THE KNOWLEDGE SOCIETY

A Breakthrough Toward *Genuine* Sustainability

Marc LUYCKX GHISI

Preface by Sam PITRODA (to be confirmed)

Head of the “Indian National Knowledge Commission”

Introduction by Vittorio PRODI, Member of the European Parliament.

Foreword by Ilya PRIGOGINE

Nobel Prize, 1977

July, 2008

ENDORSEMENTS

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1. *“ A superb synthesis of today’s burning issues of globalization, the transition to post-industrial futures, the growth of post-carbon, “green” economies worldwide, changing paradigms in science, economics and management --- all enfolded in a deep cultural analysis of changing ethical, religious and spiritual values.*

*As an independent scholar/activist and financial practitioner participating in and observing these whole-system changes as humanity shifts toward planetary citizenship, I find no other author who embraces these historic transformation processes as deeply as Marc Luyckx Ghisi.*

*The Knowledge Society explains and make senses of today’s widespread confusion among “leaders”, mass media and traditional academia. Marc’s deeply personal style illuminates his heroic synthesis. He shows how our endangered human family can re-design our various civilizations toward more peaceful, just and sustainable futures for all life on Earth.”*

Hazel HENDERSON, author, *Ethical Markets: Growing the Green Economy* and *Building a Win-Win World.* St Augustine, Florida

1. *Marc Luyckx Ghisi offers a holistic and dynamic panorama to explore the paradigm shift implicit in the United Nations Global Compact. The Knowledge Society has been masterfully crafted to caringly expel the reader from the comfort of the sacrosanct leaving in its stead a prickly, insistent framework to address one question: WHY NOT?*

Frederick C. DUBEE,

Senior Advisor “Global Compact”, Executive Office of the Secretary-General, United Nations, New York.

1. "A book of outmost relevance of our times. About life and death. Helping us all see the old way of thinking that is now decaying and exhausting itself, and the new way of thinking that is painfully trying to be born. Why we have to change course creating a more desirable and sustainable future. Why we have to partner with nature, not conquer it. "

Göran CARSTEDT, Ph.D
Chairman The Natural Step International, Former executive at Volvo and IKEA

1. The Knowledge Society offers a brilliant blueprint toward a transmodern
world in practical terms and through the author's personal transformation and re-enchantment of his own life.  A truly inspired work.

Barbara Marx Hubbard
Founder, The Foundation for Conscious Evolution
2. *This is an important book, one that marks an important transition. This transition is a multilevel one. First, it has become clear for the first time in industrial society’s consciousness that we cannot sustain ourselves using current practices. Second, humanity has reached a new stage of consciousness of knowledge itself. In other words, knowledge about knowledge has never been greater. One important aspect of this transition is that we have two choices. Either we can succumb to a paralysis of anxiety that will lead us to make superficial analyses and gestures towards bringing about necessary change, or we find reasons (knowledge) for hope that energise profound action to realise necessary change. Marc Luyckx Ghisi’s, The Knowledge Society, is a blueprint for hope and wise action. It might be better to call this book, The Wise Society.*

**David Rooney,**UQ Business School | The University of Queensland | Ipswich Qld 4305 | Australia

1. *Breathtaking in scope, compelling in its urgency and inspiring in its vision, The Knowledge Society shines like a beacon across the turbulent waters of a world in transition.  An astute and passionate observer of the deep societal shifts taking place in this early 21st century Marc Luyckx Ghisi digs down to the bedrock of the forces tilting the world toward a deep transition. Then he invites us all to “re-enchant” ourselves and the world, weaving a new fabric of beliefs and action for a more hopeful future.*

Verna ALLEE, author *The Future of Knowledge: Increasing Prosperity through Value Networks*. Martinez, California

1. *Marc Luyckx Ghisi book is like the inspiration of a painter which has not yet found its right canvas to be painted. That canvas which has to be made of a new texture, a new way of thinking and re-examining our present so that a future could exist.*

*If we are able to come out from the intellectual blindness which do not allow us to give up old ideas and behaviours, we may hope to have a future.*

*The search of a new way is never easy, so that is never easy to leave a port we think safe for venturing out to open sea. Unfortunately the port where now we have cast anchor is not safe, on the contrary it does not offer any more protection. We are called for changing, and really entering the knowledge society in order to survive and to create a sustainable world for next generations.*

*Through a clear analysis of the present society in its complex, of the values which are its bedrock, of economic laws too obsolete, Marc smartly shows what are the dangers of standing still and of denying the knowledge society.*

*He asks for a deep change of perspective centred on the sustainability of Nature with which we are linked, and without which we cannot exist. He shows that knowledge society, its values and its leaders are already here and are conquering their spaces.*

*But we continue to have the unavoidable problem to find new tools and parameters to measure intangibles, qualitative aspects which distinguish knowledge society. They cannot be similar to those used for measuring quantitative aspects upon which it is based the industrial society, modern, pyramidal and already death. This, perhaps, is one of the most important obstacle.*

*We recognize the fundamental and prevailing value of intangible assets, but we put them in the background because often we do not perceive them as a real thing, but in abstract terms. As they belong to the world of ideas and not the real world. This is due to the thought which, by developing during the centuries, has led convictions which are only conventions. Money itself is it not a convention?*

*If we want to watch, in its whole, a future already here, this book, looking beyond and giving a systemic vision, is the new way. And, as all systemic visions, can but draw a paint owning the smartness of simplicity.*

Paola De Piccoli, Editor in Chief of “IC MAG : Intellectual Capital Magazine”, Torino, Italy.

1. The Knowledge Society provides dramatic insights into how the world will change within the next five decades. With his concept of a transmodern society, Marc Luyckx Ghisi opens the perspective into the powerful trends away from the industrial society with their pyramidal structures towards a planetary knowledge society based on cultural creativity. Personal experiences with the European Commission and intense exchange with thought leaders from all over the world make it a fascinating reading.

Karlheinz STEINMULLER, author, Futurist, Director of “Z-punkt GmbH”, Büro für Zukunftgestaltung, Berlin. Germany.

1. *Because Marc LUYCKX GHISI is a ‘transmodern’ renaissance man who knows the breadth of global life and the depth of human consciousness, he deeply understands that we can’t reach social and environmental sustainability, without also developing personal sustainability. He stresses the often neglected alignment of our methods and goals and points to the need to integrate the inner and outer dimensions of our leadership. Whether you want to succeed with your values intact in business, government or civil society, you will greatly benefit from Marc’s original analysis.*

## Walter Link, chair of the Global Academy and the Global Leadership Network.

1. ***The Knowledge Society*** *is a must read book for anyone wanting to make a positive difference in the world today. It offers a deep and meaningful explanation of what is happening today from an economic, social and spiritual perspective. It is a brilliant historical review illustrating systemically the many factors contributing to the challenges and opportunities we face today. Most significantly, it offers hope as it outlines what can, and must, be done to create planetary wellbeing – what its author Marc Luyckx Ghisi calls genuine sustainability.*

Dr. Diana Whitney, Author *The Power of Appreciative Inquiry: A Practical Guide to Positive Change*

*“When there is no vision, the
people are unrestrained”*Bible, Proverbs 29:18

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To Isabelle, my spouse

To my children and children-in-law

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BOOKS ALREADY PUBLISHED BY THE AUTHOR

*Au delà de la modernité, du Patriarcat et du capitalisme: la société réenchantée*. L’Harmattan, Paris. 2001. (available on my blog. [http://vision2020.canalblog.com](http://vision2020.canalblog.com/) )

***"European Visions for the knowledge age: a quest for a New Horizon in the information society"*. Paul KIDD(Ed.) Cheshire Henbury, 2007. My contribution in this collective book is: *"A win –win strategy for the European Union in the knowledge society”.***

***La société de la connaissance: une nouvelle vision de l’économie et du politique* Les éditions romaines, Luxembourg, 2007.** <http://www.leseditionsromaines.com/?pg=author&id=3>

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FOREWORD

In the next few decades India will probably have the largest set of young people in the world. Given this demographic advantage over the countries of the West and even China, India is optimally positioned, in the words of our Prime Minister, to ***"leapfrog in the race for social and economic development"*** by establishing a knowledge-oriented paradigm of development.

Marc Luyckx Ghisi’s book on “The Knowledge Society” is giving new global insights and new visions of this Knowledge oriented paradigm. We are, according to him, in a huge cultural change worldwide towards a new society.

This Knowledge Society is, in fact, a different paradigm, centred more on humans than on machines. It is also possibly genuinely sustainable.

So that the real race in a global world today, is for understanding and adapting to this new vision of economy, education, governance, business, intangible assets in the stock markets, and even defence and security.

For the moment nothing is decided. The winners of yesterday are not necessarily the winners of tomorrow, because the equation is completely new.

I am happy to recommend the reading of Marc Luyckx Ghisi’s book as a challenge for everyone. This book is enriching the debate inside the Knowledge commission, and opens for India interesting perspectives for the future.

# Sam PITRODA

Chairman National Knowledge Commission of India.

**PREFACE**

I am happy to invite you to read the book of my friend, Marc Luyckx Ghisi. In this book Marc invites us to modify our look at the present after having followed the author in a prospective vision leading to 2050.

Future Thinking (Prospective) does not know the future. It is not a prescience of the future. Because nobody knows the future. But it is an art of looking at the present with a new glance from the future. And this exercise underlines even more strongly the *unsustainability of our industrial and modern* quantitative development model.

The author indicates that we are fortunately quietly coming out of this so polluting industrial and patriarchal society and that we have the possibility of directing the knowledge society towards real respect of the environment and towards social inclusion and justice as is requested by the EU Lisbon strategy (2000-2010).

The author quietly invites us to hope because he sees, in the heart of the knowledge society, important trends *of humanism* and rediscovery of the *inner dimension* of the human person.

Marc Luyckx Ghisi brings us unexpected good news. According to him, we possess the economic and the political tools to face the 21st century in a just and sustainable way. Unfortunately, the main problem of our time is that most of us tend to use tomorrow’s tools with the methods and the vision of yesterday.

It is therefore important to rest a while to analyse our own implicit vision and seriously examine if it is adapted to yesterday or to tomorrow.

Thus, this book invites the reader into a road of personal and collective “reenchantment”.

Vittorio Prodi

Member of the European Parliament, Brussels

# Foreword as Homage to Prof PRIGOGINE

 *Just before leaving this Earth, my friend Professor Prigogine accepted an invitation to write a preface for my first book, published in Paris, in 2001. The book spoke of re-enchantment, the concept of which was first introduced by Prigogine and Stengers. I have chosen to reproduce his beautiful preface here as an homage to one of the greatest thinkers of the 20th century.*

 The idea of *disenchantment of the world* advanced by Max Weber at the beginning of the 20th century was addressed to a culture searching for knowledge that was *objective*, universal, and independent of the culture than would produce it. This vision assumed the existence of deterministic laws and placed man in a position to be superior to nature and to dominate it. Science thus seemed an elitist form of knowledge, considered by public opinion as an inaccessible ivory tower.

 Alongside the disenchantment concept, we now see emerging a concept of the *re-enchantment of the world.* That vision is at the core and the heart of this book. This line of thinking gives priority to non-linearity over linearity and prefers complexity to simplification. It considers that it is impossible to separate the measurer from what is measured. It is equally impossible to separate physical sciences from the human sciences. The vision informs us about complexity and auto-organization. It mirrors altogether the sense of direction of our times.

 In this new vision, nature appears more autonomous. The laws of probability rule it. So we now rediscover a new field for human creativity in the very bosom of nature’s creativity. Man is no longer above and outside nature, in order to subjugate it and force it to deliver up its secrets. On the contrary, man is immersed in a nature, which is autonomous, creative, and often unpredictable, inviting man to develop his own creativity.

 With the emergence of this new vision, our whole conception of the universe rapidly evolves. And we now seek new ways to express adequately the unforeseen structures that we observe in nature and in human societies.

 In this context, science and technological research are of more and more interest to citizens. This is especially true now that they are dealing with information technologies and biotechnologies, which touch directly the life of every citizen on earth.

 What image of nature and of man will our civilization choose? Our future will mostly depend on that choice. The vision of nature plays an important role in our consciousness of the human condition.

 The deterministic vision of nature, though associated with a materialist vision, required postulating the existence of God. An automaton needs an intervention from outside to get it started. By contrast, in the new vision, if one takes into account the law of auto-organization, the problem is transformed—nature shows a gap, which can be filled in either from the outside or in an autonomous manner. The metaphysical debate is also transformed, as well as the issues about ethics and about values. They have to take account of the new vision of science in our time.

 Marc Luyckx worked for ten years in the Forward Studies Unit of the European Commission, working for Presidents Delors and Santer. I have met him on a number of occasions. He has visited with futures researchers all over the world, notably in California, in Australia, in Japan and in China. He is also a member of the two principal associations of futurists. This book is therefore nourished with information that he has accumulated in the global observation post he has occupied.

 I am passionately interested in the future. The vision presented by Marc Luyckx is original, especially his analysis of the underlying levels of changes in process. This book can be seen as placing in evidence new questions. It can help define, in the spirit of its readers, the problems that are surfacing in society today.

 It is therefore with pleasure that I have written this preface to Marc Luyckx’s book and invite the reader to discover the possible futures that he offers us. The future is unforesee­able, but we can prepare for it. And that preparation is possible only if we are conscious of the progress and the problems of our time.

Professor Ilya PRIGOGINE (+)
Nobel Prize in Chemistry 1977

NB: The translation of this text has kindly been done by Harlan Cleveland

# THE PATH TOWARD GENUINE SUSTAINABILITY

 This book heralds the good news that we possess the economic and political tools to steer the world civilization toward *genuine sustainability* and that we can do so *now*.

 What do I mean by “genuine sustainability”? I mean creating a political and economic environment in which our collective footprint on Earth is a positive one—an environment in which we put a stop to the current practices that do irremediable harm to Nature and we begin to heal and to clean our environment.

 How can we do this?

 That’s what this book is about.

 At the moment, the footprint of human beings on the earth—our global impact—is negative. (The European footprint is smaller than that of the U.S. but is still very large.) We are polluters of our living space—our planet. And although there are movements in the world attempting to diminish the harm we are doing to the environment, they are not enough—because even if the world becomes cleaner, it is still on a path toward a collective death for the entire civilization.

 The premise of this book is this—that our industrial-modern economy and our “modern” political system, which produces wars between states, are incapable of moving us toward a positive footprint on Earth despite the fact that human beings across the globe are doing their best to care for the environment at the local level. Overall, we might be lessening the damage we do to the environment, but the economic and political system of the industrial-modern paradigm *does not allow* *progress* toward a genuine positive footprint. Indeed, because the industrial economic system is based on the concepts of *quantitative growth* *and* *tangible assets*, *it is not capable of leading us toward a genuine sustainable future*. (Business leaders across the world agree tacitly with this premise already.)

 Why is the current system incapable of guiding us toward sustainability? Because for industrial economists, an unavoidable trade-off exists between economic growth and sustainability because working for sustainability is considered as a cost to be subtracted from growth and profit. The common statement emanating from political boardrooms across the globe is, “Whatever we do for the environment, we subtract from economic growth.”

 I have heard this statement myself many times in the European Commission. And it is not without valid arguments in the context of the industrial-modern model. We cannot ask our politicians to completely sacrifice economic growth for the sake of the environment, because doing so would undermine the whole economic and social equilibrium of our member states. Unfortunately, in this trade-off between economic growth and sustainability the industrial-modern model almost guarantees that sustainability loses. And whatever might be done to save the environment will be done in a losing cause!

 In industrial-modern capitalism, we are locked in this trade-off.

 Now for the good news.

 We have at our disposal *right now* the tools we need to shift our economies and our politics (and, therefore, our world) toward *genuine* sustainability and toward the creation of a positive footprint of our human civilization on Earth. Such a shift is possible for two reasons—one, because the world business community has already begun to shift into a new economic logic based on the idea of a “knowledge society,” and two, because the Mind of the world is changing and ushering Humanity to a new level of consciousness[[1]](#footnote-1). It is possible also because we now have the political tools of non-violence between states (in the EU, especially) and are beginning to emerge into a world beyond war—that is, a world where war no longer represents the continuation of “foreign policy by other means,” to borrow Clausewitz famous phrase. With these new tools, we can redirect our global civilization toward a *genuine* sustainable future and a positive human footprint on Earth.

 What we lack at this point is the vision and awareness at the level of the political leadership. But here I also have excellent news to report—25% of the world’s citizens may have already become aware of the new values and the new vision of life (paradigm) without saying so (or perhaps even knowing so). And in the business world, some CEOs have begun to implement a vision of the knowledge society (and knowledge economy) and are managing their companies in new ways—to great success.

 There is no doubt in my mind that our global economy is headed full-speed toward becoming a *knowledge economy*. This means that we are “de-materializing” the value creation process itself, which is the core of any economy, thereby allowing us to pollute less. We are also changing how we measure success in our businesses—steering away from measuring according to tangible (material) assets and more toward measuring with the intangible (non-material) assets. And among those intangible assets, *sustainability* and *social inclusion* are becoming more and more important.

 This means that the more a business spends on improving the environment, the more intangible assets it will acquire and the more successful it will become. One can even imagine a case in which a company spends millions in order to genuinely clean the environment and, in the process, becomes a worldwide leader in its market. In the industrial paradigm and classical capitalist economy, such an investment would be suicidal, but in the knowledge economy it is the smartest of moves! And businesses that employ such strategies change from being part of the problem to being part of the solution.

 In 1989, I was contracted by the European Commission’s Science Department to write a report on the attitudes and positions of the major religions of Japan and the West concerning science and technology. That work, and also my work on the renowned European Union “Forward Studies Unit” (Cellule de Prospective) from 1990 to 1999, convinced me that Humanity is currently undergoing an unprecedented cultural mutation, and this mutation is taking place silently and “behind the scenes.” It is comparable, in fact, to the mutation and transformation that took place during the Renaissance in 1500, but it is probably much more fundamental, more rapid, and deeper. In any case, at this moment, it is difficult to see the full consequences of the mutation. The purpose of this book is to shed light on what is happening in the world as the mutation takes place.

 The reason for this mutation is two-fold. First, we are now at a point in history in which humankind is confronted with the danger of extinction and death if it does not change the way it manages its relationship to the environment and to the economy in general. And second, the human race is climbing to new level of consciousness[[2]](#footnote-2). (I am firmly convinced of this fact based on many personal observations.) These two factors are combining to propel us to a new stage in our realisation of the threat that we ourselves pose to our world and of the necessity to change. We are, in fact, in a very positive phase of our evolution.

 Unfortunately, this type of mutation (or “jump in consciousness”) is often hard and produces much anxiety. What manifests during this anxious period of transition are the crises brought about by the current system (industrial-modern-patriarchal) as it is dying. We see the human suffering caused by such crises, and it affects us. It causes us to question our basic life motivations. It causes us to question the very meaning of our global civilization. And it makes us realise that to survive as a civilization, we must change.

 In the second part of this book, I write about the incredibly positive dimension of this change that is sometimes difficult to see clearly. We have already in hand the key elements of the new society of the 21st century—from the political standpoint, the non -violence between states, and from the economic standpoint, the “knowledge economy.” The subject of the knowledge economy is especially captivating to me, because it is based on a new economic logic that is currently arising in the business world and has the potential to be genuinely sustainable.

