

Introduction

The world beyond the Fourth Revolution will be the Age of long distance collaboration. In this Age, manufacturing will represent only a very small share of the value creation system and will be subsidized, as agriculture is today. Value creation will be measured in a way very different from today's accounting rules. As a result, the accounting and financial system will be completely transformed. Instead of being resisted, environmental changes will be leaned into, and engineered. Organizations will stop being closed and exclusive. They will be networked, open to the world, fluid and operating in a turbulent succession of multiple short-term projects. The new leadership will be nomadic, international K.E.E.Ns – Knowledge Enhancing Exchanging Networkers. Leadership skills will be reinvented, with a new model, the 'mutual learning' leadership. Physical systems like energy systems will become decentralized. Democratic institutions will evolve significantly, from representative democracy to direct democracy. Retirement will be replaced by a new active life phase...

How can we make such predictions, which for some, are quite beyond the usual mindset and understanding of the world? And what can we do to thrive in such a transformation of the world?

The real focus of the book

While a large section of the book is devoted to the understanding of the Fourth Revolution, its causes, its symptoms, and what the new Collaborative Age will look like, it is not the main goal of the book.

The main goal of the book is to determine which are the behaviors and actions which we can all take to make the most of the events that will be unleashed in the next decades. A Revolution leads to many changes.

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Established institutions and elites will crumble and disappear. A new leading community will appear which will ultimately decide which way the world will go.

Do yourself a favor – get onboard to understand the changes of the world and become part of this leading community.

Do the world a favor – become part of the leading community to build a world that will be better for our children. Practice daily leadership and develop a good understanding of the upcoming and oncoming world so that you can help accelerate the transition and make it smoother. Become a leader to work for and avoid the crises always associated with the consequences of Revolutions becoming catastrophic, bloody and creating too much pain.

The method

As we intend to understand the Fourth Revolution, let us pause for a short moment and think about whether we can really understand what will happen. Since childhood, we have been indoctrinated with the Industrial Age worldview and its accompanying assumptions. Most of them will change completely. Can we stretch ourselves and develop a sound understanding of what is happening? Is the intent of this book condemned to failure even before starting?

Indeed, history is full of people roaming around with worldviews of another Age, who just cannot understand the changes happening around them. This is problematic when they are the rulers. Louis XVI of France, the king who was overthrown by the French Revolution, famously declared: “*one cannot govern a nation against its habits*”. He quite underestimated the changes occurring in the French society as a result of the Third Revolution, commonly called the Industrial Revolution.

One of the most extreme cases is the still existing: the Flat Earth society that still supports the theory of a Flat Earth. More seriously, there are several recent examples of new theories which significantly change our

worldview, for which heated debate is still soaring more than a century after they have been articulated. Darwin's theory of evolution is one of these examples, and debate is against creationism, a philosophical position of the previous Age. What characterizes such heated debates is that they touch the very core of individual understanding of the world. It appears that a portion of the population does not open itself to possible new worldviews.

What then can be the chance of this book accurately deciphering precursors of change and giving a sound prospective view of the world beyond the Fourth Revolution?

We believe that by following a rigorous approach, it is still possible to escape from one's current worldview. Of course there are still risks involved, but they should be greatly reduced. Anyway we are warned, as Niels Bohr, one of the fathers of quantum mechanics said, "*prediction is difficult, especially if it's about the future*"!

The method that is used in this book is both simple and powerful. It is based on the historical analysis of the previous Ages and Revolutions. We thus develop an understanding of the common threads of change that happen during such Revolutions. In particular, understanding the root causes of the previous Revolutions allows us to uncover the fundamental reasons that provoke these tremendous changes. Definite precursors of the Fourth Revolution have also been developing since a few decades. They can be identified because they are highly visible changes that do not fit into the normal Industrial Age framework.

As the reader will find out in the book, using these two methods together – the historical analysis and the observation of precursors – gives quite a good idea of the general direction of the Fourth Revolution. The overall understanding of the Fourth Revolution and the Long Distance Collaborative Age developed in this book is thus certainly a sound description. We can use it to act so that we can thrive through the Fourth Revolution into the Collaborative Age.

The root cause of the Fourth Revolution

One of the most stunning findings of the research underlying this book is the real root cause of the Fourth Revolution.

Today the mass media constantly refers to the ‘digital revolution’, the ‘knowledge revolution’ or other such concepts. In fact, the Fourth Revolution is related to a single technological breakthrough: cheap long distance, interactive communication. And because of this technological development, a Fundamental Revolution is deemed to happen, because it fundamentally increases the collective cognitive capability of humankind in a manner never possible before.

