

# Paradoxes of Leadership 

NEUROSCIENCE-BASED
LEADERSHIP IN
THE INFORMATION AGE

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## ACKNOWLEDGEMENTS

To the women in my life:
My wife and my friend, my life and business partner, my love and my grounding, Irma:
"Dedicado a Irma. Por supuesto. Te amo." (Paraphrasing Gabriël Garcia Marquez, Amor en los Tiempos de Cholera)

My daughter, Elisa:
"Te quiero basta las estrellas, y más allá.
Baila y brilla desde dentro, cuci."
My mother, Elza:
"Ik heb je kunst en vermogen met je moedermelk ingezogen." Lyrics from the song, 'Mama'. When I asked my mother if I had become who she thought I would become, she answered: "I'm proud of what you bave become, don't get me wrong, but I always thougbt you would become a musician."

This is my opus.

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## INTRODUCTION

Our world is changing. It changes at an accelerating rate. So should we, if we want to keep up with the change. We need to re-invent ourselves, as we have been re-inventing our environment. The human race has proven to be one of the most adaptive species on earth. Its survival as a species in itself, the fact we have climbed up to the top of the food chain, and that we have developed the technology to reach beyond our own habitat and explore new worlds, testifies to that. We have now come to the point where we have become the chief architects of life on earth. We synthesise new materials, organic and non-organic, adapting the genetic code and the chemical composition of the very building blocks of life and matter, to develop tools and materials to build cities and societies, and to grow crops and breed livestock to feed the billions of humans inhabiting them. But the chief architect more resembles the magician's apprentice, because the impact of change we are causing is beyond our grasp, creating climate change and upsetting our ecosystem, forcing Gaia to struggle for equilibrium. We are waging wars for access to scarce natural resources, causing millions to suffer for the benefit of a happy few.

One wonders what will be the next leap in our evolution, what will be the species that evolves from the homo sapiens. Whatever this next evolution will be, it will surely offer another adaptation to the environment and, for the first time in history, it will be an adaptation to an environment we have shaped ourselves. We now live in a world configured by technology, interconnecting humans on a global scale, allowing us to defy the laws of time and space. We have already entered the virtual age, where we are building a parallel, immaterial world whose boundaries are set only by the imagination of its creators. In this world the fittest will be those who can process and share information at the highest rate with the help of their own intelligence, the brain power of those who they interact and collaborate with, and the processing power of the artificial intelligence at their disposal. The most probable adaptation of our species will be - more than ever before - in the shape and function of our brain.

This book is written for the leaders and shapers of this new world: the ones who are clever enough to understand that in order to recreate a better world we need to
become smarter than our previous selves; those who understand that the level of complexity of the change we face requires many individual brains to be orchestrated in unison. This requires changing and accelerating our processing power through leadership, to intertwine individual intelligence and create a higher-order - collective acumen. This book does not provide the content of the knowledge you need to acquire to deal with your particular context. I leave that to your judgment and expertise. Rather it is about the challenges of how we acquire and share knowledge, how we process information, how we can connect and lead people, and motivate them toward higher, common goals, in order to create collective intelligence. This book is about how to lead and interconnect people in the knowledge and service society, with the brain in mind.

The knowledge base of this book consists in the integration of different sources:

- Intelligence about how the brain works, based on advances in the neurosciences;
- Over 20 years of experience as an international researcher of employee wellbeing and productivity, accumulating data from over 25 countries;
- Two decades of observation and interaction with managers teaching as a business school professor at universities in Europe, the Americas, and Africa;
- Several hundreds of coaching processes with managers from more than 30 countries, helping them with a diverse range of (self)leadership issues;
- Data gathered over the last eight years using a proprietary methodology called the "NeuroTrainingLab ${ }^{\text {TM }}$ ", observing over 1,000 processes of manageremployee interactions, gathering multi-level data of their discourse, nonverbal behaviour, and neurophysiologic activity while confronting challenging social situations involving real people in realistic simulations.