 The most difficult problem today is to change how we view the world in order to perceive this image of the new Renaissance—which is occurring even now as you read this.

 I do not intend this book to convince anyone to change their paradigm and world view. I simply want to be of help to citizens around the world, who are feeling this huge transformation on their own—so that they might realise that not only are they not alone, they are in the emerging majority.

# PROLOGUE:A BRIEF FUTURE HISTORY OF THE WORLD (2000–2050)

 I dedicate this prologue to the memory of Willis Harman, who at the end of his life strongly insisted on the importance of producing and disseminating positive scenarios of the future. Negative scenarios are easy to create, quite common, and don’t provide any useful vision. Positive scenarios, according to Willis, act at another level, upon the global morphogenetic field[[3]](#footnote-3) of human consciousness and bring about the very (positive) futures that they forecast. Thus, it is an important responsibility that he invites us to assume.

 Let us then act together upon the future by talking about it.

***We are in 2050***

 *We are in 2050 and a group of historians is trying to write a narrative to insert in school history curricula to explain to children how and why things have changed since 2007—for example, how people lived and what it was like to live in the early part of the century; why animal and vegetable species were destroyed by the thousands, and how humans negatively influenced their environment; how for so long we caused the rich to get richer and the poor poorer while promising the contrary.*

 *The children of 2050 have a hard time understanding the growing uneasiness of the years 2010–2012.*

***A growing uneasiness (malaise) around 2010–2012***

 *Around 2010–2012, an increasing uneasiness began to grow among the global population, including in the rich countries.*

 *In the southern hemisphere, it was becoming less and less clear why they should accept a system where the large majority of the population was excluded while a minority increased its share of the goods and wealth and where the situation was not improving but was getting worse day after day despite the promises of the leaders and the economists that increasing gross national products would bring prosperity to all. The “trickle down” effect seemed like a rich man’s trick. It was becoming clearer that an economic system that, since the 1950s, had promised to bring development to the southern hemisphere, had only deepened inequalities and would not suddenly produce the opposite result.*

 *In the northern hemisphere, the number of questioning and concerned citizens was growing every day. Anxiety was growing about the future. Wasn’t global climate change causing hotter, drier summers, more deadly storms, and wasn’t the evidence mounting that changes in the flow of the Gulf Stream (and the associated North Atlantic conveyor system) could result in triggering an 21st-century ice age? Weren’t we heading for the next mass extinction of life on Earth? And what of the looming demographic explosion? Surely, if we did not resolve the acute problems of poverty at our national borders, the immigration pressure would become intolerable, even violent? What should be done?*

 *In response, it appeared that global leadership had only one answer—more of the same, to continue to use the then-current model to correct the deficiencies in itself. To trust yesterday’s methods to solve tomorrow’s problems.*

 *Public anguish was growing and the diminishing legitimacy of the leadership cadre was generating a split between the public and its leaders.*

 *In September 2012, the U.S. dollar lost 75% of its value in one day. The astronomically large U.S. current account deficit was jeopardizing the global economic system. Nobody wanted U.S. treasury bonds, anymore. Indeed, suddenly, nobody wanted to lend money to the U.S. China, Russia, Japan, the EU, Brazil, and India had done so on a monthly basis for years and had decided to stop.*

 *That particular model was no longer sustainable.*

 *U.S. foreign policy changed. Within months, U.S. troops were repatriated; U.S. military bases overseas closed progressively and continuing plans for U.S. military rearmament ceased. U.S. foreign policy changed progressively. Western global hegemony was in crisis.*

 *The Euro suffered, losing 15% of its value against the Russian rouble, the Brazilian real, the Indian rupee, and the Chinese yuan—each of which had become among the most stable currencies in the world.*

 *Finally, the assassination several heads of state, including the president of the United States, France, China, and Brazil, during a meeting of the “G12” (now including Brazil, Russia, India, and China) in 2013 in Rio de Janeiro, by a group of terrorists tied to the Brazilian Mafia, was the final blow that toppled the system.*

 *At the same time, the Chinese communist party suddenly decided to change its constitution and to allow Chinese citizens to elect by direct universal vote a president of the People’s Republic of China, with extensive powers. The slightly ajar door to democracy suddenly opened up in China. The election winner, a young Chinese woman, poet, and Nobel prize winner for the environment,[[4]](#footnote-4) named Mrs. Cheng, was elected on 13 December 2015 with 65% of the popular vote.*

***Mrs. Cheng’s memorable speech***

 *Mrs. Cheng’s first foreign visit was to India . . She proposed to the government of Delhi and to the president of the party of Congress to create between China and India, and with other interested countries of the region including Pakistan and Bangladesh, a treaty of non-violence between states and a community of economic and monetary solidarity along the European model.*

 *However, the major historical event was her memorable speech on Monday, 15 March 2016 to the United Nations which had moved to Geneva in 2013, following the enormous growth of violence in the U.S. following the dollar financial crisis of 2012 and assassination of the president in Rio.*

 *In very simple words, she explained that we no longer were in a modern, Western-style capitalistic society. The world was entering into a post-capitalistic and post-Western knowledge society that we needed to build together. It was thus urgent to adapt ourselves to this new situation with a new vision and new tools to be created. First and foremost, the objectives themselves of our society had to change. For several centuries, the modern, Western, industrial society had been geared toward producing the greatest quantity of objects in the cheapest way possible and then convincing the population to buy them, even if they were not needed. These goals did not correspond any longer with the 21st century, where the primary urgency was our own collective survival and the bequeathing of a planet to our future generations.*

 *She proposed that the new aim for this world society should be to embrace the knowledge society in a sustainable and socially inclusive way, which implied the development of human creativity and all human potential, including an inner or spiritual dimension, and this with absolute respect for Nature and the environment.*

 *Her first appeal was to the all citizens asking them to invest their energy, skills, hearts, and souls to build a new society. She then called upon academic people and intellectuals of all countries to network their intelligence and creativity to conceive together a new workable economic and political logic. The most urgent was to fundamentally rethink the global economy as a transdisciplinary reflection. She then asked global politicians to hold sincere dialogues with society to imagine and create together new and credible political practices to bring us toward a sustainable and inclusive global future.*

 *She also said it was false to believe, as the Western modernity or the communists pretended, that man could live without an inner dimension. This, she said, was an illusion and she invited intellectuals to reflect about new sacred forms of reconnection with nature and the cosmos, which appeal to the new generation.*

 *The last part of her speech was addressed to the women of the world, of all races, religions, and cultures. She told them that the patriarchal ‘reign’ has ended, whatever their culture or religion they lived in. For the patriarchal values did not allow humankind to protect the blue Earth, our planet. She asked them to enter the fray and to fully participate in the discussion on the future of the world and on our global economy, since this concerned the future of their children. Without them, half of humanity would miss the discussion. Her last sentences were emotional as one could feel the feminine aspect vibrating in her with all her power and strength.*

***Sceptical…. then enthusiastic reception.***

 *This message got through instantly to many people all over the world. The next day everyone spoke about it, as much in the “favellas” of Rio as in the mosques of Qatar, in the streets of Paris or New York, in the parliament of Delhi and the villages of China.*

 *However in the United Nations, the heads of states that did not take this speech seriously politely applauded her. Neither did the press understand or accept this speech, which was outside accepted norms for heads of state. Certain media even ridiculed the speech of the Chinese woman poet!*

 *But after a few days, important personalities of the business world, the intellectual world, and civil society responded positively in supporting Mrs. Cheng. They were soon supported by personalities from State structures (judges, ex-ministers, etc.). On the Internet, a forum of millions of people was created, regrouping personalities, old media chiefs, heads of global firms, and responsible people of civil societies like Greenpeace, Amnesty International, the Red Crescent, and other Muslim democratic organizations which were developing enormously, since the entry of Turkey in the European Union had been definitely set for 1 January 2017.*

 *This “Global Forum for Mrs. Cheng”, through its spokesman, declared five days later, on 20 March, that it considered the speech as historic and as a foundation for the rest of the 21st century. Indeed for the first time in many years, a political speech finally was addressing the true expectations of people and their deepest questions that had rarely been considered until then.*

 *This movement for a civil society grew so much that some media started to reflect these new opinions they had not anticipated. In a matter of days, the world media turned over.*

 *By the end of March, many politicians claimed to have always thought like Mrs. Cheng. Her speech was analysed and explained by the press and other media, and even by universities and economists. People suddenly agreed that that speech finally had said out loud what a great number of people thought silently, and that it was time to act and to act together on a worldwide basis. It was clear that no partial solution was able to generate answers to global problems. It was necessary to reinvent our approach to our shared global future.*

 *Indeed, the global society started to consider economic, political, and legal alternatives. A movement of enthusiasm and of unheard creativity rapidly appeared. The winds of change and hope were blowing everywhere. Many of the meetings were organised in China, but they were open and accessible on the web in real time.*

***2015–2020: A deep and bold reform, which re-enchanted the citizens of the world.***

 *The following years were years of intense thinking and creativity. A space opened up and civil society engulfed itself with an unexpected dynamism. Suddenly, alternative analyses, which had been kept hidden for years, resurfaced. New concepts and interesting, concrete, and elaborate projects in the most diverse fields were uncovered.*

 *Meanwhile Mrs. Cheng was carrying through intelligently and with vigour. One of the most important areas to start with was the global economic system. The spectacular fall of the dollar was forcing everybody to think seriously outside the box. We couldn’t carry on living on borrowed money.*

***The monetary agreements of Beijing, in 2017***

*Mrs. Cheng requested that the global economic and financial systems be thought over especially the basic monetary mechanisms to adapt them to the new knowledge economy. The latter was well-known by only a few economists. She insisted that the common good of the majority of the world population and total sustainability (positive footprint[[5]](#footnote-5)) be the main goal of any new economic system. Several young women economists, members of the group “economists for a sustainable world” made unusually innovative propositions… which were accepted.*

*In that frame another group of monetarists (money specialists) worked on a redefinition of money for the 21st century. This resulted, after six months of reflection, in a new global monetary agreement, the Monetary Agreements of Beijing of 2017.*

*These agreements opened the 21st century by creating a global monetary reference based not on gold but on the vital resources of the earth[[6]](#footnote-6)—for example, wheat and clean water. Those vital resources were the real treasure of humankind for the generations to come.*

***A new global economic and a new informational order***

 *Within a few months, the great lines of a new economic order were established, no longer based solely on the free trade of goods, as in the industrial economy, but on the free sharing of knowledge as well. Moreover, this “new economy” was functioning within the framework of absolute respect for the environment and social inclusion.*

 *This new economic order was a message of hope for the majority of those excluded from the sharing in the Earth’s resources and for the future generations… our children and grandchildren. The idea was simple—in a global knowledge economy, six billion humans are the main resource (“human capital”). Thus, valuing human creativity and potential becomes the utmost priority. In addition, this changes from the industrial economic priorities, which were centred on capital and technology. The whole world economy tilts toward growth of global human resources through education, access to clean water, medical care, etc. However, this is no longer done to “help the Third World”. Rather, the aim is simply to increase the global human capital and thus the prosperity for all of us for the short, middle, and long term.*

 *The “intangible assets” and other new concepts of the post-capitalistic economy were entirely integrated. And a number of alternative economists who had been left aside for many years were finally able to explain and have accepted their vision. Within months, the great lines of a new global economy took shape—the post-industrial and post-capitalistic knowledge society.*

 *Finally, after so many years, the poor of the world saw a new light of hope since, in this vision, humankind is the principal capital and, thus, the mechanisms of social inclusion are no longer considered as expenses but as crucial “intangible assets.” The most important association of business leaders in the U.S., which had merged with the European and Chinese counterpart, advanced the idea that tomorrow’s contractor would be a champion of social cohesion. The miracle happened. People from the shanty towns in the entire world suddenly understood that things were really changing and that, if they would seriously work, they had a chance to succeed in a system based on a win-win social and environmental system, as well as on the respect of the local cultures. A strong movement of hope was rustling in the world. The global terrorist movement was into free fall.*

 *This movement was also facilitated by the fact that it did not happen behind closed doors in a Western capital, but all discussions took place in an open global forum suggested and protected by the Republic of China, Mrs. Cheng herself who protected the entire process by her globally recognised, charismatic authority.*

***A new informational order promoted by the UNESCO***

 *Mrs. Cheng also invited UNESCO, whose new president was Chinese, to promote again a “new order of information,” as UNESCO had tried to launch this in the 1980’s without success. It was a total and surprising success because the context had completely changed. The strategy now was the ‘win-win-win’ where everybody wins, the individuals, the organizations, business, or others, but also the planet (people-organizations-planet). The new key phrase was, ”The more I share my information and knowledge, the more I receive in return.” We had finally understood that the command, control, conquest, and exclusion strategy, which were the backbone of the industrial society, were no longer operational in this new age. Gone were the patriarchal approaches. This new politics of knowledge sharing had a resounding and unexpected impact at the global level.*

 *It was in one strike going much farther than all the industrial “development” politics ever went. Here, for the first time, people sat around the table of the world and really and honestly shared the “knowledge cake” to increase it for everyone’s benefit. No similar vision had ever been heard of. Under the guidance of Mrs. Cheng, everybody agreed within a few months.*

 *Naturally, there was strong resistance from some businesses because it was the intellectual property notion itself that was questioned and was toppled over its bases. Some businesses, mainly American and European, wanted to keep protecting their patents, namely in nanotechnology, pharmaceuticals, food genetics, and entertainment content. These patents had cost them many million of euros. At the same time they allowed them to maximise but also manipulate the human brain. Mrs. Cheng got the last word when she proposed that precisely, the only way that humankind could protect itself against inauspicious new nanotechnologies applications dealing with human life or the human brain, was precisely by rendering them public to make them ”part of Humanity’s common heritage.” This was the beginning of a huge jump into the “open source strategy,” which is so common now in 2050. She proposed that the businesses would be rewarded by how much these technologies would be used to the benefit of Humanity’s common good, including the social and the environmental. Those intangible assets were becoming the main value of the goods produced. Profit would be the consequence and the guarantee of the authentic social and environmental value of the proposed use of those tools of the knowledge society. Those were the first important steps toward a truly new but coherent entrepreneurial logic.*

 *The New Order of Information was voted by the United Nations with a majority of 72% on 20 March 2018.*

### The European model, a transmodern door to the 21st century

 *In January 2017, Mrs. Cheng had a memorable visit to the European Parliament in Brussels. She was also the special guest at the meeting of the European Commission (of heads of states).*

 *She listened at length to the head of states and to the president of the Commission who had the European Union enter the transmodern society.*

 *Mrs. Cheng strongly praised the European structures. She considered them the first transmodern and post-patriarchal structures in the world since they were the first strictly non-violent alliance between States, which had stabilised Europe for fifty years in an unexpected and incredible fashion. She explained that her project was to reproduce the European system in Asia with China, Pakistan, Bangladesh, but also Sri Lanka. These transmodern political structures were, according to her, the best structures available for the 21st century, although they needed to be developed and improved.*

 *She congratulated and paid respect to the European Foreign Secretary (Minister of Foreign Affairs). She foremost noticed that he had been in the shadow, the patient, and solid creator of a new paradigm in foreign policy, which was non-violent and post-patriarchal. He silently had buried Clausewitz and Machiavelli and had quietly proposed the Union a foreign policy, which was innovative, non-violent, and effective.*

 *Mrs. Cheng also congratulated the heads of States to have finally decided to accept the entrance of Turkey in the European Union in 2017. “By this foreign policy of a new type, you become a true engine for peace, stability, and democracy. The EU has done more to invite global Islam to adopt the criteria of democracy, human rights, and civil rights than all the other foreign policies together, for over 50 years. Moreover, this policy is almost cost-free and is non-violent, since the candidates themselves do all the adaptation work and internal reforms at their own expenses.”*

### The creation of the International Security Agency (ISA)

 *In the conversation, the European Foreign Affairs Secretary told her of a completely new global defence concept which had been discussed in his reflection group in Brussels. The idea was to propose to the interested states to terminate their national army, and budget (!) and to pay an insurance fee to the new global International Security Agency of the United Nations[[7]](#footnote-7). The latter would guarantee the protection of your national territory against external but also internal aggressions by the immediate intervention of its white helmets.*

 She found the idea excellent and adopted it. “From now on, it is also my idea” she responded to the European Foreign Affairs Secretary. This is exactly the kind of troops that we would have needed to intervene in the former Yugoslavia to prevent massacres and rapes. She suggested the immediate creation of a working group on the subject in the United Nations. One year later, the United Nations proposed the creation of the International Security Agency (ISA).

 *The atmosphere in the United Nations had changed a lot in two years and the proposal was accepted with an 80% vote in favour. Such unanimity had never been seen. This agency received a strong army of white helmets and an advanced technology from the former armies. The heart of these troops was formed by the European armies (German, Belgian, Dutch, Swedish, Danish, Finnish, etc.), which, for years, had reoriented themselves toward concrete actions of peacekeeping, and had learned to work together, notably in ex-Yugoslavia.*

 *It is also in Europe that the first serious subscribers were found: Germany, Ireland, Sweden, Norway, Denmark, Finland, Spain, Portugal, and Greece and Turkey together. Soon, Japan and China joined (encouraged by Mrs. Cheng), followed by India because in India the lobby of the generals is powerful and the generals were very hesitant.*

*In the Unites States, the Vice President was doing his best to manage a very difficult situation, since the dollar crash. And he did not at all oppose those new ideas, which were in the line of the multilateral line adopted by Obama. It was also easier for him, because of the weak position of the US military industrial complex.*

 *With all these wonderful people in the project, half of humankind was largely represented. It had started. The other states were welcome to follow if and when they wanted. Before long, then, the African states, with South Africa in the lead, decided to join. The costs were adjusted to the income per inhabitant. This was, for Africa, a wise and cheap choice, which enormously increased the chances of stabilisation of the continent, which suddenly understood that it could enter the knowledge society because of the new order of information launched by the UNESCO. They began to foresee the real possibility of valuing the huge potential of creativity of their population, including and mainly the women. They were followed by the Russians, who could not ask for better than to decrease their defence budget, but had waited prudently to see how this army of white helmets was functioning. After an extremely effective intervention in Africa in 2018, everybody suddenly understood.*

 *When looked at from the point of view of costs, large surpluses had accumulated in national budgets as military expenses had decreased significantly. Mrs. Cheng seized upon it to announce that China was investing 10% of its national budget for the promotion of human quality in education, first in China, and then in the rest of the world.*

 *And the world followed. The global economy was really on the move, because everyone discovered at that moment that certain States like Brazil were, for years, accounting education and human potential enhancement as an investment and not as a cost. And suddenly the budgets of all States in the world transformed totally.*

***The complete reorganisation of the United Nations— a new level of power***

 *Following her visit in Brussels, and because of the success of the International Security Agency, Mrs. Cheng realised that it was urgent to entirely rethink the structure and the foundation of the United Nations. Indeed, as Jean Monnet[[8]](#footnote-8) previously said, the United Nations were built on outdated basic concepts because no level of power was tolerated above the level of the national states. This condemned the UN to relative powerlessness.*

 *And it is this superior but subsidiary level of power that the European Union had, de facto, created. Even if the European member states, mainly those newly accepted, were slow to understand what they had really created together. And, paradoxically, Mrs. Cheng found unexpected allies. The newly elected (woman) president of Brazil and the prime minister of Japan were the first to grasp and approve this new way of reasoning. Whereas the Indian, Chinese, and Russian diplomats, and even some from European governments, were still hesitant to accept any authority above the nation state, that was neither a state, nor a super-state.*

 *But at the United Nations’ meeting of November 2019, that matter really changed when Lieutenant General Aristotle Panini, Officer Commanding ISA (the well-liked “white helmets”, straightforwardly said in his annual report: ”What our white helmets only miss is that they be the emanation of a global authority which is superior in legitimacy to the authority of nation states, and function along the subsidiarity (or devolution) principle.” It appears that, “only a European style World Nations Union can provide it to us. It is clear to our staffs that we need to move rapidly in that direction. Otherwise, we shall experience problems with the strong states of the world.”*

 *A deep silence followed. It was the president of Brazil, supported by the prime minister of Japan and Mrs. Cheng herself, who proposed to set up a commission to transform the United Nations into a World Union of the Nations.*

 *The reform took only six months because minds were ready. This reform, which will continue to be felt throughout the 21st century, evidently generated a reorganisation of all the United Nations agencies.*

 *The most spectacular reform was that of the WTO, the World Trade Organization, which quietly changed into the World Information Sharing Organization (WISO) in 2019. It was drawing the idea from the “New Order of Information“ proposed by the UNESCO and ratified by the general assembly in 2018. Its goal from now on was to promote the sharing of knowledge everywhere, because that was the only way to create new knowledge that would benefit humankind.*

 *The World Bank and the International Monetary Fund closed in 2017, at the same time as the Beijing monetary agreement of 2017. They were not immediately replaced.*

***We are in 2050***

 *We now are in 2050, and the world is so changed that the “New United Nations” has created an international commission of historians to write an essay for the school curricula on the history of the 20th century to explain to children how was the world, which their parents were born into.*

 *As George Santayana has noted: “Those who cannot remember the past are condemned to repeat it”*

# PART ONE: ONE WORLD IS DYING

“We are living through one of the most fundamental shifts in history:
 a change in the actual belief structure of Western society.
No economics, political or military power can compare
with the power of a change of mind.
By deliberately changing their images of reality,
people are changing the world.”