In retrospect, each of the previous Fundamental Revolutions corresponds to the development of a technique which greatly enhanced the collective cognitive capability of humankind, by enhancing humankind’s communication capabilities. It is not just about each individual’s cognitive capacity: it is about the addition of the cognitive capacity of humankind as a whole, and how to make the group’s collective capability significantly enhance the individual’s capability.

The First Revolution, which made humankind emerge from the darkness, was brought about by Speech, a technique that allows the exchange at short range of complex information in a reciprocal manner. Speech is also a fundamental tool for creativity.

The Second Revolution, where humankind settled as farmers with Agriculture as the main value production system, was brought about by the invention of Writing. Writing allows the transmitting of valuable information beyond geographical distance and time, allowing one to compound the wisdom of ages. Scholars could now benefit from the discoveries of other scholars in distant lands and times. Humankind could benefit from the old books of wisdom which often became a basis of religious belief.

The Third Revolution is also often called the Industrial Revolution, because the new dominant value production system was Manufacturing. But it is not the revolution of Industry. In reality, it is the necessary

consequence of the invention of Broadcasting. Broadcasting is the capability to communicate ideas cheaply over long distances and times, one way. The first Broadcasting technique is mobile-font printing, which appeared in Europe at the end of the 15th century. It changed the collective cognitive capability of humankind by making information available in a much cheaper and broader manner than ever before. Literacy rates soon soared and the world changed, because a lot more people were able to refer easily to a lot more ideas and knowledge. Decisive inventions were discovered by individuals that were not part of the dominating and educated social elite. Technology developed and ultimately, the Revolution ignited, based on a significant change of the value production system, of the social elite, and of society as a whole.

While Broadcasting efficiency further developed with the invention of the motion picture, radio and television, these techniques only remained one-way long distance communication. Two-way long distance communication remained scarce, slow and not really interactive. Public postal service developed in the early 19th century. The fact that the postal services were always at the forefront of the progress of transportation technology, to shorten transportation time, is testimony to the constant importance of two-way mutual communication for humans. The telegraph after the second half of the 19th century significantly improved the speed of long distance communication but due to its technical limitations, it was not interactive at all for normal users. Telephone developed from the 1870s onwards, but only allowed affordable two-way communication on a local basis until the 1960s. Actually, it is only recently, with the advent of cheap long distance communication tools, that practical, affordable long distance, two-way real time interactive communication is available. This is an unprecedented change and we are yet to understand fully its implications.

The Fourth Revolution is caused by an unprecedented capability to interact in real time with other individuals situated physically in any corner of the world. Digital technology is only the underlying technology that supports today's communication infrastructure. Digital technology does not

create the Revolution in itself, being simply a useful form of data storage and transmission. Data does not increase cognitive capability by itself. Cognitive capability is created by the unprecedented density and frequency of long distance interactions between humans.

The value created by social networks and the Internet is clearly related to the fact that it allows individuals to interact and contribute over long distances and over time in an unprecedented way. Today, for free, we can interact with distant relatives and colleagues over video using Skype or its equivalent. The value created by these tools is tremendous. It is much higher than what is recognized by our usual value measurement system rooted in the Industrial Age accounting system, based on capital and money. Knowledge and insights from distant lands is now available, and it is not uncommon today to see researchers from some far away and unknown research center in India respond successfully to challenges posed by American multinationals.

We are only today discovering the power of long distance collaboration. The Age beyond the Fourth Revolution will be the Collaborative Age. Our daily life, and our worldview, will be dramatically modified.

The world beyond the Fourth Revolution: the Collaborative Age

Although a lot more details are provided in the book, some useful findings and insights can be highlighted. They will certainly seem striking and difficult to admit at first, but they are derived logically from the historical analysis of the Revolutions, the analysis of root causes, and the observation of the precursors of the Fourth Revolution.

The value production system of the Collaborative Age will be the creativity and contribution of long distance networks of individuals. Measuring this value creation with the current value measurement systems –

accounting and financial – is useless. This is because the value created will have many more components than just the monetary component. We are today already at a loss to integrate in a consistent manner the environmental and social impact of corporations. Our value measurement system needs to be overhauled, or we run the risk of being blind to the actual value produced for individuals by long distance networks.

The organization of the Collaborative Age will be significantly different from the organization of the Industrial Age. It will be open to the outside, instead of closed. It will be fluid and structured around a number of projects limited in time. An ecosystem of temporary contributors, followers and supporters, outside the formal organization, will make decisive contributions to the outcome of the projects, and ultimately to the success of the organization.

It is the end of traditional hierarchy and organizational charts, and any kind of centralized control over the organization in the way it is conceived traditionally. An organization will be an ecosystem of projects and initiatives, loosely coordinated and driven around an organization's purpose.

The new Elite will be the K.E.E.N., the Knowledge Enhancing Exchanging Networker. Actually, the 'Es' can have multiple other meanings, like Exploring, Experimenting...