After teaching leadership at a top business school for almost 10 years using the case method, and studying wellbeing in professionals and managers around the globe by administering surveys, I felt it was time to open the 'black box' of leadership. The creation of NeuroTrainingLab ${ }^{\mathrm{TM}}$ has allowed me and my team to get very intimate with the dynamic interaction processes between managers and employees, while gathering synchronous data of their electro-encephalographic (EEG) activity. Now, eight years later, we have set up labs in Spain, Chile, Belgium, Peru, Argentina, and Brazil, with labs in Mexico and Ecuador in the pipeline.

Based on this research and building on previous work of colleagues at IMD business school (International Institute for Management Development) in Switzerland, I developed the paradox theory of leadership, which forms the central axis
of this manuscript. Observing leaders in action, we found that successful managers are capable of balancing many paradoxes, i.e. apparently contradictive behaviours, while engaging in complex human interactions that involve solving problems and building relationships. Paradox theory is a refinement of situational leadership theory - the dominant paradigm in most training companies and international business schools. The fundamental advancement of situational leadership theory consists in "going from or to and". I have learned that a fundamental premise of situational leadership still holds: great leaders are capable of effortlessly adapting their leadership behaviour to changing circumstances. But it is not a question of exerting transactional or transformational leadership, autocratic or participative leadership, being a thinker or a feeler, someone who learns through abstract conceptualisation or through direct experience, to have strong local or global identity. Paradoxically, it is a question of being both and doing both.

Employees expect to be directed with an iron hand and treated with velvet gloves. They expect to both provide inputs and to be heard, and to be told clearly what to do. They need a clear vision and smart goals, and to be coached to optimise the path, drawing on their own strengths and insights. They want to be both respected in their idiosyncratic cultural identity and collaborate with colleagues around the globe. They need to be both controlled to provide contingent feedback and steer behaviour, and trusted to delegate certain responsibilities.

The challenge that managers face though is that these different leadership behaviours require the recruitment of different circuits in the brain, which "naturaliter" cannot be activated simultaneously. In order to balance paradoxical behaviours, leaders exercise a very specific type of multi-tasking, or what scientists call dual-task processing. This requires what I refer to as "brain flexibility", defined as the capacity to switch between different brain states or mindsets effortlessly, and "brain resilience", which is the capability to bounce back from cognitive overload or emotional turmoil in a matter of seconds, unconsciously redirecting the blood flow in the brain to different neural circuits involved in these very different cognitive and affective activities.

The purpose of this book is to elucidate these different brain states, explain how to develop brain flexibility and brain resilience in order to switch between cognitive and affective activity consciously and effortlessly. The correlates of these different brain states are focused analysis, creative flow, emotional regulation, relaxed disconnection, and mindful meta-cognition, the latter being a higher-level cognitive activity that allows one to adequately judge when to switch between modes. This is not a goal in itself, rather it is the process underlying the capacity to deal with the
many leadership paradoxes managers face nowadays when dealing with complex social situations.

The first chapter of the book elaborates the different trends in our socio-economic milieu, in order to set the stage and point out the specific, paradoxical behaviours required to deal with the complexity, speed, interconnectivity and stress characterising our contemporary business context. These trends are: turbulent change, knowledge and service-intensification, digitalisation and massive interconnectivity, the accelerating speed of change and work rhythm, increasing levels of diversity in the workforce, globalisation, mass customisation, and the concentration of wealth.

In the second chapter I introduce you to a series of neuroscience concepts and principles that underlie the basic cognitive and affective capabilities described in the rest of this book, like expectations, attention, emotional regulation, creativity, and meta-cognition. The drastic changes mentioned in Chapter One call for a different mindset and a different level of knowledge and resilience. In order to understand what is required from managers to improve their cognitive and affective capabilities, we need to understand how mind and body work in the first place.