Willis HARMAN (+ 1978)
Thinker of Silicon Valley at “ The Stanford Research Institute”
Co-Founder of the “ World Business Academy”
President of the “Institute of Noetic Sciences”
California

## INTRODUCTION—THE FIVE LEVELS OF DEATH IN SOCIETY

 Many citizens around the world currently have the uneasy feeling that a transformation sneaking into their lives.

 “Everything is going bad.”

 “We are in crisis.”

 The individual citizen feels lost and wonders what will happen to him and his children. He senses that something important and large is happening in the world but cannot identify what it is. Moreover, he believes that he is alone in his uneasiness, even though hundreds millions of others feel the same way.

 He lacks a global vision.

 The crux of his feeling is that something is dying. He sees its death throes every night on the television news—businesses closing, political and institutional dysfunctions, corruptions, wars and violent insurrections.

 Indeed, something is dying—the existing industrial-modern, patriarchal system. If mass media had existed at the time of Renaissance, they probably would have spoken about the collapse of the agricultural and medieval society, of the crisis of the Latin language in the universities, of a horrible invention that allowed the printing the Sacred Book by machine. Word of the pioneers of change—like Galileo, Michelangelo, and Copernicus—would have been relegated to the cultural pages of the weekend paper… or in the crime-beat pages (describing the latest news from the Inquisition).

 To speak about the death of this system, I use the metaphor of a five-level iceberg only the top floor of which is readily visible above the water line and is, therefore, apparent to us (see Figure 1). In the first part of this book, I use this metaphor to describe the current system, parts of which are either already dead or dying in silence or with great noise. In the second part, I re-use the iceberg metaphor under a slightly different form to show, at each level, what is already alive in a new way. Specifically, I show what is being built around new economic and political concepts of the “knowledge society”—which not usually shown on television because it is uneasy to perceive.



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Figure 1: Iceberg metaphor (Part One)—Five levels of death

 In the iceberg metaphor for Part One of this book, Level 1 is at the bottom, where it is the coldest and the darkest—a place where one does not like to visit, much less live. This is the level where we are today—the level at which our global civilization is threatened to die if we do not change anything. I put this level at the bottom of the iceberg because we do not like to talk about danger hanging over our heads. We prefer not to go down so low in the cold water of our individual and collective subconscious.

 Level 2 is still very cold and low. One does not often visit there, even though one knows it exists. It is the death of the patriarchal values. One speaks very little about it, and yet we are confronted every day with the vertical, arrogant, and manipulative management crisis that arises naturally from the patriarchal system. And many people sense that no solution will be found to our global problems with its “command, control and conquest” values. One feels that to protect this lovely blue ball of a planet—the first pictures of which the American astronauts brought us in the 1960s—we urgently need a new cocktail of values of care and respect. More gentle and more feminine values. The truth is that the patriarchal system is already dead…but its corpse still twitches.

 Level 3 is the midway—the death of modernity. We might not be conscious of this death, but we sense it. And for those who still are 100% “moderns,” it is very difficult, if not impossible, to comprehend that we might be in a paradigm shift that will result in its death. By definition, such “moderns” are not conscious that they are living in a paradigm since they choose to view their world as objective reality rooted in impartial truth.

 Level 4 is very close to us. Many ”industrial” types of businesses are dying before our eyes. One does not usually say that a business dies, but that it “closes.” (It is a more modest statement.) But it is the whole of *the modern industrial economy that is dying* and for a very simple reason—the industrial approach to the problems of the world does not lead to rapidly finding a way toward a truly sustainable world. Industrial logic leads us instead toward collective death. It has no future.

 Finally, on top, is Level 5—the only visible level—made up of institutions that are so seriously in crisis that one may advance the hypothesis that they are in the process of dying. Globally, however, all pyramidal institutions are in crisis if not already dead, because they are subject to corruption, lack of transparency, or worst, lack of competency—and they cannot address the question of collective survival.

## CHAPTER 1: DANGER OF DEATH AND COLLECTIVE SUICIDE

 I start with this premise—that humankind finds itself at a totally exceptional moment of its existence because it is confronted, for the first time in its history, with the possibility of a conscious collective death, thus a suicide.

 Lester Brown, President of the Earth Policy Institute and former director of the “Worldwatch Institute“ in Washington D.C., who presented his book in the European Parliament in 2005, started his conference with the following words.

 “*Our global economy grows so much that it exceeds the absorption capacity of the planet. Thus, it is leading us every day closer to decline and possible death”.*

 It is quite obvious to most observers and to the general public that our Western model of development is polluting and unsustainable. Still, it worked well enough as long as there were only 750 millions Westerners (U.S. and EU) to create pollution and as long as we could dump our refuse of nuisances on other countries. But now that China, India, Brazil and the rest of the world align themselves with the same “unsustainable” development policy, one has to add to the 750 million Westerners more than two billion people. Thus, it becomes obvious that there soon will not be enough fossil energy to fuel the planet, that there will be even more waste and pollution, and that the agricultural fields will decrease and become impoverished more rapidly than ever before. Carbon dioxide (CO2) production will increase, climate change will accelerate, and animal species will diminish ever faster. In short, we are going straight to the wall… and doing so more rapidly than we have foreseen.

 If one extends the actual evolution curve, including China, India, rare are the “specialists” who deny the existence of a serious, very serious problem.

 Recently, I was reading on the train an article by Koïchiro Matsuura, General Director of UNESCO[[9]](#footnote-9). In the article, he says:

 *”Mankind, the planet, and the cities now know that they may be mortal. Sure, mankind does not live its first ecologic crisis. But, we perhaps live the first global ecologic crisis of such a magnitude. Today, we understand that war on nature is a global war…”*

and he continues by encouraging us to pull out of our conservatism,

 “*Is this sustainable development too expensive? No, it is rather our inertia which is costing us enormously!* *Javier Perez de Cuellar gave a clear caution in the 21st century dialogs: “How can we know and not be able to act, nor willing to?”*

 To end this war on Nature today, we need a new solidarity with the future generations. To this end, humankind needs to conclude a new pact—“a *contract with Nature*”—choosing co-development *with* the planet and signing an armistice with Nature!

 If we want peace with Earth, let us have an ethic of the future prevail. Because the planet

is our mirror. If it is wounded or maimed, then *we* are the ones being wounded or maimed.

 Matsuura also proposes that we embark as rapidly as possible toward the knowledge societies which are potentially much less pollutant and even, toward a real possibility of creating a global sustainable society.

 *“To change course, we must create societies of knowledge to combine the fight against poverty to investment in education, research and innovation, and build a structure of a true ethic of responsibility.”*

 We shall return to the subject proposed by Matsuura of *war on Nature,* which finally is a *war on ourselves.* The question, which quietly tortures our civilization, is to know if we will globally move toward life or if we collectively will walk toward death? Are we going toward the irreversible destruction of our natural environment and, thus, in time, toward our own collective suicide? Are tensions, and cruel socio-economic wars and devastating invasions awaiting us? Or will we make the necessary decisions to ensure our survival… and will we make them in time?

 These are the difficult questions buried in the depths, which haunt our civilization.

### Black is in fashion

 Our time is dominated by a collective feeling of death, which is not called as such. For instance, black has become the dominant colour in youth fashion and in the street. This was unthinkable in the 1960’s. Isn’t this fashion precisely revealing the feeling of death related to the end of one vision of life—the end of a period? Something is dying, and the agony of the system permeates the minds and clogs the horizon.

 A decadent civilization has no future.

 But, at the same time, in the entire world, something is being born which is thrilling but still perceptible with difficulty.

###  “Is it the end of France?“

 I was invited, some time ago, to give a talk to one hundred business leaders of an important French industrial group in Paris. I remember that after presentation, which considered different levels of the actual mutation I alluded to above, there was a long, embarrassed silence. Then someone asked, “Do you think that is the end of France ?”[[10]](#footnote-10)

 This type of question reveals the subconscious presence of this potent feeling of death. This question is most indicative of the underlying currents of our society; the feeling that something is dying.

### Of the difficulty to accept changes at the Renaissance—Justus Lipsius

The challenges to our survival that I have described above are forcing us to change. But change and transformation can be difficult. Civilizations, in general, do not like changes, and we should not feel too guilty if we, too, sense in ourselves a resistance to change.

 Acceptance of changes was not easy during other mutations in History—such as at the Renaissance—for a very simple reason. Eras of major change involve transfers of power between those who maintained power in the old system and those who will have the power in the new. In all my studies of history, I have never come across a transfer of power that occurred harmoniously and smoothly. This is probably why the end of the Middle Ages was littered with so many wars and so much individual and collective violence.

 As an example, consider the entrancing world of the *universitas*—those universities of which the professors were theologians who spoke Latin and travelled throughout Europe to exchange ideas and to enrich each other. The lives of Thomas Aquinas, Erasmus, Albert the Great and others are full of travels and teaching throughout Europe. It was a world truly endowed with great universal values, which died, also suddenly, without understanding why.

 Justas Lipsius was chancellor of the University of Louvain[[11]](#footnote-11), one of the jewels of scholastic theology dominating Europe and the western world at that time. In 1606, the year of his death, he said, “*Omnia cadunt”*—that is, “Everything collapses!” Sixty years after the Reformation, and as printing started its irresistible ascent, it was not only the University of Louvain that collapsed, but also the whole architecture of medieval knowledge, which found itself suddenly threatened to death. Latin, the common language of Europe, gave way to vernaculars. The absolute domination of theology was disparaged by the appearance of new disciplines in the modern, laic, and humanistic University. A whole world of values, determinant for centuries, which one believed immutable, collapsed, crushed to death by its own weight.

 Many did not understand and refused to change. This refusal is marked, in Justus Lipsius’ sentence, by the word” *omnia*”. Had he said, *“multa cadunt*“ (many things disappear), he would have helped his contemporaries understand the change, But he refused it, likely because he himself did not understand[[12]](#footnote-12).

 This refusal of change, which often proceeds from an error of analysis, wrongly equates *paradigm change* with *world death*. Indeed, many human beings feel that if *their* world disappears, it is the *entire world* that is going. And this feeling manifests at the level of a subconscious anguish, which is not easy to reason with… and overcome. Such anguish often prevents those who are worried and in death from seeing what is discreetly rising in the fringes and interstices of the dominant system in crisis.

### Conservatism and powerlessness of the soul— Vaclav Havel

For the first time in human history, we have built a global civilization, which has achieved the technical capacity to feed itself without compromising its future… and does not do it.

 There has never been so much poverty and misery on Earth as there is today. Thousands of children die every day of hunger in a frightening silence. Our planet itself is in mortal danger. The survival of all of us is at stake.

 What is happening? How can we explain the gripping and revolting contrast between our technological capacities and our incapability of using them to resolve our most troubling problems? In reality, we seem incapable to direct our tools and our intellectual and collective wills toward life—our civilization seems incapable of recognizing, much less solving, the fundamental problem of its own survival. It finds itself sliding inexorably toward nonsense and death—death of nature and irreversible loss of animal and vegetable species. Millions of children are dying of hunger. Thousands of young and adults in the northern countries commit suicide. Faced with this energy of death, we are deeply divided between revolt and despair.

 Such is the fundamental uneasiness.

 Is it possible to change our polarity—that is, to change something at the deepest of our collective unconsciousness, at the level of prime narration and the founding myth of our global civilization? It seems completely necessary for us to pass from a death instinct to a life instinct, from a culture of violence to a culture of peace to insure the survival itself of humankind.

 But how can it be done?

 This question is central. Its difficulty is proportional to what is at stake. It makes us touch the roots of our western civilization, but also, more broadly, the roots of most civilizations and cultures of the world.

 So why are we doing nothing?

 Vaclav Havel may have best described this sickness of the soul when he said:

 *“This inaction is explained by a desperate lack of will and inner need, that is to say by obstacles belonging to the field of the conscience and the mind. I draw from it a stronger and stronger conviction: the reversal of the situation is possible only if a change begins in the mind itself, in man’s relation to the world, in his acceptance of the values of life, in his mentality, and in his way to be responsible.”[[13]](#footnote-13)*

 These timely words make us touch the deepest level of uneasiness of our modern and industrial civilization.

 Our civilization seems to have lost the spiritual energy needed to make the decisions necessary for Life. Could it have lost its soul? I am tempted to believe it. In any case, it seems incapable of this ethical leap, this refusal of fatality allowing us to reconnect with the elementary and fundamental survival instinct.

 In the end, the predictions of Max Weber regarding the disenchantment of the world have become reality. The disenchantment seems to have simmered from generation to generation, deeper and deeper…into our bone marrow.

 And this disenchantment paralyzes us.

 At the same time that we are experiencing this profound and uneasy sense of Death, however, Life seems to be rising again, quietly, deep in the heart of all citizens (male and female) of the entire world. (I will discuss this more in Chapter 9.)

### Conclusions from Chapter 1

 In this chapter, I have invited the reader to go deep into very the cold water of our collective subconscious. It is not an easy step, but it is an essential one.

 We find much dead energy there. We touch on the roots of our civilization crisis—roots that are difficult to talk about and about which few people speak, aside for some intellectuals. We also see that the young generation is at the front line of an awakening to Life but that it also is at the front line of the sufferings stemming from this contemporary crisis.

 And I identified the source of our individual and collective “disenchantment.“

## CHAPTER 2: THE DEATH OF PATRIARCHY

 In Chapter 1, I revealed the fundamental malaise (uneasiness) to which we are currently confronted. It is like a death energy that paralyzes us. This “war on Nature” is really a war on ourselves, as the Director of the UNESCO rightly said. In going to war on Nature, we succeeded in turning our violence against ourselves, against our children, and against the future generations.

 So how do we get beyond this war? How can we help humankind choose life values?

 For a long time, I searched in theological libraries for an intelligent reflection on the values of life and death, as well as on violence. I only found reflections on sin, indeed the original sin, which explained violence and death as real constituents of Man or even as the consequence of the original sin

 The Christian religion, like the other great religions of today’s world, seems to have participated in the anointment of violence and violent death by engraving them deeply in the founding myths of humankind. The only hope allowed to believers is that they will be compensated (“redeemed”) by the salvation brought by another violent death of a non-violent individual.

 But did Jesus’ message, and those of the great wise men of humanity, truly endorse the anointment of violent death and of suffering? Didn’t they offer another way? And, along the way for many centuries, didn’t we somehow distort their first and fundamental intuition?

 Before talking of the death of patriarchy, we must first understand its origin. Where does it come from? Did it always exist or did it appear relatively recently in the history of humankind?

### The birth of patriarchy—a new narration of the origin

 The answers to the questions I posed above came to me in the form of a revelation and a face. The face was that of Nicou Dubois Leclercq[[14]](#footnote-14), who helped me discover the writings of Riane Eisler[[15]](#footnote-15), Marija Gimbutas [[16]](#footnote-16), and other women writers. The discovery of these wise women is that patriarchy, which influenced the narratives and origins of most contemporary religions, presents itself as always having existed when, in fact, it *is of relatively recent appearance after thousands of years of matrifocal[[17]](#footnote-17) civilizations.*

 These discoveries are based on recent archaeological research by Gimbutas, who demonstrated that civilizations far less violent and more centred on life values than those presented in the Bible did exist in Europe, India, and China before 3500 B.C.E. These civilizations, called “matrifocal” civilizations, were based on a different relationship between woman, man, and the sacred.

 The principal creed of these civilizations revolved around a Mother-Goddess who exercised her authority by giving life and by helping growth. Her action was felt even in death, which was conceived as a passage to another way of life. In these civilizations, the sacred was centred on the values of the gift of life, fertility, and thus also on sexual pleasure, artistic creation, and aesthetics. Power was a positive concept centred on life. It meant to make grow, live, bloom and, because of that focus, establish favourable norms.

 Among these very ancient civilizations, the Minoan civilization (from King Minos) in Crete is the closest to us. Malta, where important excavations are currently under way, is also mentioned. Their main characteristics are as follows.

1. Women played an important role in sacred rites. They were on equal footing with men. Furthermore, they did not employ our current domination paradigm—that is, men were not dominated by women, as in the later patriarchal civilizations where women were (and are) dominated by men.
2. These matrifocal societies were *more peaceful* than those that were (and are) patriarchal. Their art does not show “heroic battles” where men kill each other and rape women. The concept of power was to give life and help it grow.
3. Social structures were *more egalitarian*. Everything points to the absence of great social inequities, even though there are some social-based differences in the tombs.
4. These civilizations do not seem to have built *great defensive walls* *or to have employed important armies*. (This is perhaps the reason why they were vulnerable to invasions, and why they disappeared around 3500 BC.)
5. These civilizations did not create significant breakthroughs in technology. For instance, they did not invent writing—which makes it difficult today for historians and archaeologists to know exactly how they functioned.

 It is significant that *all over the world, at about the same time*—in India, China, and Europe—the matrifocal civilizations described above, centred on life and the pleasure to exist, were replaced by a patriarchal paradigm (civilization) focused on command, death, and suffering. Almost everywhere, there were conquests and violent invasions. And because these civilizations did not possess armies, they were rapidly subjugated and trampled down.