The K.E.E.N. is an evolution of the now classical 'Knowledge Worker' of Peter Drucker, and it is quite different. First, it is no more a Worker, a concept of the Industrial Age which sometimes implies alienation and salaried employment. The K.E.E.N. builds his value around his knowledge beyond the static asset of his expertise. He also builds his value around his capability to network and enhance creativity and knowledge production.

The K.E.E.N implements a new type of leadership – the 'mutual learning' leadership. Typically applied in teams, this style of leadership dispenses with the old concept of the leader giving the direction. The team, not the leader, determines the purpose and the direction, and the formal leader acts mainly as a resource.

For the first time since time immemorial, the dominant social leadership will be nomadic. In the Agricultural and Industrial Ages, the dominant social component was sedentary, because production means were physical and could not be moved easily. The K.E.E.N.'s value production can happen anywhere, using long distance communication. The K.E.E.N. will move temporarily where he will participate in a core project team. The fact that the social leadership will be nomadic and not anymore attached to a territory or a Nation is a tremendous change. It will change the political picture and definitely shake the world.

Institutions will be redefined by the Fourth Revolution. Deep mindset changes will shake societies: manufacturing will become subsidized, we will engineer our environment, physical systems will become much more decentralized than they are now, and specialization will increase to the point where every individual will be unique.

Our institutions today have been mostly shaped by the Industrial Age. The education system, governments and tax systems, democracy, intellectual property and research institutions among others, will be significantly redefined in the Collaborative Age. Should they resist the change, they will be forcefully wiped out and replaced.

How to thrive through the Fourth Revolution

The most important section of the book deals with a framework to ensure success in the Collaborative Age, and hence thrive through the Fourth Revolution.

What does 'thriving' mean? It is related to happiness. And happiness is related to the quality and density of our positive relationships. Therefore, thriving through the Fourth Revolution cannot just be a personal quest in isolation. 'Succeeding' independently of the surrounding community, or even at the expense of others is not a sound recipe for deep long-lasting

success. Thriving requires a deep, intense interaction with the environment at the emotional level.

What are a few practices which, if practiced daily and consistently by you, will make you successful? These are the same practices which, if practiced daily and consistently by many people, will help make the Fourth Revolution smoother, providing a source of opportunities and transformation for a large number of people. Exposing these practices is ultimately the objective of this book. It is to help you thrive. Share them. It is also for the world to thrive.

The first key habits are emotional balance, the practice of a holistic exercise involving both body and mind, and giving.

Paradoxically, internet and virtual social networks are places where emotions are ever present. With information density being poorer in virtual communication than in face-to-face communication, the risks of misunderstanding and the risk of generating strong emotions are greatly increased. Improved emotional balance is thus paramount to success in the new world.

Today, more and more knowledge is uncovered on the deep-knit intricacies of the mind and the body. Mind-based cognitive processes cannot happen without intervention from emotions and the body. It is thus primordial to exercise both mind and body in a holistic manner to develop those capabilities which will be needed in the Collaborative Age. Developing a healthy mind-body relationship increases openness to new experiences and enhances emotional stability. The book gives detailed suggestions as to a holistic exercise routine that addresses mind and body in synergy.

Giving is a key skill of the Collaborative Age. Contrary to what is generally believed, the development of long distance collaborative tools increases face-to-face interactions, in addition to developing virtual interactions. Interpersonal skills are thus even more primordial than ever before. In the real world, interpersonal relationships are based on giving; it

is even more so in the virtual world. Giving out to the world time and knowledge is a decisive skill. It also needs to be practiced and nurtured.

Beyond these fundamental elements for success in the Collaborative Age, the successful K.E.E.N. needs to be able to influence the world effectively. Leadership in the Collective Age is for everybody. Leadership is based on effectiveness and doing things right.

First, the K.E.E.N. needs to be sufficiently technologically literate to use properly and efficiently tools like social networks, discussion forums, websites, wikis. He or she needs to know the basics of project management, which differs greatly from usual manufacturing management in terms of outlook and tools. He or she needs to know how to market oneself effectively. These skills can be easily learned and enhanced. Just go and practice them!

Second, the K.E.E.N. needs to strike a synergy between focus and openness, between choice and flexibility. The new mindset of abundance opens a world of opportunities like never before for the individual. It is both great and cumbersome. How then to choose?

Individual purpose and drive is required. More than ever before, one can, and should, lead his life toward his purpose. It is important to have at any one time, a clear and compelling personal purpose. There are several ways to establish it. Some of them involve external help.

The skill of focus through Presence is becoming a primordial skill for success in a world where we can easily be overwhelmed by all the stimuli we are subjected to. The capacity to be fully Present when it is needed is a skill that needs to be developed and practiced. This skill underpins those moments of deep attention and focus that allow real connection with the environment, other people and true creativity. Presence goes along with the skill and discipline of choosing what we spend our precious time on.