Given the central importance of paradox in the book, I have decided to dedicate some focus to the concept paradox, during the Interlude. Understanding the properties and the omnipresence of paradoxes in depth serves as a conceptual basis for understanding all subsequent chapters, where I analyse self-leadership paradoxes, time paradoxes, and leadership paradoxes.

The third chapter focuses on a number of "first-level" self-leadership paradoxes we all have to confront, "conditio sine qua non" to be able to take on the "second-level" leadership-of-others paradoxes that I address in the fifth chapter. These first-level paradoxes are: "approach versus avoidance orientation", or overcoming one of the most fundamental differences between people according neuroscientists, whether we feel more motivated by rewards or threats; "thinking versus feeling", or the capacity to reconcile mind and heart; "data versus intuition", or the capability to integrate reality and unconscious parallel processing; and "work versus family versus personal life", or the capacity to reconcile professional and personal goals.

The fourth chapter is dedicated to a particular paradox that has fascinated mankind for centuries: the paradoxes of time. Time is a fundamental dimension in physics, one that can alter any material or person significantly, and one that is beyond our control. Or so it seems. This is not a treatise on the physics of time, and neither on the
psychology of time. For this I refer you to my previous book, Quality Time. In this chapter I will focus on the individual experience of "chronos versus kairos", or the objective and subjective dimensions of time; "linearity versus circularity", or the perception of time as uni-directional or developing in iterative loops; and "present versus future time orientation", or the capacity to be present and ambitious. The ultimate paradox of time, the "endless now", is that the present moment vanishes as soon as we want to grasp and hold it. However the capacity to be fully present has a strange and almost mysterious relationship with health and wellbeing and therefore deserves special attention.

The fifth chapter explains the major leadership paradoxes we have identified in the NeuroTrainingLab ${ }^{\mathrm{TM}}$ : "being versus doing", referring to the importance of both nature and nurture for becoming a leader; "inquiring versus informing", or the capacity to gather information as much as transmit information; "task versus people orientation", or the capability to simultaneously solve problems and develop relationships; "employee versus organisational interests", or the ability to develop "i-deals" to meet individual needs while respecting organisational rules and policies; and "control versus delegation", necessary both to provide the necessary supervision and follow-up expected in inspirational leaders, and to facilitate motivation, initiative and intrapreneurship in others.

The concluding chapter six integrates all the above into the concept of "Quiet Leadership", a third-generation formulation of leadership to deal with the $21^{\text {st }}$ century challenges. A quiet leader is tranquil, serene, discrete, and wise, connecting and developing people in silence, leading through vision and purpose, safeguarding the profitability of the organisation, driving both operational excellence and innovation, protecting collaborators against information overload and stress, and developing leaders through role-modelling and providing support through observation, feedback and coaching.

The epilogue offers a critical and bold look ahead. I'm no Nostradamus, nor do I pretend to be one. My intention is to prepare your mind for what is bound to come. The human species stands at the dawn of its rebirth. The question is whether it will be a reset or a renaissance. If we allow politicians, corporate and union leaders, and the media to further prey on our fear, taking cowardly advantage of the neurologically wired negativity bias of citizens, the latter will continue to respond with a biological reflex of self-preservation, selfishness, and a focus on "me" and "my tribe". This egoand ethno-centric focus and antagonism between nations will prohibit the creation of global alliances needed in order to come up with global solutions for global problems, like the polarisation of wealth and power, global warming, the depletion of
natural resources, and migration. Eventually this will drive us to destroy our habitat and civilisation. However there is hope for a renaissance.

As we speak I am are already preparing a sequel to this book, dedicated to the Brain Balance. This publication will offer solutions in terms of developing brain health, flexibility and resilience. The Brain Balance is a brain-state decagon model explaining five brain-state paradoxes underlying the above-described leadership paradoxes: "exercising versus sleeping", or the ease with which you can activate or deactivate your body to remain in physical shape and get the necessary rest; "focusing versus disconnecting", or the capability to focus attention for data analysis and problemsolving while switching off one's thoughts engaging in intuitive, associative thought; "connecting versus reflecting" or the capacity to direct our focus internally through reflection and meditation or externally connect with others; "playing versus routining", or the capacity to (dis)inhibit and engage in spontaneous-fun-creative (disinhibition) mental activity, or in tedious, repetitive, disciplined mental activity (inhibition), both of which are necessary for success; and "nourishing versus fasting", or the capacity to feed and cleanse our body to generate the energy to confront daily life.