 In the “new” world, of which we are the last heirs, *“power” is no longer viewed as the ability to give life, but is construed as the power to bring death, destroy life, subdue others, and control and be obeyed at all cost.* In modern terms, this is expressed as “command, conquest, and control.“ In this patriarchal world view, sexuality has been degraded from its sacred position, pleasure has been sullied, and woman is presented in the foundation myths as the “temptress” and reduced to an object of reproduction and/or pleasure. Even the sacred ability to give life is debased and reduced to a form of punishment—“You will give birth in pain.” The *sacred* is also displaced in such societies—from now on its place is in the *blood of violent death* and in the suffering, which rescues. The concept of the “sacred” undergoes a complete reversal, and connects itself with *renouncement of* sexuality, *mortification* of the body, and *devaluation* of life in its entirety. Present life becomes a “valley of tears” and has *no more value by itself*. It is there only to be the anteroom of an afterlife where all tears will be” wiped off.”

 This cultural transition of the myths occurred gradually by a systematic subversion of the sacred symbols and myths. The Goddess-Mother, for example, progressively became the Goddess-Mother with a spouse, then the spouse of God the Father, then the Mother of the Father-God, and finally, the Mother of God, without even a divine rank, against God the Father Almighty. Francoise Gange beautifully describes this subversive transformation of original myths[[18]](#footnote-18). She shows, in quite a brilliant way, that this transition evidently is not unique to the Christian tradition, but that it is found in almost all the great myths on earth around 3500 B.C. A book printed by the Social Sciences Academy of Beijing shows that the same happened in China at the same time[[19]](#footnote-19).

### A new interpretation of ”original sin”?

Thanks to these authors, I also discovered a totally new interpretation of the beginning of Genesis, in the Bible. This story of Adam and Eva would not only be the narration presenting the story of the original sin. This text could be more deeply a transition between the “old” matrifocal myths and symbols and the “new” patriarchal symbols. And this same transition can be found almost in all myths and in all holy books of that period. The transition irremediably demonises and degrades the most sacred rites and symbols of the primordial feminine narration and makes sacred the symbols of the new patriarchal narration.

 In light of these discoveries—the research of which appears to be solid—it remains to be seen what will be done with the story of the original sin itself. If the original sin is not the central message, but a detail of the mythical transition, then Christian tradition would be cleared of an enormous individual and collective guilt which has been rampant in our Western civilization for almost two thousands years[[20]](#footnote-20). We would then need to rethink in depth our interpretation of Jesus’ message. If he is not the one who “saves us from our sins,“ then what is he bringing to us? Perhaps in asking that question, we could rediscover that Jesus brought us a simpler and more interesting message. Perhaps then we could rediscover Jesus as teaching us a *new means of going beyond violence* and moving toward a superior way of life centred on the divine source that is in each of us—and a way of manifesting his words that “ the kingdom of God is *in* us.”

 All of this induces a fundamental reinterpretation of Christianity, which might be enriching and opening new roads.

### The passage from matrifocal to patriarchal

 It is instructive to analyze in detail the text of the Christian story of original sin. Its initial setting, for example, in the Garden of Eden, a terrestrial paradise, presents four of the most important and sacred symbols of the Religion of the Mother-Goddess.

1. The *woman* is the sacred sex and the symbol of wisdom and sacred duty. She also is the symbol of supreme divinity, the Mother-Goddess. She is the symbol of life and giving. She gives life and wisdom. She is the great priestess of Life, sexuality, and sacred pleasure. Her power is a power of Life.
2. The *snake* is the principal attribute of the Mother-Goddess and a symbol of her strength. It is also the symbol of eternal wisdom, and of Life, which renews itself again and again, much like a snake renews itself by changing its skin.
3. The *tree of life* is one of the main symbols of life. It is life-giving by making the connection between heaven and earth. Its roots plunge into the earth and its branches touch the sky. The tree is explicitly presented as “*good to eat,* *fascinating to look at, able to make one wise.*“ (Genesis 3:6)
4. The *relationship between man and woman* is the heart of the sacred. Sexuality and the pleasure are sacred. Through the love of the man and woman for each other, they each reach ecstatic experiences, which open for them the doors of mystical knowledge.

 Then, in less than one page, the narrative *totally inverts and subverts the* *deep meaning of all these symbols*, one after the other. It desacralises them and demonises them or, at the least, slanders them.

1. The *woman* is cursed forever, and is from that point forward considered an inferior being—a sinner dragged by her sexuality and her perverse curiosity. She leads the man toward the “fall” which will be the single-most catastrophic event in the history of humankind. Her sexual desire is, therefore, negative and dangerous, since it is the reason for humankind’s misfortune thereafter. The text explicitly states that the man will rule over her. And regarding the power to give life, it is transformed into a malediction and a scenario of suffering. “You will give birth in pain,” says the text.
2. The *snake* is cursed. Tradition will even go further than the story itself—it will transform the snake into a symbol of the Devil. Therefore, what was once one of the principal attributes of the Goddess becomes hostile to the woman who will crush its head. The snake becomes vile.
3. The *tree of life and wisdom* becomes an evil to be avoided. To eat the fruit of the tree of life, to know the good and the evil was the ultimate goal of the wisdom in the prior religion. From now on, it is a mortal danger, announced by God himself and sanctioned by the facts. (The tree of life will ultimately be replaced by the cross of dead wood, symbol of death and of the redeeming suffering of the Saviour.)
4. *The sacred Eros between man and woman* is replaced by a couple where the man rules and the woman becomes subservient forever. ”And *they became ashamed because they were naked.”* For a few millennia thereafter, sexuality and culpability are associated. There is no more room for a positive vision of Life, and, thus, of the woman, the body, and sexuality.

 Thus, the sacred undergoes a complete reversal. All symbols are degraded one-by-one, and transformed into their opposite.

Table 1: From matrifocal society to patriarchy

FROM 7000 B.C.E. TO 3500 B.C.E.

MATRIFOCAL CIVILIZATIONFROM 3500 B.C.E. TO 2000 A.D.

PATRIARCHAL CIVILIZATIONS

LIFE = Sacred

Birth = Joy, songs, beauty

Death = Transition to another life

DEATH = sacred

Life = Sad valley of tears

Birth = Suffering and pain

Goddess-Mother gives life

Her Power is beneficial

God the Father Almighty with power of death (Abraham, Isaac). He will save through violent death

Woman = symbol of Life and the Sacred

Woman is the Great Priestess of Life and 2symbol of Sacred, because she is *giving* Life, she saves and heals

Man rules the woman and the universe. Man has total and exclusive hold of the sacred. Woman is impure and dirty. Gift of life is punishment. Woman totally excluded from the sacred.

Tree of Life = tie between earth and heaven. Gives knowledge of life and of evil and good. This beneficent tree brings Wisdom and Life.

Tree of Life = deadly danger.

Tree of death = Saves, Cross of Jesus

Sexuality and couple = Sacred

Through Sacred Love the couple may reach the divine. Human Love is thus a way toward the divine Light.

Sexuality and pleasure = suspicious and guilty.

Suffering = sacred.

Celibacy and asceticism = the path to Divine Light.

Snake = symbol of life and wisdom

Snake = tempter and liar = Devil

Power = to give life & love

Power enables creativity and growth of life

Power = to give death,

Power = domination through guilt and fear

Submission and obedience are the way to spiritual progress.

Creativity, art, beauty, and harmony with the cosmos are sacred.© Marc Luyckx Ghisi, 2008

### The crime is perfect

 With the story from the Bible, as in the other stories from that same period, the crime is perfect—there is *no alternative* since the prior civilizations were *perfectly wiped out*. Indeed, as with any myth of the origin, it determines the state and meanings of things “at the origin“—that is, before any other thing or system existed. Therefore, all that might have come “before” is perfectly erased, and the matrifocal civilizations can be treated as if they never existed. One still hears this today, because many people still doubt the existence of these matrifocal civilizations.

 Thus, we remain prisoners of the patriarchal narration of the origins, which has defined our individual and collective lives for thousands of years—rooted in the idea that the patriarchal model has “*always been so*.”

### By opening the past, one opens the future.

 The matrifocal vision is not only interesting, it is useful in that it allows us to open the graves of the past and exhume ”primitive” prior civilizations. It therefore removes the legitimacy of the violent and death-centred patriarchal narrations which are presented to us as the only possible narrations of the origin. By opening the past, these pioneering women writers open the future. They open for us the door of a “transmodern” and planetary paradigm and of the post-patriarchal knowledge society.

### Death of patriarchy

The discovery of the matrifocal civilizations suggests that, one day, patriarchy might be seen to have only been a transitional period in the history of humankind, and a heavy burden will be lifted from our shoulders. No, the violence that has infested our societies is not part of the original human nature. No, patriarchal values are not eternal. No, they did not always exist. No, they are not “part of human nature,” having “been there at the origin.”

 When one realises these things, it becomes suddenly apparent that the emperor has no clothes and that patriarchy can be seen, after all, as only one period of our history. In fact, the patriarchal values might ultimately be seen to characterise a rather sad period of the history of humankind, even though they have enabled extraordinary developments. Even though the patriarchal values have created prodigious leaps in science and technology, they are incapable of helping us move toward a sustainable future. Thus, one must to conclude that these values are already dead as a forward-looking reference system. Their vision of “conquest, command and control” no longer corresponds with the visions and aims of our worldwide civilization, which is in danger of collective death.

 Or, to present matters in slightly different way, one can say that our society suffers from an excess of patriarchal values. And that it is time also, as Riane Eisler suggests, to rewrite these original narrations in the direction of a true partnership between female and male values.

### Conclusions from Chapter 2

 Patriarchy as an unconscious structure in the world may be seen as *already dead* if we choose instead to look toward values of care and respect in order to survive. Our civilization is currently moving toward a new, more-feminine set of values—a new cocktail of values, as it were. This cocktail is composed of both patriarchal values and pre-patriarchal (matrifocal) values. And its making is already taking place invisibly in the world—in the subconscious of millions of people on Earth today.

 Thus, we may reasonably hypothesise that patriarchal values by themselves are dead as future values. They no longer have any meaning, precisely because they are incapable of yielding constructive solutions to the world’s problems and resulting in our collective survival. They have been effective and useful in the pre-modern and modern paradigms—for example, in the many conquests, expansions, and colonisations that have taken place over the years, and, finally, in the “conquest“ of space. And they have been useful in the development of science and technology. But they are not useful when it comes to survival and protect the “blue planet“ on which we live and which is in danger, because they are too much centred on death, and not on Life.

 It is important to understand that, although the patriarchal and pyramidal model is dead and dying in the world, most of our current institutions are still 95% patriarchal and pyramidal. These institutions are like dinosaurs that sense their impending extinction and do not know how to respond.

 One should not attack nor criticise the structures of the past; they were useful in their times. Likewise, we should not try to tear them down—they will fall under their own weight in time. For us the most urgent matter is to start constructing alongside them a network of non-pyramidal structures—supple and transparent new enterprises and institutions. This will require an enormous amount of creative work and that is the great challenge facing us.

 Unlike the dinosaurs, whose extinction was caused by a sudden event that they could not sense or prevent (a meteor hitting Earth), those who adhere to the patriarchal model can sense their impending extinction and attempt to prevent it. The idea of a world that values non-pyramidal, matrifocal values threatens those who currently are responsible for the management of most religious, political, economic and other institutions and structures. This sometimes renders them aggressive and even dangerous. They strike out in anger and desperation, resulting in the excesses that we presently observe.

 This is what I call the “dinosaur syndrome.” They are dinosaurs that become more and more aggressive because they feel trapped and condemned to death and they have thus nothing more to lose. Indeed, one witnesses the return of the most barbarian obscurantism. Some men in Afghanistan, for instance, use the pre-modern and patriarchal interpretation of Islam to oppress women. This is a typical mix of pre-modern and patriarchal paradigms.

 But patriarchy, for many years, has also been reinforced by modernity—by the modern way to think and act. The connection of patriarchy and modernity favours a civilization centred even more clearly on death, and even less on life values—and, in the extreme, a civilization totally disconnected from life.

 But modernity, too, is ending.

## CHAPTER 3: MODERNITY IS DEAD

 Modernity, like patriarchy, is already dead with regard to its global meaning, because it is unable to efficiently help humankind to orient itself toward a sustainable future. Thus, we are again changing our vision of the world. We are shifting paradigm, as we must to ensure our survival. We are passing from the modern paradigm to a “transmodern” (planetary) paradigm.

 Meanwhile, however, more than two billion people on earth remain in either the agrarian and pre-modern paradigm.

### A definition of paradigms

 What is a “paradigm”? The word comes from the Greek term “*paradeigma*,“ which means “*example.*“ To my knowledge, it is mainly the book of Harvard professor Thomas Kuhn, who coined the expression by showing that science progresses all along its history by leaps and hard conflicts between different interpretations, which he called “paradigms.“[[21]](#footnote-21) Every time someone proposes a new working hypothesis (like quantum mechanics, for instance) based on reproducible experiments, the holders of the official prior explanation are in crisis. Kuhn describes the four stages of the advent of a new scientific paradigm that is a new vision and explanation of scientific phenomena.

1. The paradigm is ignored.
2. The paradigm is ridiculed as absolutely unimportant and irrelevant.
3. The paradigm is violently attacked, including sometimes at the level of the private life of the inventor.
4. Everyone agrees that, from now on, it is the only way to think, and that actually, “everybody always thought that way.”

As Willis Harman wrote, a “paradigm is the basic way of perceiving, thinking, valuing and doing, associated with a particular vision of reality”[[22]](#footnote-22). He said also, “We are living through one of the most fundamental shifts in history—a change in the actual belief structure of Western society. No economics, political or military power can compare with the power of a change of mind. By deliberately changing their images of reality, people are changing the world.” Indeed the paradigm of a civilization determines how it perceives itself, how it sees the nature of reality, the society, the surrounding world, and the goal of existence. And this is precisely what is changing today.

 Our paradigms determine not only our thoughts, but also the way we view life. A paradigm is like a pair of eyeglasses. When a civilization leaves one paradigm for another, the transition touches the heart itself of our lives. Unfortunately, at the political level, power transfers occur most often in a violent manner—resulting in wars and revolutions.

### What is the meaning of the modern paradigm?

 It is important to recall that at the end of the Middle Age, it was almost impossible for scientific minds like Copernicus or Galileo to pursue their research quietly without being threatened with death by the Inquisition of the Catholic Church. The modernity that they represented was a liberation movement with regards to the then-current ecclesiastical obscurantism—that is, the withholding of knowledge and the opposition to its dissemination. Their ideas provided a new vision, a new way to consider the relationship to the truth.

 This new way to consider life (the modernity paradigm) was very successful. Over the centuries, it has allowed an extraordinary soaring of sciences and technologies, which produced the industrial society.

 The global meaning of the “modern” vision is one of *making human intelligence autonomous with regards to all obscurantisms,* whatever they may be. And this autonomy reflex remains deeply rooted in many intellectuals. It is as if there is a collective subconscious memory, a collective reflex of autonomisation, which remains deeply anchored and very strong. For instance—with the recent scandal created by the publication Mohammed’s caricatures in a Danish newspaper. Regardless of the substance of the issue, it calls attention to the uproar that arose to protect the human intelligence autonomy as old wounds of a collective unconscious resurfaced.

 I shall describe modernity in more detail in Chapter 9, by comparing the matrifocal, pre-modern, modern, postmodern, and transmodern paradigms.

### Why is the modern paradigm dead?

 In adopting modernity as the global paradigm, Humanity went too far in the direction of analysis, separation, and dissection. Following Descartes, we have sliced the problems too mush in order to resolve them. We also went too far in pushing the values of conquest and submission of opponents... too far in the conquest of nature, oceans, continents, other cultures and other religions... too far in attempting to control our personalities and our minds by reason and by rational and analytical arguments… too far in the exaltation of suffering and the despising of pleasure and sexuality.

 We as a global civilization are tired now. The earth is also tired, as it shows it by the alarming environmental jolts that are shown on the evening news. Other (pre-modern) cultures have started to complain and to speak out, reproaching us for directing the invading arrogance of modernity toward them. And the West is surprised by the critics, because it did not see the hidden face of our “modern” behaviour, our collective shadow.

 Thus, to save the planet and ourselves, we urgently need to install a new relation with the other cultures—to create a new horizon where the supreme value is *our mutual and collective* *survival*.

 That is the reason why modernity is dead—because our civilization does not anymore consider that autonomy of human intelligence is our supreme and most urgent task. Our most urgent task is survival. But, let us look at things more in detail.

|  |  |  |
| --- | --- | --- |
| *Property* | MODERNITY | TRANSMODERITY  |
| Supreme value  | Autonomy of Human intelligence against obscurantism | Ensuring our collective survival, thus preserving the planet |

### A new supreme value—to save the planet

 As I noted above, the supreme value of modernity is rooted in the *urge for autonomy of the* *human mind against Middle Age obscurantism.* And we just saw that we are living today in a completely different landscape. Today the supreme value is the absolute necessity to ensure our survival and that of the future generations.

 When we (the citizens of the world) saw the first pictures of Earth brought back by the astronauts in the 1960s—and saw clearly that our planet is a marvellous-but-fragile blue ball, we *began to enter the planetary (or transmodern) paradigm*. A new priority suddenly imposed itself on us—that of preserving and protecting this beautiful blue ball if we want to survive and care for our children.

 The principal reason for the paradigm shift is that our supreme value has changed in a short period of time… since the astronauts came back from the Apollo mission in the 1960s and 70s. That supreme value, the deepest aspiration of Humanity, is different now. And we as a species feel lost and in distress because we (consciously or unconsciously) are looking for a system of thought and action (paradigm) that corresponds to our new and urgent mission—to save the planet.

### Shortcomings of the analytical method

 The modern paradigm, which is mainly analytical, has proven extremely effective in leading us to the moon and developing science and technology… and also war machines. But it has several drawbacks, including:

1. *It is incapable of thinking in a synthetic and holistic manner*.
 In order to reflect on Humanity’s future, we must look at the problem in the most global way possible. And the modern analytical methods appear insufficient and ineffective. Indeed, modernity tends to follow the advice of Descartes, which is to cut a difficult problem into pieces that are easier to analyze and to resolve. So that, at the end, one only has pieces of solution or partial solutions—never a global solution. For example, if you have a problem in Europe, and you go to your local, national, or European authorities, you will be obliged to formulate your request by adapting it to different ministries (secretaries) and departments. Then, in time, you will receive different answers from each ministry (secretary). And you have to do the synthesis *yourself*, which is not always easy and, most of the time impossible.
2. *It is incapable of rethinking itself in depth as a system to reach a sustainable solution for our future.*
 Indeed, we must rethink in depth our economic and political systems to orient them toward life and future generations, and not toward collective death. But the modern mentality considers itself as perfectly objective and thus above any reflection on paradigms.
3. *The “modern” leaders are somewhat like the captain of the Titanic*.
 They do what they can to limit damages. But the most lucid ones feel deeply powerless. For one needs to learn to think differently. And it is not easy and almost impossible in their context. They have to go down with the ship. It is their duty.
4. *It is dead.*
 Modernity is in a mortal crisis in this beginning of the 21st century because its supreme value (autonomy) is not tuned to the necessary supreme value—survival. Modernity is incapable of helping humankind in the face of the survival urgency.

