of the technology unless we reorganize our ways of working. When we invented the electric motor, we didn't get the benefit until we reorganized the factory.³ Because AI is a cognitive technology, we won't get the benefits unless we rethink the *cognitive* aspect of business—unless we build



companies that cultivate and harness the most valuable mental capacities of the humans within them, working together with intelligent algorithms.

Beyond the assessment of people's skills around hiring, promotion, and a handful of other tasks, the cognitive dimension of work has not been a big focus for business. Historically, the process of industrial production could afford to not care much about what was going on inside people's heads, because it required little more than compliance with prescribed roles. It's a focus that has continued to the present. Compared to, say, the industry of psychotherapy or great sports teams, people in business are primarily concerned with externals, comparatively less with the potentialities and nuances of the human mind.

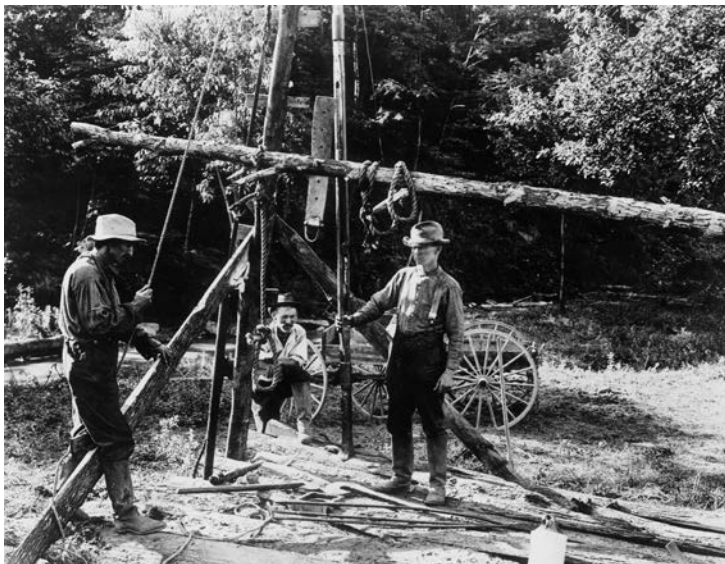
Yet the rise of AI will likely shift the focus of human work to higher-order capacities. Businesses will need to be-



We often think of business as about managing the externals, but what is going on in the brains of people here? *Source: Jetstar Airways (jetstar.com).*

come much more knowledgeable about and competent at extracting value from unique processes in human brains. To draw an analogy, modern business applies a huge amount of ambition and competence to formidably difficult tasks, like extracting oil from miles under the ocean or from organic matter embedded in rock. We will need to apply that same level of seriousness—the desire to do it a hundred times more effectively than anyone has before—to the task of nurturing and drawing from imagination in human brains. In the early days of oil, people would just dig around and occasionally strike oil. That's roughly where we are at with imagination today.

In addition to changing how we work within businesses, AI also opens possibilities for radical new services and busi-



The early days of extracting oil. This is our current level of sophistication around extracting imaginative ideas. *Source:* George Rinhart/Corbis Historical via Getty Images.

ness models that will transform industries and fulfill unmet needs. With the rise of AI, we will rethink how we generate energy, build infrastructure, defend countries, manage and enhance health, educate ourselves across a lifetime, save and invest, communicate, gain self-knowledge, and get entertained. Firms that cultivate and use imagination effectively will be pioneers in these spaces of possibility, finding revolutionary new offerings and the growth they unlock.

For the sake of restoring the vitality of our companies, and for the societies these companies serve, we must better harness imagination. To imagine and realize new ways to



meet collective and individual needs, companies must tap into the full humanity of the people who work for them—the reward of which is sustained growth.



This book is about how to harness the unique human faculty of imagination. We have written it primarily for business leaders who wish to revive and capture the imaginative powers of their organizations. We are motivated by frustration at the declining creative capacities of mature companies and the aspiration that we can not only rehumanize our overly financialized and proceduralized corporations but put the human capacity for imagination at the center of collective enterprise.

Though we have a long way to go in understanding imagination, we do have important insights about it from cognitive science and the humanities. The aim of this book is to

draw on the best knowledge we have about imagination and filter this through practitioners' minds—our own experience and interviews with business leaders—to produce a practitioners' guide to building and operating an imagination machine: a company that systematically harnesses imagination to drive growth.

We use the word “machine” because imagination is a tool, and companies are tools to serve human ends. Though imagination is somewhat unruly, there is no reason we cannot develop a more systematic approach to cultivating and using it, just as business has done in other domains that depend on quirky characteristics of the mind, like advertising or human resources. And although the word “machine” may evoke images of factories from the last century, modern machines are increasingly flexible and intelligent. A company worthy of the name imagination machine is one that can consistently reinvent itself and what it offers to the world.

This book is about the mind, but not only the mind. Harnessing imagination entails dealing with the mind, action, and their interaction. It is not only about individual creativity, but how minds can interact, creating collective imagination and momentum to turn ideas into new realities. And it is not only about product innovation; it is a book for business leaders who want to re-envision their entire enterprise and increase its imaginative potential. We will look at the complete life cycle of ideas from inspiration to new realities. We will look at how businesses can be transformed to capture imagination. And we will explore how AI might be incorporated into an organization so it can become even more productively imaginative.

Our journey begins by understanding what this familiar but ill-defined capacity is all about. What is imagination? How does it work, and how can it be put to work? We explore this in the next chapter.