Last but not least, in addition to this book we provide access to online resources that can help you to gain self-awareness of your cognitive, learning, and social styles, and evaluate activities associated with brain health and performance. For more information contact us at info@neurotraininglab.com. These online resources provide self-diagnosis questionnaires and resources, taking into account the paradoxes addressed in this book, and offering solutions to keep in shape and sharpen one's focus and brain health.

This book was slowly developed and matured through hundreds of hours of teaching and coaching, incubated in my brain more than five years, and crystallised when working with colleagues and doctoral students from Brazil, USA, Morocco, Spain, Peru, Belgium, and Chile. Following the advice of my first academic supervisor and dear mentor Prof. Emeritus Marc Buelens who said "if you want to write a good book, teach it", I further refined my thoughts thanks to the provocative questions and inputs of masters and Ph.D. students at Antwerp Management School (Antwerp), EADA Business School (Barcelona), Nortus (Campinas, Brazil), Adolfo Ibañez University (Santiago de Chile), Mediterranean School of Business (Tunis), LATAM Coaching Network (Lima), Deusto Business School (Bilbao), the EFMD Executive Academy (Prague, Miami, Singapore), Momentum Consultores (Santiago de Chile), Institute of Business Studies / RANEPA (Moscow), the University of CEMA (Buenos Aires), the University San Francisco de Quito (Quito), Instituto Politécnico do Porto (Porto), Universidad de Sevilla (Sevilla), and Human Capital Consultores (Lima).

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Enjoy the journey.

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## CHAPTER 1

# Leadership Challenges 

"You can't manage tbird-generation strategies with second-generation organisations and first-generation managers." (SUMANTRA GOSHAL, LATE STRATEGY PROFESSOR, LONDON BUSINESS SCHOOL)

## INTRODUCTION: "PANTHA REI"

Everything changes, the ancient Greek adagio goes. The game-changer, however, is that in the $21^{\text {st }}$ century this change has become high-paced, continuous and unpredictable, demanding constant adaptation. The quote from Sumantra Goshal expresses how organisations struggle with adjusting their organisational and managerial mindsets in response to these frequent disruptions. In this world we can no longer rely on the "first generation" assumption of relative stability that can be administered with strategic planning, "command and control" management with a clear division between those who plan and those who execute the plans, applying "scientific management" to prescribe exactly what everyone is expected to do. This clockwork / machine metaphor where every employee is a mindless cog has lost most of its relevance, except in predictable environments or crisis situations that still require meticulous execution of automatised routines and protocols.

In my classes I often ask managers how many of them have job descriptions. The majority still tend to raise their hands. Then I ask how many actually stick to their job description. Nobody raises their hands. If they did, their companies would simply go bankrupt. In a world in constant flux we need flexibility and ongoing adaptability. By the time the strategic plan that top executives have masterminded reaches the outposts of the organisation, the strategic intent has become an outdated illusion. In an economy that is driven by innovation, not involving employees to contribute with ideas and entrepreneurial initiatives to drive continuous improvement is an enormous waste of talent. The downfall of communism is a clear illustration that this model is not sustainable.

Neither can we rely only on "second generation" management by objectives (MBO), the modus operandi of the vast majority of companies nowadays. True, MBO was a major upgrade in comparison with first-generation management, as it actually relied on the intelligence of employees. It allows initiative and creativity, and motivates effort with bonuses and benefits for those who excel. However, this management style also encourages aggressive corporate behaviour to reach highly demanding quarterly objectives. Where possible, companies strive to eliminate competition through price wars, hostile takeovers, advertising belittling the adversary, breaking the rules, corruption, appropriation of scarce natural resources or talent, ruthless downsizing, or the acquisition of strategically important providers.