 Owing to these drawbacks, we must today look for holistic, synthetic and global solutions that concern our collective survival. At the same time, we must rethink:

* + The global economy (Economics)
	+ Our relationship with nature and the environment (Philosophy, Anthropology)
	+ Our relationship with the sacred, since we have desacralised nature so much that we have allowed ourselves to plunder it (Philosophy, Theology)
	+ Our political systems, which are not even capable of launching a suitable debate (Political Sciences). (Note that Nobel Prise winner Al Gore had to wait to be *out of politics* to make the film that made him more famous than his political career.)

 Thus, modernity’s supreme value of autonomy is not valid anymore in the 21st century because Humanity has other, more-urgent needs. This is the main reason that modernity is dead. It is incapable of providing a new supreme value for the 21st century.

### To change a paradigm is difficult… and is also dangerous.

 Changing a global paradigm is a delicate, painful, and laborious endeavour. After all, one does not change culture—the way to see and judge other beings and things—as easily as one changes ones shirt. The birth of a new world is always difficult and dangerous.

 The death of modernity is very difficult to describe because it addresses the way we currently look at reality. It addresses the very eyeglasses through which we perceive reality. The ”paradigm” is ours—that is, *all the values and implicit prejudgments through which we ourselves apprehend reality.* The major difficulty is that most people are unaware that they wear these eyeglasses—including most modern intellectuals, who are convinced of their objectivity and are certain that their views are not shaded or skewed by any such lenses; therefore, they have no need to reflect on any paradigm shift.

 Another difficulty is that in the death of modernity, it is not just one value that changes, but a whole *set* of values and, chiefly, their relationships and hierarchies. It is an entire *matrix* of values that changes all at once and together—a group of factors related together by defined equations.

 But, the major difficulty in talking about the death of modernity comes from the political and institutional side, because it is difficult, even dangerous, to challenge the existing structures. They are sure to fight back in order to ensure their survival.

### Conclusions from Chapter 3

 Modernity is dead, but most citizens of the world are unaware of the fact, even if some of them are more or less conscious of it. Everything is happening in the background. A world is dying, but in an astonishing silence. Why this silence?

1. The soft silence of the intellectuals
2. Many intellectuals, who should be the ones to explain the situation to the public, are not convinced of the occurring changes. They would rather continue to implicitly hold up the slogan, “There is not salvation outside modernity.” Indeed, many intellectuals are convinced that only chaos will ensue if we abandon modernity. They are convinced that there is no front door. There only is a back door, which wakes up sufferings in our collective unconsciousness—religious wars, crusades, and inquisition. Yes, one could be frightened if there truly was no front door… but there is one. (I shall talk about it in the second part of this book.)
3. Extreme difficulty forinstitutions to adapt to changes
4. The other reason for the silence is more political. It is almost impossible for an institution to change paradigm, because an institution is made to last, not to change. I came to understand this while working at the European Commission. The idea of the founding fathers (Monnet, Shuman, Adenauer, Spaak, de Gasperi, etc.) was *precisely* to create in the midst of the European Union, then called European Communities, an institution that would survive them and become a lasting, stabilizing element of their initial intent—that is, non-violence between European states and, thereby, definitive stabilization of our continent. And we in the “Forward Studies Unit”, created by the President of the Commission, were then questioning the vision (paradigm) and thus, inviting the Commission to reflect at adapting itself to the new era. This was a message that could be heard by individual officials—sometimes with interest, often with scepticism—but at the institutional level was very difficult to accept. Thus, the “Forward Studies Unit” was suppressed.

 It is important to note the huge difficulty for institutions to reform themselves from the inside. This often is impossible. It is not in their basic “program.” And this is true, even if the individuals who run the institutions are interested in the ongoing changes and are of good will.

## CHAPTER 4: THE DEATH OF INDUSTRIAL SOCIETY

 In Belgium, we were shocked recently when the excellent automobile factory of Renault was closed. Then a Volkswagen factory followed suit, and more recently it was reported that a well-performing General Motors factory is also closing.

 And the public does not understand why. The workers do not understand. The trade unions do not understand. Even the Belgian prime minister says he is astonished and truly shaken, because these factories were functioning well and were considered to have some of the best returns in Europe in terms of the ratio of salaries to quality of production.

 One could report hundreds of similar stories from the other EU countries. Everywhere the tendency is the same. But the subject is taboo, and nobody dares approaching the true cause—that our industrial society has been killed by the progress in the form of robotic technology.

### The death of the “industrial society”

 The “industrial society” is dead. We certainly continue to have a sector of industrial production, just as we still have one of agricultural production, but we no longer are in an industrial *society.* That is to say that industry will not be the primary one offering employment and, therefore, give its name to society.

 Let us recall what Alvin Toeffler’s warned of in 1970[[23]](#footnote-23), when he propounded the idea that we are on the way to create a *new* society—not a transformed, enlarged, greater-than-Nature version of the existing society, but a genuinely original and new society. It has taken 30 years for this simple warning to come to the forefront. And yet, if we do not heed it—if we do not understand its truth—we shall go straight to ruin, despite our efforts to face the future.

 Toeffler observed that our civilization struggles in the anguish of revolutionary changes. In the 1920s and 1930s, communists were talking of the “general crisis of capitalism.” It is now obvious that they were short-sighted for what is happening is *not a crisis of capitalism*, but *a crisis of the* *industrial society itself*, regardless of its political organization format. It is a general crisis of industrialism. In fact, one could say that we are in a “super-industrial revolution.”

 Toeffler’s warning was aimed at politicians and all those who might want to continue with the “business as usual” approach. Leaders, however intelligent, who ignore the warning not only do not understand the present situation but also to display a dangerous ignorance about the future. The lack of understanding often causes them to substitute simplistic guidelines for thoughtful analysis and action. They implicitly and naively presume that tomorrow’s bureaucracy will even be more powerful than today’s. This type of rectilinear extrapolation occupies a major part of what is currently said and written about the future and it causes them to lose sight of the true problems. According to Toeffler, most leaders do not seem to understand what is happening and continue to imagine a linear future similar to the present one.

 This misunderstanding is both sad and dangerous.

 The change to a post-industrial society manifests most clearly in the disappearance of industrial jobs. As Jeremy Rifkin[[24]](#footnote-24) states (and as Daniel Bell, the Harvard sociologist[[25]](#footnote-25), stated in 1973), it is at the level of manpower that things are changing. It becomes more and more obvious as time goes on that industrial factories will be obliged to replace human manpower by robots in order to exist. The trend is the same around the world.

 Rifkin notes that this robotisation phenomenon is also happening in China[[26]](#footnote-26), since China did reduce its manpower requirements by 15% in seven years, which is enormous. In the West, we might believe that Chinese manpower is cheap, but in the end it is still more expensive than robots! At the global level, too, industrial manpower was reduced by 14% in seven years. And Rifkin adds that this “outsourcing“ accounts for a maximum of only 5% of the overall employment reduction.

 This is one less argument for the political class to retain in favour of the status quo.

 It is important to note that in the year 1900, 87% of the European population worked in agriculture. Today, farmers comprise only 4% of the European population. And their production is seven times greater than that of the 87% who worked in agriculture over one hundred years ago. Thus, the yield has increased geometrically, and agricultural employment has almost disappeared. This increase in productivity and loss of agricultural employment resulted in the end of the “agricultural society”, because agriculture is not anymore the main employment activity in Europe today.

 Now, we are beginning to see similar trends in the field of industrial production. Indeed, as industrial employment diminishes, productivity increases, since robots can work day and night without lunch hours, vacations, or coffee breaks. Not too long ago, a sugar factory near Brussels employed 5000 workers. Today, it is totally robotised and uses only five specialised workers who supervise the computers that operate the robots. Manpower at the factory has been reduced a thousand-fold, and productivity has increased enormously.

 In the coming years, we might have the following job situation in the EU:

* + Six percent in a more “bio-natural” agriculture (if the current trend for the subsidies of the “common agricultural policy” of the EU is changed. A few new positions (perhaps 2%) could be created for the bio farmers.
	+ 10% in industrial production
	+ 30% in services

 As far as the rest goes, nobody knows. Nothing is said of these things because there is nothing *to* say except for hollow promises to “create employment positions.” The employment situation can only be truly confronted if one realises that the industrial society is dead. But, as a politician, this is not easy to say. The first one to tell the truth may be executed, as in the French song[[27]](#footnote-27)! This is what Jacques Delors and the European Commission tried to say in the White Book of 1993 on employment by making intelligent propositions to prepare the 21st century. But, they have not been heard.

 This may be the reason why he European Chiefs of States happily accepted the “Lisbon strategy,” which addresses the knowledge society and which I shall address in the second part of this book. Yes, the difficult problem that confronts the most expert politicians is precisely the one of employment in the post-industrial society in which we have already lived for some years.

 But, things appear to be changing—if slowly. Romano Prodi, when he was President of the European Commission in Brussels, asked Jeremy Rifkin to be one of his advisors. And Angela Merkel, the head of the German Government, invited Jeremy Rifkin to Germany in 2005 to reflect on employment and the future.

### Death of the “modern” concept of development

For fifty years, we in the West promised “prosperity by development” to those countries that we modestly call “developing countries.” And, except for a few cases of excellent results, we must have the courage to declare that the concept itself of “catching up” conceived by the American economist Rostov[[28]](#footnote-28) and repeated *ad nauseum* by thousands of economists working for Euraid, the World Bank, or NGOs (non-governmental organizations) has not worked and does not work today.

 Meanwhile, the development machine keeps functioning. Credits from the World Bank continue to be distributed. And Euraid, the aid for development offered by the EU (by far the most important globally) continues as if no report had taken place. This is understandable but sad, because so many lives are at stake.

 The primary support propping up the old “industrial-society” paradigm is the idea that to discard it would leave a vacuum… there is no new concept to take its place. Thus, it continues to be used even though it has shown itself to be obsolete. It is imperative to create a new vision and thereby offer hope for 70% of the global population. But there is no new vision on the horizon, at least in the official circles. And, thus, the prospects are bleak for the majority of humankind. There is no hope on the horizon… in fact, it could be said that there is no horizon at all.

 Certainly one might argue that the industrial-development model succeeded very well in China and in India, both of which heartily applaud globalization. Nevertheless, global public opinion, as well as that of some of the intellectuals in China, India and the West sides with the idea that this model of “growth” is driving us directly to a global ecological catastrophe.

 Riding along on the coattails of this death of the development concept is the demise of the Western hegemony in the world. Having brought the “good” religion and the “good“ civilization to the rest of the world, the West followed up by bringing “good” development and “good” structural adjustment. The West possessed the “truth” and distributed it to the “underdeveloped.” There really was no room for any other points of view, other approaches, and other visions.

 My thesis in this book is that this arrogant concept of Western truth—which has functioned for thousands of years—is dying along with the industrial society. It is an expression of the old saying of the Catholic Church “*Extra ecclesia nulla salus*“—that is, “*Outside of the Church no salvation.*” Were we conscious that we were manifesting this expression? Probably not. But those who were subject to Western arrogance have been perfectly aware of it for centuries. They sometimes pushed inward the oppression in the form of a societal inferiority complex, which has often taken often the form of an “underdevelopment” complex. And those so called “underdeveloped” have accepted, once for all, that the Western civilization should be the norm and the model for a sustainable development.

 But in the face of its societal and environmental consequences, who can still dare to pretend such a thing?

 Thus, we are confronted with the death throes of two things at the same time—the industrial society and the Western epistemology, a pyramidal and exclusive concept of the truth, that pretends to know what is best for cultures and continents (and economies) other than itself—both now and for the future.

 In a global world, the Western concept of development no longer makes any sense. But it has yet to make its exit from the world stage.

### Conclusion of Chapter 4

 The industrial society is dead. This does not mean that future societies will not have industries, anymore—only that industry will no longer rule society. With the death of the industrial society comes also the death of the concept of “catching-up development.” *There is no global project anymore for the great majority of the people of the world. No more hope.* This situation is potentially very dangerous politically because it can lead to despair and, thus, to violence.

 We live in a difficult period. And the citizens of the world are right to be worried. But political discussions on this burning subject are few. This is understandable but pitiable. The death of these systems is not being talked about even though it affects the lives of every person on the planet.

 The patient might die before it before it is even publicly acknowledged that he is sick.

## CHAPTER 5: THE DEATH OF THE PYRAMIDAL STRUCTURES

 The fifth and final level of change in my iceberg metaphor (Figure 1) is the only one above the waterline, above. One can read about it sometimes in the newspaper. And this is presented as a “credibility gap” of the State, of the democracy, and of all the pyramidal structures that currently make up our society.

### Death of the pyramidal structures

 Citizens of the world today adhere less and less to the State structures and believe less and less in democracy. The number of citizens who do not vote anymore increases more and more in all countries of the world. It’s a disturbing trend that one finds in almost all institutions structured the pyramidal way—trade unions, churches, international institutions, and multinational enterprises.

 At the heart of the problem is the fact that the vertical organization of power no longer works. Why? Because even though people want to contribute, have their say, be creative, and be able to participate in the decisions that affect themselves, they *no longer trust the vertical structures themselves, which created the dangerous situation that the world finds itself in now.* They would agree to delegate political power to the elected ones, at the top of the pyramid, if the governance made sense—that is, if those in the seats of power were intent on preserving humankind’s interests on a middle and long-term basis. But this appears not to be the case.

 And there probably is a deeper reason for the distrust and unworkability and death of the pyramidal systems. At the basis of all pyramidal structures exists the patriarchal logic I described in Chapter 2—which is still profoundly rooted in the soul itself of such structures. And the patriarchal logic of death and conquest becomes more and more problematic all the time in the actual world, especially in contrast to the planetary paradigm and vision?

 Thus, these pyramidal structures, which are everywhere, are suddenly losing their legitimacy. Instead of being considered parts of the solution, they have become parts of the problem.

 Their legitimacy has vanished at an astonishing rate—in just a few years.

 There also is a second phenomenon leading to the death of pyramidal structures. It is less spectacular but still important. It is that the State, as a political structure, is losing its hegemony, because other organizations are in the process of sharing its sovereignty.

### Death of the “modern” State hegemony

 Modernity invented the State as a structure of ultimate power and did not conceive of another power entity above it. There are certainly stronger States that are able to dominate the less powerful or the poorer ones—there exists a whole body of literature on the subject—but modernity did not conceive any authority above the State or even alongside it.

 During the period of modernity, the State was the globally dominant political structure. Of course, a few State forums were set up—like the Society of the Nations between the world wars of 1914–1918 and 1940–1945, the Council of Europe, and, of course, at the global level the United Nations. But all these structures are still modern because they do not accept *any level of* *authority above the State*. The United Nations includes a Security Council, where the “big States“ have a veto right over the smaller ones. But we still are in a modern vision because, here again, the relationship between States is a power struggle. And nowhere is it said that this is a new level of power. In fact, some States, like the U.S., would never accept a new level of power—it is too “modern” to do so.

 The leadership of George W. Bush as president of the U.S. represents a good example of a totally “modern“ political vision. His leadership is like a yellowed photo of the modern leadership that we are quietly abandoning in Europe but have used for centuries. In his speeches it is obvious that the national State holds the hegemony and priority in all domains, including in those spheres that affect the whole world, such as the environment or human rights. They suggest that the national U.S. State has the absolute hegemony of political power in all spheres of foreign policy and that it will never accept the sharing of its sovereignty with any other State, nor with the United Nations, which it does not fail to humiliate when it does not need its sanction.

 Bush is, then, a “modern” head of State. And the extent to which his actions and attitude shock the rest of the world illustrates that European and worldwide (including parts of the U.S.) public opinion no longer is “modern.“

 We are already in the planetary paradigm.

### Refusal of the pyramidal power

 At the same time in Europe, one can observe that citizens refuse more and more a “top-down” authority, dictating orders from above. The European citizen no longer accepts this understanding of the political power.

 This is probably why the principle of “subsidiarity” has been suddenly rediscovered. According to this principle, *any political decision must always be taken at the lowest level. And the superior power level cannot and* *must not* *intervene*[[29]](#footnote-29) *unless, and only unless,* *the inferior level is incapable of deciding*. *But if the lower level is not able to decide, then the superior level of power must intervene.* Thus, subsidiarity is a principle that, while evidently giving power priority to the base, also provides the superior power level its justification, its sense, and its functioning key. Since it also specifies when the superior power needs to intervene. It is written in the first articles of the European Constitution project and is also the keystone of the U.S. Constitution, but under the name of “federalism.” In fact, these two concepts have the same source—a German book from the beginning of the 17th century written by von Althaus or “Althusius”[[30]](#footnote-30).

 The subsidiarity principle moves us toward a post-pyramidal society because it also applies to a network society.

### Relativisation of the sovereignty of the State from above—the European Union.

 The European Union is a new level of power to which States are invited to surrender part of their sovereignty in order to exert it together at a more global level—that of the European Union. This is a new level of power above the State.

 But the EU is neither a State nor a Super-state. It is a transmodern or planetary structure.

 That’s right… without knowing it, the Founding Fathers of the European Union created what Jacques Delors called an “unidentified political animal.” I dare add that it is a political animal of the new transmodern or planetary paradigm that corresponds to the true needs of the 21st century, as it appears more and more obvious that war and violence are *no longer acceptable political solutions.*

 The EU is, in fact, the first transmodern political construction. It is the first structure that relativises the State hegemony, since it organises a sharing of part of the national sovereignties to institutionalise absolute non-violence between the States of the Union. But, by so doing, the member States create, de facto, a superior level of power and of continental responsibility to which they delegate part of their sovereignty. And the European Court of Justice did not err when it decided that European laws always take precedence over national laws.

 The EU is an enormous and significant step toward a non-violent global society. It is setting us, without our knowledge, in the political transmodern or planetary vision because it is a new level of power (not State controlled) and of political continental responsibility.

 During my years at the European Commission, I had he opportunity to attend reflections on the evolution of national governments as they visited Brussels. Such governments usually need several years to realise that when they sign European laws they are not at the same level of power as when they sit in their national government. It is not the same level of power, nor the same level of responsibility. One can observe quite often a heightening process of the level of political consciousness of the government and its political staff. Suddenly, they become conscious of their new level of European and global responsibility… just about the time that the government is replaced by the subsequent one.

 But this also means that the great “modern” thinkers of political wars like Clausewitz and Machiavelli are also surpassed. Thus, it is an enormous side of political science and of war tactics that is collapsing. In fact, we are also facing a paradigm shift in the manner in which war itself is conducted. A British general who directed the siege of Sarajevo in the Balkan war has just published a revolutionary book that suggests a total rethinking of our strategic concepts in a mutating world.[[31]](#footnote-31) According to him, the atomic bomb of 1945 ended the “industrial war” and opened the era of the “war among people.” The result is that *“you use soldiers for tasks that they are not prepared for.*”

 I believe that we are only at the beginning of a reflection on the role of armies in the post-industrial, transmodern 21st century.

### Relativisation “from below”—cities, regions, and civil society

 But there also is the relativisation “from below.” Sovereignty divides itself into levels, which are lower than the Nation State. The growth of the European regions is impressive. Even though the Council of European Regions does not hold a lot of institutional power, it has acquired a growing importance in the European apparatus. Thus, there is an obvious sharing of sovereignty.

 In Belgium, this is even more evident since the successive reforms of the Federal State provide the Belgian regions with more and more power and rights, including, for example, commercial representations abroad. Indeed, there is a true sharing of sovereignty, this time toward the bottom.