At the same time it is important to stay open-minded, and available for random stimulation. It is even more important to voluntarily leave time for stimulation from sources we would not have accounted for.

The successful K.E.E.N. needs to cultivate flexibility. Flexibility between management and leadership styles during the work day. Flexibility

between roles carried out simultaneously – member of a project core team, occasional contributor to other projects, follower and supporter of still more projects. Flexibility between one's revenue generating occupations, voluntary work and family life. Flexibility in terms of geography, settling temporarily where and when needed. Flexibility between one's purpose and goals, and one's various interests.

A positive and appreciative approach is the key to the synergy between focus and openness. It is a mindset that should be practiced.

Numerous skills are thus needed. They can be learned and there are resources available to teach them. Above all, they need to be practiced to develop experience. The Collaborative World is a world where failure costs nothing. Experimenting is far easier than before. Set up a website and a blog. You don't encounter any response? Scrap it and start another; the cost of doing this is just your time; the profit is your experience.

Go and experience the world of long distance collaboration. Become savvy in the ways individuals will interact tomorrow. Understand through your own experience what will create value and how creativity is unbounded by free failure. That way, you will increase your effectiveness and thrive and contribute to shaping the world.

The structure of the book

Any revolution is an opportunity for the part of humankind that leans into it, and a tragedy for the other part that resists it. The ultimate objective of this book is to provide sound advice for action so as to grasp the benefits of the Fourth Revolution. To achieve that, a large part of the book is devoted to deepen our understanding of the Fourth Revolution.

For the reader uniquely interested about practical behaviors and tools to thrive through the Fourth Revolution and bring a useful contribution to the world, our advice is to directly jump to the last Part of this book, Part IV. In this Part, we discuss what are the best tactics and strategies, not only to

adapt, but to thrive through this Fourth Humankind Revolution in the Collaborative Age.

The first three Parts and eight Chapters of the book aim to develop an in depth understanding of the changes that are happening. They are also important to really understand deeply the meaning of the Fourth Revolution. As they are based on historical analyses, it is preferable to read them in the order they are presented. Should you still want to skip a Chapter, a summary sheet at the end of each Chapter gives its highlights.

Part I explains why the current changes of the world are in fact a Fundamental Revolution, one of those few world-redefining events for humankind. There has been only three of such Fundamental Revolutions before.

Chapter 1 exposes what is the deep root cause of all past Fundamental Revolutions – a new communication technology that changes the collective cognitive capability of humankind. Lately, cheap long distance interactive communication has appeared with the potential of creating a Fundamental Revolution.

Chapter 2 goes deeper and shows how the new communication technologies create a step change in humankind's collective cognitive capability. The Fourth Fundamental Revolution is inevitable. Indeed it has already ignited shock waves which are traversing the world.

Part II sketches the world beyond the Fourth Revolution using a simple yet powerful method.

Chapter 3 examines the new evolutions of society of the last few decades that contradict the classical Industrial Age model, and how they already play a major role in our lives. They are the precursors of the Fourth Revolution.

Chapter 4 looks into the History of humankind to identify how mindsets change across Revolutions and identify how they can be expected to move across the Fourth Revolution. Doing this gives deep insights into the world of tomorrow.

Part III builds on the previous Parts and goes into more detail of the world of the Collaborative Age, beyond the Fourth Revolution.

Chapter 5 examines in detail what the value production system of the Collaborative Age will be, and how we can measure this value.

Chapter 6 examines a particular institution that was central to value creation in the Industrial Age, the organization. How does the organization change in the Collaborative Age? It will become open and fluid. And it will be nowhere near the traditional corporation of the Industrial Age.

In Chapter 7 we look deeper into the profile of the typical new Collaborative Age contributor, the K.E.E.N., and what are the new practices of leadership. Again, they are significantly different from the usual approaches of the Industrial Age.

In Chapter 8, we finally examine the impact of the Fourth Revolution on other social institutions. Revolutions always lead to the demise of previous institutions: governments, education system, intellectual property, tax system, religious institutions. What will the institutions of the Collaborative Age look like? As one can expect, they will be deeply transformed.

This all helps to determine in Part IV what habits and skills are necessary to thrive through the Fourth Revolution.

Chapter 9 examines personal fundamental habits and skills required in the Collaborative Age. What are the daily practices that will found one's success?

Because one cannot thrive through the Fourth Revolution without helping the world to thrive, Chapter 10 finally builds on personal habits and skills to examine more deeply the basis of the key practices of the effective leader of the Collaborative Age. How can you lead the world in the direction you want it to take, and thrive at the same time?