In this environment changes can hit so hard and unexpectedly that goals become obsolete. The recent financial crisis was the disastrous consequence of second-generation - "the-financial-goal-justifies-the-means" - corporate greed, in which callous top managers are allowed to lie and cheat, striking up hefty bonuses, receiving golden handshakes, and getting away with murder just in time before leaving the sinking ship. Objectives tend to focus employees on short-term, individual gains at the cost of long-term, collective purpose, with dire consequences for the natural and social ecology. The downfall of capitalism and the successive financial crises we have already suffered and will continue to endure are a clear illustration that this model is not sustainable either.

Companies no longer gain a competitive advantage with the products and services they offer to the market. Competitors simply reverse-engineer and copy innovations, sparing themselves the investment in research and development. The only way honest, "third generation" companies build and maintain a competitive edge is in the way value is created: faster, cheaper, smarter, through constant renewal and updates, a high pace of innovation that is impossible to keep up with, unique positioning and branding, proprietary distribution outlets and channels that take years to develop, incessantly collecting and enriching data no-one else has access to and, more than anything, developing close-knit, high-performance teams of highly talented professionals committed to constant renewal.

This is a direct function of the capacity of companies to constantly come up with new ideas, redesign, streamline, and automatise to produce at a lower cost and build long-term trusting alliances, client and employee relationships - something that is hardly encouraged through short-term objectives. This is why Sumantra Goshal called for third generation organisations that know how to integrate learning and innovation into their DNA. This requires that all employees are encouraged and empowered to re-invent and themselves through a sense of common purpose, and contribute to organisational innovation on every level.

When I ask my students to give examples of first-generation organisations that still - in the $21^{\text {st }}$ century - operate under command and control principles, they often quote the military. However, if there is one organisation I frequently encounter in academic conferences studying the cutting edge of human and social engineering, it is the military. Why? Because their environment has changed dramatically as well. We no longer wage wars with nations on battlefields. We combat guerrilla armies and terrorist cells that use the element of disguise, surprise and electoral sabotage to combat nations equipped with superior technology. The only way we can win the war against terror, or succeed against our competitors in the market, is through intelligence and counter-intelligence, superior information generated with the help of advanced technology and international allies, true synergic collaboration, all in order to generate data to constantly adapt strategy and tactics. The question is not to act quickly, but to strike faster and harder than the enemy, without falling into the immoral logic of pre-emptive strikes. Truly sustainable warfare, however, is inherently peaceful and forward-thinking, helping underdeveloped countries to become self-sufficient, educated, safe and politically stable, so that poverty and fear is no longer a motive for aggression.

This calls for a new type of "third generation", high-performance organisations that evolve with their complex and unpredictable environment. Organisations that are capable of radically decentralised business intelligence and decision-making to local, autonomous, self-sustaining units that fight the economic war like a guerilla army.

In this chapter I briefly introduce some of the major trends characterising our contemporary business environment. You will be familiar with most of them. My aim is to point out how these trends exact a new leadership mindset and require a new set of competencies in managers to make quick, well-informed decisions and lead people in organisations. I will further develop these managerial mindsets and competencies in chapters three to five.

For each trend I will also zoom in on the new set of requirements for our body and brain, in terms of physical, cognitive and emotional resilience, setting the stage for chapter two on the neuroscience of leadership. The trends I will describe below have been chosen for being both a present reality and indicative of the future landscape, discarding fads that are transient in nature. The realities I describe are here to stay. I would go even further: unless the darkest forces driving these major trends prevail and provoke a major natural cataclysm or worldwide conflict that cripples our civilisation, we can expect these trends to continue to evolve and pervade every aspect of our lives, whether as citizens, volunteers, or professionals working in small, medi-um-sized or large multinational organisations.