 Cities and regions also appear to be much more open to changes and new ideas. Management at that level is, at times, surprising and sometimes very creative. It perhaps is at this level of power that the political mutation toward transmodernity and the knowledge society will occur first.

 Finally, I am only skimming here the topic of the intrusion of civil society in the political debates on environment, consumers, etc. Moreover, it is obvious that the impact of civil society is growing, more and more. The most obvious sign is that the United Nations has now created an ad hoc department for civil society and non-governmental organizations.

### Conclusions from Chapter 5

 The pyramidal structures that have governed the world for many years are dead. And their demise is occurring rapidly, even though almost all governing structures in the entire world are pyramidal. The principal reason that they are dead is that “modern” leadership is incapable of resolving the problem of our collective survival. Thus, its legitimacy is dead even though the structures are still in place.

## CONCLUSIONS FROM PART ONE

 In the first part of this book, I have described the deaths of many things that we as world citizens take for granted in our daily life. Let us stop for a moment and put them in perspective.

 Is there a link between them? Most certainly so. It is the danger of collective death, which is the only force capable of changing behaviours that have been entrenched for thousand of years in the subconscious of all of us—male *and* female.

 Patriarchy, unmasked and examined, reveals itself to be merely a period in the history of humankind—not something inherent in human nature. When one realises this, one may start to relativise patriarchy itself and to surpass it. But, it is not easy to do so, because our bodies possess a profound “cellular memory” of its existence, which is difficult to purge.

 The deaths of modernity and of the industrial society are related to that of patriarchy and are, in fact, consequences of it. One encounters in them the same pyramids of power, the same structures from low to high, the same absence of women at the high levels of decision. It can reasonably be said that modernity is like the ultimate avatar of patriarchy. It is obviously the predominance of the male analytical mind that was reinforced by modernity.

 Modernity promotes itself as having granted equality to women. Perhaps, but we really are far from such equality. In private life, women enjoy greater autonomy—at least they are no longer considered by the civil code as being the “property of their husband”—but in political structures and in business, women are often kept in jobs that rarely are the ones of real leadership. The implicit and unconscious matrix of industrial modernity values does not favour the feminine values.

 Like modernity, the industrial society is also an avatar of patriarchy. It has been built on warlike values, and if one looks at market strategies in business schools, they often employ the warlike phraseology of patriarchal values.

 The modern State itself is also patriarchal. It has certainly made concessions to women, and it should be credited for doing so, but the structure of its defence policy is warlike and violent, therefore patriarchal.

 Thus, a red thread of patriarchal violence weaves through all these deaths. And this thread of patriarchal violence is on the way to being cut.

 This is the best of news for the planet, because the changes are deep and not merely cosmetic. The changes are taking place on the level of human consciousness.

# PART TWO: THE KNOWLEDGE SOCIETY

## CHAPTER 6: THE TRANSITION TO THE NEW SOCIETY

 As we leave the modern and industrial society (and, at the same time, the patriarchal society) to enter into the knowledge society, we also enter an era of strong cultural and political turbulence—because the modern-industrial and patriarchal paradigms and structures of the world will fight for their survival. And due to the fact that we are undergoing mutations at two levels—the transition might be doubly violent and strong.

 One can represent the cultural mutations that have taken place throughout history by a diagram such as that shown in Figure 2.



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Figure 2: Graph of cultural mutations

 Figure 2 shows the evolution of the world toward the knowledge society and shows where we are at this point in history. Obviously, this is an extremely simplified view designed to illustrate that we are entering an important zone of turbulence.

 At around 3500 B.C.E., we see three curves intersecting. The first curve represents the diminishment and end of the matrifocal society. The second represents the beginning of the strong pre-modern agrarian influence, and the third is the beginning of patriarchy**.** The upper part of the agrarian era seems indeed to correspond to the beginning of patriarchy, and nobody knows why the matrifocal vision was superseded by the patriarchal vision. According to Riane Eisler, hordes came from the north with a completely different mentality, more violent and more prone to conquer—and, therefore, closer to the patriarchal values. They easily conquered the southern people, who had matrifocal values and had no armies. These invaders were probably also farmers, whereas the invaded people were fruit pickers and cattle raisers. Following this violent conquest, the vision of the world was profoundly transformed in all Europe.

 It is interesting to note that similar transitions occurred in China and in India at about the same time. Was it the sudden passage from shepherding to farming in the entire world? Very little is known about these conquests because, at that time, writing was not yet invented. This is the reason why I did not draw an explosion around the first transition toward the agrarian period—very little is known about it. On the other hand, the study of myths is possible and was done masterfully by Francoise Gange. She describes the progressive transformation of the founding myths in every civilization.

 The agrarian period is characterised by the dominance of agriculture; whereas, in the preceding period, the main activity was fruit picking and shepherding livestock. Obviously, the transition to agriculture represents for the populations a massive shift toward a sedentary lifestyle. Some observers have also noted that the farmer who plants is obliged to delineate his planted soil from that of others. He marks out the land with boundary posts so that he is able, a few months later, to harvest without disputes. This is probably how the right of ownership was born. A shepherd in the preceding period, on the other hand, would herd his cattle through large swaths of land that belonged to everyone… and to no one. Thus, he had no notion of ownership.

 By analogy, one might wonder whether this ownership instinct did not also extend symbolically to the male who sows his seed within his female partner and, thus, takes ownership of her by divine right. Could this be one of the origins of patriarchy?

 The efflorescence of this pre-modern period lasted for 4000 years. It ended in Europe at the close of the Middle Ages, around 1500 A.D., but billions of people today still make their livings via agriculture and maintain an agrarian vision of reality.

 During the whole of the Middle Ages, from 700–1500 B.C.E., the Christian Church was in power. It mastered and managed the agricultural technology through the abbeys, which transmitted their knowledge to the farmers. It also held political and military mastery throughout Europe and was the dominant power, together with the emperors and kings with whom there were constant conflicts.

 The transition to the modern industrial period was progressive and slow. It is symbolised in the architecture of most European cities. Next to the cathedral and the cathedral square sits the marketplace, which often serves as the “great place“ or main square. This square resembles the cathedral square. The town hall, too, often has the shape of a cathedral. My own home city of Brussels is an excellent example—the city hall, located downward from the cathedral, looks like a church. And the guild houses where the most famous trades were centred surround the Town Hall in the “Grande Place.” You can see today the houses of the bakers, the fishermen, the bankers, the butchers, and the cheese makers. Those houses in square, as if surrounding a church, symbolise the rising might of the craftsmen and the pre-industrial forces—forces that ended up dominating the economic and political European scene even as their influence was becoming visible in the cities’ architectures.

 Although this transition was slow, it was also very violent—because human history shows that those in power never surrender their power without violence. Instead, they usually do whatever they can to consolidate their position, even (and perhaps especially) if they sense that their demise is apparent. This is probably why the end of the Middle Ages was such a violent time, with the religious wars, the Inquisition, the crusades, and all sorts of conflicts.

 The transition from the agrarian period to the industrial period was thus a violent one. That is why I have surrounded it with the drawing of an explosion.

 My hypothesis, and that of numerous observers of the world, is that today *we are precisely at* *the threshold of* *a similar transition*—the transition from the ending of the modern industrial society to the transmodern knowledge society. The U.S. and Europe are the dominating powers in the world for the moment, but for how long remains to be seen. The incidents of September 11, 2001 in New York City might be the triggering element—the indication that we are entering a rather turbulent period. And, unfortunately, these troubles will probably be generated, directly or indirectly, by the dominating powers themselves—that is, the Western powers.

 But things are more complicated in this transition compared to the previous transition, because not only are we leaving the modern industrial period, but we are also stepping out of the patriarchal era. Thus, the weight of the mutation is much heavier and more potentially explosive. And those who hold authority at this time are, in principle, almost exclusively male and manifest themselves in institutions such as religions, trade unions, political parties, factories, and other organizations that have institutionalised suppression of women. It is true, for example, that the Napoleonic code, which was still in use until recently in Belgium, considered women to be the property of men.

### No, this is not a change of the dominant empire. The crisis is deeper.

Obviously, no one knows how this transition will occur. Personally, I believe that we are *not* dealing simply with the “decline of the West“ as many authors suggest. Instead, we are confronting a deeper change where all political powers will switch places on the chessboard and where the Western position also will probably change, but always with this *new threat* of collective death in the background.

 As I showed in Part One, we are now confronted with a danger of collective death as well as the death of patriarchy, of modernity, of the industrial society, of all pyramidal structures, and finally the death of State hegemony. Thus, we no longer are in the dynamic of a simplistic scenario wherein one empire ends and other empires rise to take its place—like China or India, for example. Such a scenario would still be a “modern” scheme.

 For us, the entire problem has changed. Yes, we will see the end of Western hegemony, but it probably will probably *not* surrender its hegemony to a new world power. We could assist the rise of networks of States—some networks, like the EU, are non-violent; other networks could be more violent and some, extremely violent. *But all networks will be confronted with the new and formidable danger* that threatens our survival and that of our children. This danger is generating an unprecedented mutation in the history of humankind.

 It is as if *history is forcing humankind to change the very level of its conversation.* The purpose of Figure 2 is to illustrate our ”situation on the map of history.” Thus, its goal is more pedagogic than scientific.

 The explosions shown in Figure 2 represent the transition periods. Reform and Renaissance for the first, the crossing point between modern and transmodern societies for the second—that is, ours. We are already at that second crossing point, as I will show later in this section. The regions in which the curves cross always represent the death of the power of the dominating system which suddenly is marginalised and the birth of the power of a new system—a rising curve.

 But for us, this crossing is more complicated. Indeed, “our” explosion takes place at the end of the patriarchy curve, which began when the agrarian era superseded herding, hunting, and gathering. If patriarchy dies at the same time as the industrial and modern era, it is perhaps because the latter two were expressions of the former? This is indeed my hypothesis in Part One of this book.

 After the area of the second explosion, we see only one new curve, because the knowledge society is, by definition, a post-patriarchal society, where men and women must invent a different manner to manage their relationship. But the industrial curve does not end abruptly, symbolizing marginalised industrialists who still do not understand the change and maintain a patriarchal perspective even as they are marginalised.

 The downward slope of the industrial curve near its end expresses the idea that the industrial society is dying or dead, resulting in the diffuse sense of death in our Western societies. But at the same time, it symbolises also the collective death of humankind, if we keep on maintaining an unsustainable industrial development and growth policy.

### The last curve—the transmodern knowledge society

 The last (rightmost) curve represents the subject of Part Two of this book—the transmodern knowledge society. This new society, already born and growing, is usually not seen in the media because nobody talks about it. But its invisibility is mainly due to the fact that the eyeglasses of the media remain modern, industrial, and patriarchal. They are still looking for the old industrial curve so that they do not even see the new one. Sometimes, they come across businesses or civil society groups that are already in the new movement, but they do not recognise them as such because they do not have the correct eyeglasses.

 This knowledge society, I will show, is altogether post-patriarchal, transmodern or planetary, and post-industrial. It is centred on a knowledge economy, and it structures itself in networks rather than pyramids. It proposes a new political paradigm—networks of States tied together by treaties of absolute non-violence between them.

### The horizontal arrow—businesses jumping toward the new society

 In Figure 2, I show a horizontal arrow that represents those elements of the business world and NGOs that have foreseen the transition and are already moving toward it. The arrow points directly from the “modern industrial” curve to the “transmodern knowledge society” and bypasses some of the explosion. For example, IBM recently decided to give to the public more than 500 software patents in order to opt for what they are calling “*collaborative innovation*.” This is a jump to the knowledge-economy logic. Companies like Microsoft, on the other hand, have not made the jump. As a special edition of Newsweek[[32]](#footnote-32) noted in 2006, “This [debate on ‘open source’ or not] is the religious war that is going to dominate the tech world for the next couple of years, if not longer.”Some businesses, like Microsoft, are more inclined to keep the industrial logic of patenting, controlling, and not sharing. From this point of view, they are still on the industrial curve. IBM’s move seems to indicate that it is jumping directly to the new, knowledge-society curve full speed.

 It will be very interesting to see how things evolve.

 Beyond IBM, however, the business world in general is moving toward the new curve. Many consultants around the world are actively busy in this transition management toward the knowledge society. And those companies are represented by the horizontal arrow in Figure 2. Currently, about 10–20% businesses are entirely in the knowledge society. They are those that have understood the new vision and enacted the management change are represented by the rightmost curve on the figure (the knowledge society). They already are in the new world, but the media rarely speak to or about them, even though they are ones creating employment.

 We do not yet see an equivalent horizontal movement in politics or in civil society. Certainly, there are some important people here and there or small groups that try to change politics—but not many. The green movements in Europe have tried to change politics, but they too operate in the modern mindset, which implies that they do not really understand or are able to implement the paradigm shift.

 And yet statistics show that hundreds of millions of people around the world are in the process of deeply changing their values. This brings us to what I call the “five levels of rebirth.”

### The five levels of rebirth

 Figure 3 mirrors the levels shown in Figure 1 to provides a description of the ongoing mutation that I have briefly alluded to above. In this figure, the five levels of death described in Part One are transformed into “five levels of rebirth.”



Figure 3: The five levels of rebirth in the knowledge society

 This time, we shall view the iceberg from the top down.

 On Level 5, we see the visible changes to the political and economic landscape is. Indeed, my hypothesis for Part Two of this book is that the new “knowledge society” is already here but that we do not see it as a new society; therefore, we do not employ its tools and concepts to help ourselves. *We already have the political and economic structures that will allow us to tackle the challenges of the 21st century. The knowledge society and its political correspondent, the transmodern structures of non-violence between States, of which the European Union is the first prototype, has already been functioning for fifty years. But we are unaware of the great innovative character of these structures.* Thus, the emerged, visible part of the iceberg already contains the structures of tomorrow, but we do not see them.

 It is on Level 4 that an important part of the knowledge society still remains invisible. What is invisible is the radically novel character of the new society. This novelty is yet invisible because people fail to see the post-industrial and post-capitalist character of this knowledge society. To do so requires a totally new vision of politics and the economy. The world’s citizens do not see it simply because nobody talks about it—neither in the media nor in the political or economic circles. It is simply too new and its rise is too rapid (see Chapters 7 and 8).

 Level 3 represents the idea that the knowledge society not centred on rationality—and on the left side of the brain. It is no longer a “modern” society, even though many of its actors actually try to make it function according to modern schemes and industrial economic standards, because in order to produce knowledge, one needs creative individuals who are well connected in energy-creating networks. Thus, the knowledge society, which creates meaningful knowledge will tend to graft itself naturally to a positive vision of the future and, thus, to a transmodern (and planetary) vision that keeps in sight the future of humankind and focuses its energy on this new and open horizon (see Chapter 9). Thus, the knowledge society is not at all “modern,” which renders it even more mysterious, interesting and attractive, but rather impenetrable for some.

 Level 2 represents the fact that this knowledge society cannot function in a martial and patriarchal environment. It needs a non-violent environment and approach, even a non-violent energy, which can facilitate and enable networks of exchanges and interactions. This sort of novel thinking (and climate) is already apparent in some businesses that work very well in the knowledge production. In later chapters, I shall show that this new knowledge society is also rediscovering an ancient sacred thing that has been buried in our collective subconscious for thousand of years—the sacred way of reconnecting to the cosmos and to nature, of which we are an active part. This new vision of a “horizontal” sacred way of reconnection might offer a new global meaning for artistic and cultural creation, but also for intellectual and scientific creation, in interaction with art and culture (see Chapter 10).

 Finally, Level 1 illustrates that this knowledge society favours life-affirming values—in particular with regard to its responsibilities toward the future and the new generations. This society gives itself a new global meaning and categorically refuses the impulse of death, which is presently so strong everywhere, especially in the West. By doing so, it responds to the hidden desires of hundred millions of citizens around the world who feel their values quietly changing (see Chapter 11).

## CHAPTER 7: THE KNOWLEDGE SOCIETY—A POSITIVE SCENARIO

 In this chapter, I will demonstrate the astounding result that this knowledge society I speak of already strongly contributes to shape and model the contemporary civilization in a way that is not recognised by the most citizens. The underlying structure of civilization is changing because the means of production is changing.

 The sociologist Karl Marx[[33]](#footnote-33) was the first to show the *importance of the production tool for society’s architecture*. When the tool of production is changed, all production relations are transformed, and the relationships between human beings changes in depth. Ultimately, it is the vision (the ”Weltanshaaung” or “paradigm”) that is changed, and the basic values and the societal structures are transformed.

 At the end of the Middle Ages—the beginning of the modern industrial era—when society moved from the agrarian production tool (earth and agrarian technologies) to the industrial production tool (machines, technology, and capital), the whole horizon of values was toppled over, including the relationship to time, space, and the divine.

### A sharp transformation

 Peter Drucker was one of the first writers with the courage to question the validity of capitalism in the knowledge society in his very famous book *Post-capitalist Society*. The book begins with this powerful passage[[34]](#footnote-34):

“Every few hundred years in Western History, there occurs a sharp transformation… Within a few short decades, society rearranges itself—its worldview; its basic values; its social and political structures, its arts, its key institutions. Fifty years later, there is a new world. And the people born then cannot even imagine the world in which their grandparents lived and into which their parents were born.

We are currently living through such a transformation. It is creating the post-capitalist society, which is the subject of this book.” (p. 1)

 He also says:

“…We are far enough advanced into the new post-capitalist society to review and revise the social, economic, and political history of the Age of Capitalism and of the nation-state. …The one thing we can be sure of is that the world that will emerge from the present rearrangements of values, beliefs, social and economic structures, of political concepts and systems, indeed of worldviews, will be different from anything anyone today imagines. In some areas—and especially in society and its structure—basic shifts have already happened. That the new society will be both a non-socialist and a post-capitalist society is practically certain. And it is certain also that its primary resource will be knowledge.” (p. 4)

### A new production tool

Now, before our eyes, the rapid replacement of the industrial tool by a new one is occurring. The traditional “factors of production”—land (that is, natural resources), labour, and capital—have not disappeared, but they have become secondary. They can be obtained easily as long as there is knowledge. And knowledge in this new sense means knowledge as a utility—as the means to obtain social and economic results.

 These developments, whether desirable or not, are responses to an irreversible change. Knowledge is now applied to knowledge. Supplying knowledge to find out how existing knowledge can best be applied to produce results is, in effect, what we mean by management. But knowledge is now also being applied systematically and purposefully to define what *new* knowledge is needed, whether it is feasible, and what has to be done to make knowledge effective. It is being applied, in other words to systematic innovation*[[35]](#footnote-35)*. As Drucker says,

“That knowledge has become the resource rather than a resource, is what makes our society “post-capitalist.” This fact changes—fundamentally—the structure of society. It creates new social and economic dynamics. It creates new politics.” (p. 45)

### A knowledge market

 Drucker explains his view further.

“The economy will, to be sure, remain a market economy, and a worldwide one. It will reach even further than did the world market economy before World War I, when there were no “planned economies” and no “Socialist” countries. Criticism of the market as organizer of economic activity goes back all the way to Aristotle. Most of the charges against it are well founded[[36]](#footnote-36). But as no less than Karl Marx pointed out more than hundred years ago, the market, for all its imperfections, is still vastly superior to all other ways of organizing economic activity—something that the last forty years have amply proven. What makes the market superior is precisely that it organizes economic activity around information. But while the world economy will remain a market economy and retain the market institutions, its substance has been radically changed. If it is still ’capitalist,’ it is now dominated by ’information capitalism.’” (pp. 181-182)

### Looking for knowledge economics

 Drucker was also, together with Harlan Cleveland, among the first to ask clearly for a new economic approach of “knowledge economics.”

“How knowledge behaves as an economic resource, we do not yet fully understand; we have not had enough experience to formulate a theory and to test it. We can only say so far that we need such a theory. We need an economic theory that puts knowledge into the centre of the wealth-production process. Such a theory alone can explain the present economy. It alone can explain economic growth. It alone can explain innovation… So far, there are no signs of an Adam Smith or a David Ricardo of knowledge.”

 For some Silicon Valley observers[[37]](#footnote-37), the American economy could already be immersed more than 70% in the knowledge society. Clearly, the knowledge society infiltrates itself more and more to the heart itself of traditional industrial and agricultural activities by being stocked and managed by small computers doing an enormous work.

 A recent report done for the European Council of Ministers (Secretaries) shows that a minimum of 40% of the European Union economy already is in the non-material, in the knowledge society[[38]](#footnote-38). This estimate might be very low—some believe it is the range of 60–70%.

 There we are.

 Let us recall that in the agrarian society, power was tied to possession of land. Whoever did not own land was a peasant, a “serf”[[39]](#footnote-39), and did not even have a name. The nobility that had land possessions bore the name, and its power arose from the fact that it provided food and livelihood to the population. The problem was that it always needed to acquire more land to maintain its power, leading to wars, invasions, and conquests. The science of economics did not exist, because the management of the land and wealth was assumed by the political or by the religious authorities, when they were in power. It was not left to a class of intellectuals like today.

 When the industrial society appeared, power progressively moved toward those who succeeded in assembling capital and innovative technology. The agrarian work force—that is, farmers—was required to adapt, more or less harshly, to the logic of the industrial machine. Those of nobility who did not understand his change of power likely remained in their splendid castles, well-off but marginalised.

 Today, a similar phenomenon is occurring. Indeed, the industrial and agricultural machine is still producing, more and more cheaply than ever before, but it requires less and less manpower to do so. At the beginning of the 20th century, agriculture used 87% of the manpower in Europe. Today, that number is about 4%. A similar evolution can be expected for industrial employment. It will shrink as robots replace workers. Even China has recently reduced its workforce by 15% by replacing it with machines.

 The trend is the same all over the world—as Jeremy Rifkin showed very well.[[40]](#footnote-40)

 The major political problem accompanying this change is that, if the agrarian and the industrial sectors cannot provide more than 20–30% employment at the most (along with 30% in the services sector), what can be done with the rest of the population, particularly with those who are not qualified for other types of jobs? That is the very difficult question, which confronts the politicians all over the world.

 That is why the European Chiefs of States are insisting on implementation of the Lisbon strategy and the entrance in the knowledge society. It is the only hope. But that supposes a rather radical redefinition of our societies. And that is the pinch point.

 This change in the production tool contained in the advancement toward the knowledge society leads to fundamental changes in the nature of power, trade, economy, money, and *management.* But with it also comes mutations in the concepts of patents, work, justice, sustainability, ecologic durability, education, and culture—that is, in society itself.

 Finalities themselves are changing, evolving toward *something else*. An important trend of centring again toward human is developing becoming apparent at all levels. A centring, however, which could easily become perverted by means of sophisticated manipulation, as I shall show in the negative scenario presented in Chapter 8.

 To summarise the nature of the transition from the industrial society to the knowledge society, let me first define a few terms.

1. ***Data*** are pieces of raw information, as they arrive in our mailbox in the morning, or on the Internet. The problem with the data we typically receive is that they are too many (overabundant), and they are not sorted.
2. ***Information*** is sorted data. The sorting can be done mechanically—for example, by Google, postal employees, or your secretary (if you are fortunate enough to have one).
3. ***Knowledge*** is data that has been creatively sorted and, by careful reflection, given value or a set of values. The reflection is carried out in the human brain and cannot be mechanised. *Knowledge always leads to action.*
4. ***Wisdom*** is the ability to make decisions with maximum concern for the common good, including that of future generations, and social cohesion.

Using these terms, I have summarised the transition as shown in Table 2.

Table 2: The transition from industrial to knowledge society

|  | INDUSTRIAL SOCIETY | KNOWLEDGESOCIETY |
| --- | --- | --- |
|  |  | POSITIVESCENARIO | NEGATIVE SCENARIO |
| POWER | Capital +new technology + patents | Human person is creative if valued and in networks | Subtle manipulation of human brain or possible replacement by computers |
| PYRAMIDS VS. NETWORKS | Industrial structures are pyramidal | Knowledge can only be created in networks | Tries to maintain pyramids of power at all costs |
| LEADERSHIP ROLE | Command, control, and conquer | Enable human creativity in networks | Manipulate (subtly) |
| SECRECY VS. OPENNESS | Business + defence = based on secrecy and patents | Open sources, no patents, free sharing of knowledge | Closed systems capable of controlling in subtle ways |
| MANAGEMENT | Centred on machines and their logic.Taylorism: Humans must adapt to machines | Centred on humans = capitalMachines must adapt to Humans | Manipulation of human mind ...orHumans replaced by computers |
| TRADE AND COMPETITION | “Free Trade” (existing norm) | “Free sharing of Knowledge” (new norm);Cooperation and collaboration in networks | Monopolisation of knowledge and information |
| CREATION OF ECONOMIC VALUE  | Value is added to the object (from steel to automobile)  | Knowledge is applied to knowledge in order to create new *knowledge* leading to *action* | Human mind is manipulated and made submissive |
| MEASURE OF VALUE | *Quantitative* measures and *tangible* assets | *Qualitative* measures of *intangible* assets | Reduction of the qualitative to quantitative |
| DEFINITION OF ECONOMY | Manages the ownership of capital and technology | Manages Human capital and creativity for the common good | Manages humans to make them subservient to machines |
| DEFINITION OF MONEY | Exclusive and accumulative concept = created by banks | More-and-more symbolic conceptCreated by citizens | Manipulation of symbols |
| DEFINITION OF WORK | One single concept for creativity, social insertion, dignity, feeding family | New organisation of values; everyone creates his/her job; end of industrial jobs | Old employment policies increase the problem of employment |
| SOCIAL INCLUSION | Social *exclusion* is unavoidable | Social *inclusion* increases the level of creativity | *Pseudo-inclusion* is worsening exclusion |
| EDUCATION | Decreases creativity and adapts to machine | Increases creativity and mastering of machines; new humanism | Manipulation through school system |
| NEW ROLE OF CULTURE | Culture has peripheral role | Central role of culture = root of all creativity | Manipulation of the souls of cultures |
| DEFINITION OF PROGRESS | Quantitative and unsustainable | *Sustainable because it is qualitative* | *Quantitative remains the norm;* not sustainable  |
| SOCIETY GOALS  | Produce and sell a maximum number of cheap objects  | Promote human cultural an spiritual progress | Enhance dualisation of society; *not sustainable* |
| SUSTAINBILITY | Unable to achieve a positive footprint | Able to achieve positive footprint | Not really interested by the subject |

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### The knowledge society—a new post-capitalistic logic

 Our economy is radically changing. Peter Drucker is right—we no longer are in the capitalist and industrial logic. Human beings, referred to in the new management circles as “human capital,” are becoming important again, at least in the positive scenario. The machine becomes secondary and is put into the service of humans. We see a possible rising again of humanism in the heart of business.

 Is it not incredible news for industrial ears?

 And look at the new strategic approach of business. It refuses warlike strategies and chooses instead to employ new “win-win” strategies. And yesterday’s rivals start sharing the knowledge in networks and in “communities of practice.” In doing so, they shift away from the warlike values of patriarchy. The whole relationship to violence (patriarchal) and exclusion is completely reversed.

 And we enter another world.

 But before considering the details of this new vision of economy, let’s look at a concrete example of a business that functions in this new vision of the knowledge society.

### ASKO—Management of the website of the European Commission.

 Consider a company called ASKO, which was recently created with very little initial money. It was performing very well in the construction and management of Internet websites for large businesses and institutions when, a few years ago, it obtained a managing contract from the European Commission. When it received the contract, the value of its stock shot up 75%.

 The contract specified that each day all translations of all texts produced by the European Commission must be placed on the Web every day in all official languages of the Union and that the placement must be performed within 48 hours of production of the text and with an impeccable presentation,.

 The “factory” in this case is a set of computers and intellectuals who have one or two university diplomas and speak three or four languages fluently. The role of financial capital and technology is 20% at the most. The remainder is human and intellectual capital, which produces knowledge from knowledge.

 The director of the company was aware that his function is not one of “conquest, command, and control.” It was simply not possible to control the translators of Greek, Finnish, Slovenian, Hungarian, etc. Instead, the director has six basic functions:

1. *Care for the production tool* The director must take care of the intellectuals who do the work and who are more competent than he is in their respective spheres—namely, the languages that they are translating. They must enjoy their work environment and want to keep working for the firm. In brief, he must motivate them to return the next morning with their production tool, their intelligence.
2. *Control the work quality.*
 He must control work quality. But how? He is incapable of knowing all languages. To accomplish the task, he put his team members in touch with a *network of people outside his organization* who have written speeches, are responsible for official translating systems, and/or are ambassadors or associated with political parties, trade unions, media etc. By doing so for each translator (and each language), he created a new system of quality control that manages itself by means of linguistic networks. All of the Greeks inside the Greek network, for example, want the Greek text to be perfect—because it is dangerous for a political debate to be based on inaccurate text.
3. Make sure that good communication exists within the business and with the outside—that is, with the other translators of other languages.
 If there is a problem with one language, it is very possible that some, and perhaps all other languages, have the same problem. It is absolutely indispensable, therefore, that the politic of translation be harmonious and that each translator be in good standing with the corresponding Commission cabinet members and with those producing the documents.
4. *Watch over the human capital.* He must provide them with possibilities for continued education—meetings, trips, contacts, etc.
5. *Watch over the non-material value of the business.* The quality of the surroundings, the staff relations, the social environment of the business must be good.
6. *Attend to the career plan of each person*.
 His work in the business is part of a personal career plan …within the business itself… and not somewhere else.

 This type of management represents a complete departure from the norm… but the story is not finished.

 The director of ASKO was offered millions of euros to sell his business. He accepted. The next day, the new director (European) arrived and began functioning along the classic model of industrial management of “command and control”—barking orders. Two days later, part of the staff resigned. One week later, the Commission contract was suspended and the stock crashed!

 Under pressure to fix the problem, the new director rehired the previous director who accepted to come back, but only with higher pay! The contract with the Commission was resumed, and the stock price rose again.

 This is an excellent example of the transition from the industrial society management to the knowledge society one. It illustrates that one cannot act like an “industrial” business executive in a knowledge business. Those who ignore such advice and do not understand the change must beware! This seems to me the clearest example of management change in the knowledge society.

### The differences between the industrial and knowledge societies

 Many concrete differences between the industrial society and the knowledge society are obvious, but let’s examine them in greater detail. Specifically, let’s look at the differences with respect to the following subjects.

Power

Structure

The role of the CEO

Secrets… and patents

Management

Trade and sharing

Trade and competition

Creation of economic value

Measurement of value

Definition of “economy”

Symbolism of money

Definition of “work”

Social inclusion

Role of culture

Sustainability of progress

Sustainability among intangible assets

Society goals

#### Power

 We are currently looking at a progressive but fundamental toppling of the power. To realise this is not easy, at least as long as we were forever convinced that the power resides in possessing capital and technology. Today, this “evidence” is shaky. More and more, at least in innovative and growing sectors, human creativity in networks is becoming the key to success. Why otherwise talk of *“human capital* “—recognizing that the human, wrongly labelled as capital, cannot be managed in the same way as the financial capital?

 In the knowledge society, the challenge is to produce new knowledge by communicating and filtering, intelligently and creatively, data and information to produce knowledge. It is true that computers can facilitate this process, but the human individual contribution is central and indispensable. As much as man could be replaced by machine in the industrial society, here he becomes again absolutely indispensable. This transformation is so rapid and fundamental that it is difficult to notice.

 It is possible, however, to also envision using those new technologies to manipulate and domesticate the human brain—to begin with the feeblest and the poorest. This is the negative scenario that I will examine in Chapter 8.

#### Structure

Our current structures are almost all pyramidal, whether we realise it or not. We do not even pay attention to them anymore, they are so “normal.” We have been in patriarchal structures for thousands of years now and are not even conscious, anymore, that we are in them. And we only become aware of the fact when the need arises to create a new organization. Then we notice how many natural tendencies we still have toward the pyramid—at least men (in their great majority) do. But within the last few years, pyramidal structures have begun to show themselves as problematic—as much in business as in politics, international organizations, religions, trade-unions, NGOs, etc.

 The knowledge economy *cannot function in pyramids.* It requires flat network structures wherein information can move in all directions, because the new mechanisms of value creation require it. To produce new knowledge, one needs creative humans. And for them to remain creative, they need to be in a network where they can exchange knowledge and where interactions can take place from all sides and all directions. Through interaction, knowledge progresses and develops. There is no other way. We are at the heart of the mechanism of creation of value. Knowledge is like love. The more it is exchanged, the more it is received.

 The only really prosperous businesses that survived the financial shocks of the last few years are those that were transformed from pyramids to networks. It is for this reason that we are leaving the pyramidal society… silently but very quickly.

#### The role of the CEO

 In the industrial society, the CEO was the one who conquered new markets, commanded, and controlled. He was the unquestioned top of the pyramid.

 Now, a new type of CEO appears, as in the example of ASKO. This new CEO jealously cares for his new production tool—the human persons working with him. Thus, his emphasis is the complete opposite of the old type of CEO. Everything depends on the human mind, which is the only thing capable of applying knowledge to knowledge in order to create new knowledge. *Thus, the new CEO has completely reinvented his role.* He has had to become the one who makes sure that his staff, his new production tool, comes back to work the next day and does not go to a rival with all his implicit and explicit knowledge.

 The new CEO must also increase his staff’s creativity by introducing them to the “networks of excellence” and the “communities of practice” where knowledge is exchanged to create new knowledge. Thus, he helps the sharing of the network knowledge. He can also help networks develop an auto-control of the production quality of his staff—as in the above ASKO example, the head of a translating venture who involves all of the concerned users by creating a users-network around his staff.

 This type of CEO does not perform the same function as his predecessor. This new function is certainly not easier, but it is less violent and less patriarchal. There is still competition, but also collaboration in networks. Some writers are beginning to speak of “coopetition.”

 This no longer is the same world.

 The approach of the new CEO also is less and less “materialistic.” One sees the creation of associations like Business Spirit. There is now even a *Business Spirit Journal* online.

 And as much as the industrialist often was described as a warrior, the new businessman is not only the one stimulating network creativity, but also the one who breathes a good spirit into his business. Some are starting to conceive the role of this new businessman as a mission, a responsibility toward humankind. That is what appears as a trend, certainly minor, in respectable organizations of business leaders like the World Business Academy, which considers that profit is only the consequence of the way business exerts its responsibility toward the common good of humankind[[41]](#footnote-41).

 The World Business Academy helped set up the Cotrugli Business Academy in Zagreb, Croatia, of which I have been the dean since 2004. The academy is a new type of business school trying to address the change of the role of the businessman. Concretely, we offer our students in the Executive MBA Program a two-pronged approach. The first prong includes classical subjects, like accounting, business planning, organization and industrial management to prepare the students, some of whom may have known the communist era, to become familiar with the industrial economy in which they are immersed. But we also offer a second prong to prepare them to be this new type of manager in the knowledge society. The matter there is to perfect their human qualities, their internal alignment, to create in them a good spirit in business and to enable the creation of new knowledge networks. And the academy also shows them that it will be less and less possible to avoid taking care of the environment—and teaches them social inclusion. Corporate social responsibility (CSR) and sustainability become a *must* for them because they are more and more influencing the intangible assets of the companies.

The success of our academy has been striking—probably, because we address the real needs of business, and the silent expectations a majority of the younger generation.[[42]](#footnote-42)

#### Secrets… and patents

 The actual system of competition is based on the secret of manufacture. If somebody has the technology that the competitor does not know, the one who has the technology earns part of the market. Similarly if, during a war, one of the enemies owns a new weapon unknown to the adversary (whether gun powder or atomic bomb), he will have an advantage in battle. Is this not, in fact, one of the keys of the history of Western conquests in the world?

 However, as Harlan Cleveland[[43]](#footnote-43), statesman and member of the intellectual elite of the U.S., observed in 1985, the secret tends to disappear in the knowledge society because “information always leaks.” This means that secrecy will become less and less possible in the years ahead. As he wrote,

“Information is porous, transparent. It has an inherent tendency to leak. The more it leaks, the more we have, and the more of us have it. The straitjackets of government ‘classification,’ trade secrecy, intellectual propriety rights, and confidentiality of all kinds fit very loosely on this restless resource.”

 The consequence is that hierarchies based on exclusive ownership of knowledge and intellectual propriety are crumbling, quietly but rapidly. Harlan Cleveland and the World Academy of Art and Science, of which he was the president for years, announced the twilight of patents as long ago as 1990.

 In addition, public opinion appropriates to itself faster and faster that which just yesterday belonged to the world of “secrets.” The Internet has contributed greatly here, the most striking example being that of the Apple iPod® and the direct uploading of music through the Internet—with of all the resulting ownership fights. Another example is the battle of the Third World governments for the generic medicines that the pharmaceutical companies are quietly in the process of losing step by step.

 Thus it is as if a virtuous circle of sharing and transparency has established itself thanks to the opening and the sharing of knowledge. This new open logic seems to me the bearer of the future, but also of new conflicts between the old and the new vision. We alluded to this fight when we spoke about the debate between the “open-source” attitude expressed at IBM and the patenting attitude expressed at Microsoft.

 One must be careful to not underestimate those who will attempt everything to avoid a change of vision and preserve the priority of secrets and patents. There actually are important battles, on many fronts, to preserve the intellectual property of discoveries, music, artisanship, and art works in general. This is entirely understandable since artists also need to live. The way to remunerate knowledge may fundamentally change without us being able to say exactly how. And there is the problem. Nobody knows exactly how the change will affect such or such spheres of the industrial activity. Some will continue to reproduce the system and the *industrial approach* with all their strength, because they do not see the transition. One can understand this, even if this fight does not represent a probable way toward the future. Some will also find it “logical” to manipulate the human brain to subjugate it to the machine, and such logic will be considered creative in the sense of the industrial and mechanical logic of the 20th century. They will have, it seems, no ethical problems since in this “modern” and rational vision,“ all that is rational is scientific, thus acceptable, and beyond ethics.”

 We will come back to this in the next chapter on the negative scenario. It corresponds to the rightmost column in Table 2, above, and it is already at work everywhere.

 We are not very far from Orwellian scenarios.

#### Management

 Our collective subconscious tends to distrust the word “management.” It is afraid of human manipulation that might hide behind the word. Now, however, a spectacular turnaround of the management theories is under way. Peter Drucker, a pioneer and a respected authority on the matter, announces a refocusing of management toward the human in the post-capitalistic society. These are amazing words were written by somebody who is not susceptible to be targeted as a “leftist” or a visceral critic of capitalism. But, for him, it is no longer the machine that can dictate its logic to the human. On the contrary, the machines (computers) now must become the “human friendly” to be sold. In business schools, it is unusual to lecture on these new developments.