## 1. "THE PERSON IS THE PRODUCT"

## Trend 1: Evolution towards a knowledge- and service-centred society

In the last few decades our social and business context has gradually evolved to become a knowledge-based, service-centred society. Even the most basic blue-collar jobs in production and logistics increasingly require a component of intelligence embedded in experience, knowledge, intuition and interpersonal relationships, if only to operate complex machines or streamline production processes that are being automatised and increasingly aided by machine learning and artificial intelligence.

According to the statistics the tertiary sector has grown gradually over the past century to become to leading sector in most developed countries. Business knowledge and service provision are inseparable parts of the person performing the specific function. Losing a person implies an important setback, because it means that critical information about the product or service, the value creation process, or the clients can literally walk away, carried by the holder of this valuable information. As Nicolas Negroponte of the MIT Media Lab once pointed out, nowadays companies see their entire production facilities walk out of the door every night, hoping that they will return the next day. Another implication is that if the holder of the knowledge or the provider of the service is demotivated, or even worse becomes ill, the production process and service delivery suffers, affecting the results of the company directly.

## IMPLICATIONS FOR MANAGERS: VALUE CREATION AND RETENTION THROUGH LEADERSHIP

Machines and tools needed for fabricating products can be replaced at a certain cost. In a knowledge- and service-centred society, this cost is considerably higher, as in addition to the loss of knowhow and resources invested in training and developing employees, this value may be directly transferred to the competition. This means that not only do we lose value, but we give it away to competitors who gain value. In this context the concept of maintenance of machines is replaced by consideration, support, and motivation of people. Managers not only need to manage time and (human) resources; they need to lead large-scale projects of social engineering in order to optimally motivate each individual contributor, and orchestrate collaboration to combine intelligence and produce results. This implies a fundamental mind shift in managers. They need to be people managers first and foremost, equipped with the necessary competencies to get the best out of people, who all have their own vision, will, preferences, needs, and expectations. This is a particular challenge for
professionals educated and trained to operate inanimate machines and processes, but true for any manager in general.

## IMPLICATIONS FOR THE NEUROSCIENCE OF LEADERSHIP

The implications for managing employees' brains are clear: In order to generate results, it is no longer sufficient for managers to set goals and wait for results, hoping that: (a) the human resources department has recruited the most talented and experienced people and (b) those talented people will naturally find the shortest and most efficient path to their results. That is like a football coach relying on the talent scouts to win the league. As pointed out before, the focus is on the "how", rather than on the "what" or "who".

Applying neuroscience to leadership is about constantly improving the quality of knowledge and service, taking into account how intelligence is produced in brains. It is essentially about: making employees smarter, i.e. facilitating the processing of important data to generate high-quality knowledge (learning); connecting employees, i.e. facilitating the sharing of information to create synergies between knowledge held by individuals (collaboration); and developing employees, i.e. facilitating the acquisition and perfection of skills necessary to provide great client service (training).

Leadership is about continuously encouraging employees to take initiatives and to question the modus operandi. For the brain this requires the creation of a safe environment in order to counteract the negativity bias, or the tendency to overestimate the threats when compared to the possible rewards. Second, it requires the minimising of status differences. Neuroscience research has shown that people are very sensitive to status differences and perceive threat when managers treat them as inferior or incapable of coming up with good ideas. Third, managers need to spend time with their team on the field, training different tactics in order to "score goals" against the adversary team. In order for new behaviour to emerge and to be perfected, expected behaviour needs to be repeated and reinforced through feedback and positive encouragement. Great coaches also support players who failed, because they know that on any given day we can have a bad day, we can lose or win a game. By humiliating these players, coaches will only reduce their initiative and deteriorate self-confidence. Last but not least, coaches turn the best players into "primus inter pares", sharing the leadership and responsibility to motivate their co-players. As indicated before, brains are sensitive to status. By appointing team members as informal leaders, managers can increase the status of these individuals, motivating them to push the team to great results.