 Peter Drucker explains the definitions changes of management[[44]](#footnote-44) thus.

“When I first began to study management, during and immediately after World War II, a manager was defined as ’someone who is responsible for the work of subordinates.’ A manager in other words was a ’boss,’, and management was a rank of power. This is probably still the definition good many people have in mind when they speak of ’managers‘ and ’management.’ But by the early 1950s the definition of a manager changed into one who ’is responsible for the performance of people.’ Today, we know that that is too narrow a definition. The right definition of a manager is one who is ’responsible for the application and performance of knowledge.’ This change means that we now see knowledge as the essential resource. Land, labour, and capital are important chiefly as restraints. Without them, even knowledge cannot produce. Without them even management cannot perform. But where there is effective management, that is application of knowledge to knowledge, one can always obtain the other resources.”

 And he concludes with this sentence, which is like the summary of the book:

 “That knowledge has become the resource, rather than a resource, is what makes our society ‘post capitalist.’ This fact changes—fundamentally—the structure of society. It creates a new social and economic dynamic. It creates new politics.” (p. 45).

 To such sentiments, one often hears objections such as: “But all these businesses will disappear like in the crash of California,” and ”After all, this knowledge economy is like a bubble of soap that will burst at the first financial crisis.”

 Verna Allee is a friend of mine and works as a consultant. She lives in Martinez, California, on the other side of the hill, behind Berkeley. In 2004, she was asked to work on a very advanced research project building a roadmap to sustainable development in the knowledge economy[[45]](#footnote-45). This research project shows that the engine driving businesses toward sustainability is not only public opinion, but the growing importance of intangibles in businesses stock evaluation. Verna is also the first author in the world to have graphically described the intangibles in her most recent book, *The Future of Knowledge.* She works for many large businesses in the U.S. and knows very well those of Silicon Valley. She also works in Europe, namely in Norway and for the European Commission.

 In this context, she gave a lecture at the European Commission on the state of affairs of the businesses in Silicon Valley. In her lecture, she said that most businesses *did not understand the need to pass from the industrial to the knowledge society*. They simply kept their industrial vision, their pyramidal structure, and their traditional approach to profit, to customers, and to society. Only their products were becoming more and more non-material. *They all collapsed* in the “dot-com crash.”

 A small minority realised the need to change structure (from pyramid to network) and to transform their world vision. Thus, they included in their intangible network their customers, their suppliers, the public, the environment, and their society. They transformed themselves fundamentally and *survived the dot-com crash without problems*. That is a cruel fact.

 Her examples showed the danger of choosing the wrong kind of management.

#### Trade and sharing

 Trade, as we know it, is a recent notion. It is a transaction where one exchanges goods for money, period. Once the exchange has taken place, the transaction is considered ended. No follow-up is anticipated, except perhaps for another similar transaction at a later date. This perception of trade seems to us also eternal—since it is the only one that we have known, it is part of the way we view the world. But in the Middle Ages, *commercium* was a very different relation, much more comprehensive and rich. It was based mainly on exchange and gifting[[46]](#footnote-46). For example, if a farmer needed seeds, and his neighbour had some to spare, the neighbour might give some to the farmer in exchange of an object or money… or nothing at all. The farmer would then consider himself to *remain with a debt of honour.* It was understood that he would render a service to the neighbour, if needed. And he would make another gift at the right time, in return.

 Similarly, in the city market, some goods were exchanged for money, but there also was a lot of informal information and knowledge that was exchanged about things like family relations (sons and daughters to be wed), political news, and agricultural know-how. Thus, commercium comprised much more than merely money transactions. In fact, it is only when the industrial society appeared that *concept of trade shrank* to become “trade” as we know it now. And the notion of *reciprocal debt also disappeared and, with it, an extraordinary type of social cement.*

 In the industrial society, trade has become solely monetary. One gives goods in exchange for money. And the popular wisdom tells that it is impossible “to have the butter and the money paid for the butter.”

 In the knowledge society, on the other hand, if I give information to someone else, I do not lose it. My reward for doing so does not necessarily take the form of money, but the return of the information that comes back to me enriched with the creativity of the person to whom I gave it. It might well provide me with things that I did not know, thereby enriching me. That is why new businessmen insist so much on the sharing of network information.

 Thus, in the knowledge society there is a radical departure regarding the basis itself of the modern concept of trade. It is no longer a situation where I cannot, by definition, ever “have the butter and its money” but only lose what I exchange. In adopting the new concept of trade, we are returning to a logic of debt, exchange, and gifting as in the Middle Ages. This cannot be without consequence on the role of money in the world, because in the knowledge society, money no longer occupies the centre of the transaction. Transactions can occur without money. Without any doubt, this will result in a new definition of the role of money in tomorrow’s society. Some alternative money systems, like [www.favours.org](http://www.favours.org/), are built on the notion of exchange and gifting. But the more we progress in the description of the knowledge society, the more we shall see that it is built on exchange and gifting. Thus, it potentially is a more humane society.

 Nevertheless, capitalist trade concepts are embedded in us at such depth that we are not conscious of them. Thus, we keep on trying with great efforts to adapt the exchange of knowledge to “our” commercial rules, which are too narrow, like Procuste’s bed.

 Hundreds of researchers spend thousands of work hours trying to fuse the logic of knowledge with the modern capitalistic logic. Can their efforts carry the future? This is not at all evident.

 Why, otherwise, have others become conscious at the same time of the existence of a different logic? Why have some Silicon Valley firms made it a rule, an obligation, to circulate information, in order to share it? If a staff member keeps for himself some important piece of information more than 24 hours, he is fired! These firms understand that the added value of knowledge is obtained when it circulates. The more one shares knowledge, the more valuable the knowledge becomes. On the other hand, if knowledge remains secret, it loses value and the group creativity diminishes quickly. And, yet, we keep on cultivating secrecy.

 The exception, which confirms the rule, is paradoxically found in the field of defence. The Treaty on Conventional Forces in Europe is the first to have been based on a sharing of information. Each party has the right to send inspectors to the adversary who is obliged to accept them[[47]](#footnote-47). As such, it seems that it has tipped the global strategy in favour of the transmodern post-capitalistic logic. Yet, the Pentagon in Washington, D.C. is entrenched in the old model and cultivates new technologic secrets with the prospect (less hypothetical since the election of G.W. Bush) of a race on space strategic armaments. In 2007, the U.S. renounced this treaty altogether, and the Russians followed suit.

 What a pity. The treaty had represented a huge step forward in non-violence between States.

 Obviously, we are still living in the transition period between the two logics—the two societies—so that money today seems to keep an excessive importance. Nevertheless, this new subjacent logic is rising and grows quickly in some spheres. Quietly, it controls the economic power and marginalises, slowly but surely, the “industrial” trade. However, we do not yet have a theory on this “sharing economy.” Much sharing of knowledge occurs, but there is no real economic theory to show the way. We still are in the era of empirical attempts.

#### Trade and competition

 In the realm of trade and competition, one measures the change to the knowledge society even better. If one must put his staff in a network configuration to increase its capacity of knowledge creation, it is obvious that his relationship with his competitors is altered. A new rhetoric appears, no longer based on the military rhetoric of the battlefield, where one must kill the other to catch his parts of the market. More and more, a new logic appears which is less violent or non-violent. Patriarchal values and their jargon are left in the dust.

 In 1996 some authors began to speak of “coopetition”[[48]](#footnote-48), which combines “cooperation” and “competition.” But authors like Elisabeth Sathouris, in a more recent publication called *Earthdance*[[49]](#footnote-49), compares businesses with living organisms. And she observes that these organisms take an enormous leap in evolution when they move from *competition to collaboration*. In a mature living system, each party, entity or individual pursues its own interest in a manner that does not compromise the health of the group. Thus, there is collaboration that hurts neither the individual’s personal interests nor the network’s interest.

 Verna Allee[[50]](#footnote-50), in her excellent book explains how this collaboration functions in the midst of a value network.

“The first principle of a healthy network is that individual participants pursue negotiated self-interest with consideration of the health of the other levels of the system. The value network perspective and approach suggested in this book supports and encourages negotiated self-interest between all the participants, with careful consideration for the next level of holarchy—that of the value network itself. People will want others to succeed when they appreciate that their individual success is directly linked to the health and vitality of the entire network. In a successful network, everybody supports the success of others as well as themselves.”

 And she continues, regarding the absolute necessity of fairness in the network.

“Every participant in a value network needs to contribute and receive tangible and intangible value in a way that sustains both their own success and that of the value network as a whole…. When people feel they are being fairly rewarded for the value they contribute, they become willing to offer even more value… It is essential that everyone in the network operate with an ethic of giving and receiving value in a way that build good relationship and trust.” (p. 238.)

 Thus, we are entering a new logic which is no longer warlike or violent, but whose outlines are still unknown. We shall consider them later.

#### Creation of economic value and the new production tool—the human mind

 The heart of the economic engine of a society is the way it creates value. We have seen that this engine in the agrarian society is the *production of wheat or fruits, which* *issue from nature*. Man must farm but he cannot make grow. He can only ask Divinity for a favourable climate and wait.

 In the industrial society, man does not need Nature. He builds objects in the factory from raw materials. From a block of steel, he builds an automobile. *Value production consists in adding value to the object,* or in other words producing “added value.”

 The great political debates of the 20th century were about deciding who the added value belonged to. The left held that it belonged to the worker who, otherwise, “would become estranged of the fruit of his work,” whereas the right asserted that this added value should go to the entrepreneur.

 In the knowledge society, one produces value *by applying knowledge to* *knowledge*. And the value produced is knowledge, no longer value added to an object. It is, therefore, “*added, co-created value.”* And it is not possible to alienate workers from the fruit of their work, since knowledge remains in the brains and in the mind of the creators of this same knowledge. Indeed, *the human* *brain becomes the new tool of production.*

 Moreover, knowledge becomes *the* resource, so that it allows the worker to acquire all the goods that he or she needs.

#### Measurement of value

 We find ourselves immediately in an incredible situation—the stock exchange is modifying in depth how it quotes businesses. Before, brokers were taking into account what is called in jargon “business *tangible* assets”—their bank holdings, their debts, their stock value, their real estate interests. In brief, businesses were measured on their financial vested interests, and it gave a past-oriented image, because it was like scanning the past and the present of the enterprise.

 For the last few years, however, stock brokers have started to scrutinise the “*intangible* assets” of a business. Why? Because they are more and more conscious that we are shifting to the knowledge society. And since today it is estimated that at least 45% of the European economy is already non-materialised (made intangible), they realise that intangible assets have to be counted for 45% at a minimum. This concerns not only the new knowledge businesses; it affects *all* businesses.

 In brief, the stock market is becoming more and more a strong vector of change. It seems to be pushing more and more businesses toward the new logic and the knowledge society. How does this all function? The new measuring tools are still at their outset and, thus, many brokers confess that they use their intuition to measure the intangible assets. But what are these intangible assets? A partial list is as follows.

1. Assets linked to the internal structure of the business:

Research and development

Internal structures of the business

The strategic plan of the business

The internal communication inside the company

The relationship with the staff and the response of the latter

How the business manages conflicts

The software of internal management, etc.

The know-how of the business and its implicit knowledge

The structure of the business, pyramid or network

The balance of its strategy (“balanced scorecards”, for instance)

1. Assets linked to individual competencies:

Diplomas, education, experience of the staff

The implicit know-how of each staff member and worker

How the business capitalises on the implicit knowledge of its members (see Nonaka[[51]](#footnote-51))

1. Assets linked to the business external structure:

The reputation, the public trust in the business

The trust in the product (Iliouchine or Airbus?)

The brand (for example, Coca Cola)

Relationship with suppliers and consumers

*Relationship with consumers*

*Relationship with the civil society*

*Relationship with the environment*

*Relationship with our collective future*

*The quality of the “network values” to which the business participates*

 As a matter of fact, the last five items (in italics) are becoming increasingly important year after year. They could become dominant in a few years.

 A recent series of minor crises for the Coca-Cola Company illustrates this matter. The crises occurred most notably in Belgium, where a few children became sick after drinking cans of Coca-Cola. Coca-Cola managed this crisis as if it were a crisis of a product. They did not realise that Coca-cola is only 10% of brown water with sugar and 90% intangible assets. So they recalled millions of cans from the Belgian market only to turn around and *send them to the African market*, where they produced no harm.

 When the transfer was discovered by the newspapers, it produced a scandal, naturally.

 Materially, this might be considered good “management” because it spared much money and did not appear to have caused any problem in Africa. But, an intangible image is not managed as a material product, and the CEO did not understand this.

 For many, the Coca-Cola brand represents a way to participate for a few moments in the “American dream”—a worldwide symbol of liberty, equality of opportunities, ability to become prosperous no matter one’s race, sex, culture, or religion. It is a very strong and mobilizing dream, which still fascinates millions of people. But those who buy the American dream of equality and justice cannot accept a cynical behaviour that gives the impression of scoffing at the dignity of another race on earth, even if it were not the case.

 To manage an intangible image, one must take into account a content, a meaning. For example, Coca-Cola could have invested in a free aid to poor schools in Belgium and, thus, give back to the business a positive image tied to the values of the brand—social promotion, equality of cultures, equality of chances.

 This example shows us that, even in businesses that *a priori* appear distant from knowledge production, intangible assets are increasingly important. The consequence was that Coca-Cola stock lost 40% of its value on the world market, and forced its CEO to resign. Thereafter, when a new CEO was chosen, the stock bounced back. The sanctions against the top management have been terrible.

 Ten years ago, the outcome might have been different.

#### Definition of “economy”

 “Economy,” in its present form, was invented to establish management standards for the new power emerging form the industrial society—capital and private property. What exactly was the economic system in the Middle Ages? One does not precisely know with which economic system the cathedrals were built. Our current economic system, therefore, is rather recent. It is certainly not “eternal.”

 In the new knowledge society, the power is displaced, and trade is redefined in an exchange system, which works in a different way. Thus, we likely are moving toward a new approach to economics, which will be transdisciplinary, more open to qualitative analysis and to constant dialogue with the civil society. This new economic logic might be inclusive and might have to respect the environment absolutely.

 Thus, one should not oppose industrial economics, but rather one should urgently start writing new chapters on the knowledge economy, and on intangibles.

#### Symbolism of money

 Ever since President Nixon cut the tie between paper money and gold, the definition of money has become more and more floating. It now depends on the value judgment that the “market” bears on a country. The symbolic dimension becomes preponderant.

 Thus, we have left a period of stability and entered a period of great instability, which might lead us to important transformations of our money. This trend might even be enhanced by the appearance of electronic monies, themselves more and more virtual. What are the rules and standards of this new logic? What are the dangers? We don’t know.

 At the same time, a rash of so-called ”alternative“ monies with a different logic marks the period. Are they not better adapted to the society of tomorrow? For example, let us consider the mileage points that the airlines give to customers for flying on the airlines and for some other activities. With those points, the companies create money, giving it to travellers who, in turn, can exchange it for products or for travel. This is “alternative money” since it is, no longer, created by the banks. We no longer are in the bank money system, which is the dominant system. We are in a no-man’s land, an undefined grey zone. In Belgium, an alternative money system for small and medium enterprises has existed for years and functions very well. It is called RES[[52]](#footnote-52) and continues to develop rather rapidly.

 Thus, it is possible that the knowledge society endows itself progressively with a different monetary system. There is some evidence in support of this idea. Indeed, the knowledge society is rediscovering the social benefits of exchanges and gifts, because this is the way to increase knowledge. It is quite possible that money follows the same path, and becomes also centred on those traditional values that were the thread of exchanges for thousands of years.

 The alternative money systems move precisely in that direction, because my account is stocked when I render services. The more services I render, or interactions I have, the more alternative euros I accumulate in my account. Thus, this money measures my capacity of exchange, of gift and of network interaction. Isn’t this the money that is needed in the knowledge society?

#### Definition of “work”

 The concept of “work” in effect today was entirely made up by the industrial society. Not that one did not work before, but the industrial society assembled, in a unique concept of “salaried work,” values as diverse as personal growth, social insertion, family economic well being, pension, social status, etc. So that, if someone loses his work in the industrial society, he loses all those values at once and, thereby, suffers an enormous amount of damage, possibly even incommensurable. In the future, it is entirely possible that these values will be again distributed according to different concepts and functions, and that the concept of “salaried work” will be considerably transformed.

 Actually, the younger generation is more and more in need “*to invent its work—to create it*” in the knowledge economy. It often is not a classic salaried work anymore. Because the industrial structures very rarely offer new work positions. Rather, they try to thin the work force more and more and replace it by robots.

 Thus, it is probable that the knowledge society will invent a new concept of work.

#### Social inclusion

 One of the major characteristics of knowledge production is that it enriches itself through information sharing. Knowledge works like human love. The more one gives, the more one receives. And what is given is not lost. The more that knowledge includes different people in the sharing, the more the network becomes diverse and inclusive, and the more it enriches itself. Consequently, *we really find ourselves in front of an inclusive logic*. Nevertheless, we are still so strongly impregnated by our dominant industrial creed of exclusive economy that we have great difficulty to see the new inclusive logic appear.

 Fortunately, I have excellent news on this front—it is possible to orient this new knowledge society toward an inclusive logic. One may consider that tomorrow’s business leader might want to hire non-qualified individuals on his staff in order to increase the potential for creativity and for implicit knowledge in his business.

 In a meeting of the Club of Rome in Brussels sometime back, Mr. Rinaldo Brutoco, president of the World Business Academy, told the story of an important U.S. men’s suit factory called Men’s Wearhouse, of which he is member of the board.

 The philosophy of this factory is rather exceptional and ahead of its time. It values human resources, creativity, and staff responsibility at the maximum, and gives maximum employment stability, which results in a lowering of capital revenues to a stable level of 3%. After all, this is an intelligent choice because the reason for me to choose between two men stores will be how I am greeted and helped in my selection of clothes.

 The New York Stock Exchange initially was cool toward the stock as if it were without value. Its yield (3%) was considered unacceptable. But after a few years, it became obvious that it was one of the only viable businesses in the sector which, moreover, produced a stable income—whereas, most other stores were going through a serious crisis or going bankrupt, at great loss for the shareholders. The retirement funds were the first to discover the stock, and heavily invested in it. The stock speculators followed them.

 Within a few years, this new “social” concept of business was accepted at the New York Stock Exchange. This new vision was not only profitable, but one of the only exits out of the full blown credibility and identity crisis which causes havoc among American businesses[[53]](#footnote-53).

 Similarly, in the 1950s, the whole of the Colgate board was in deep reflection because they had problems with a pink soap they were selling as toothpaste. And after many hours of discussion, they were going nowhere, unable to decide what to do? Suddenly, the Spanish-speaking cleaning lady, who was finishing cleaning the meeting room, asked if she could say a word. The board chairman gave her the floor for one minute, which she took to ask, ”*Why are you not putting the soap in a tube, people will prefer this.”* Doing so became the path to world success for Colgate.

 People with Ph.D.s are not always very creative. Sometimes they need other people with a lot of implicit knowledge that they can use and spread in the network.

#### Education

 In the industrial society, the creativity of children has been diminished in order to “adapt” them and insert them in the logic of a society dominated by the machine. According to some studies, in our present system, the creative potential of a child is reduced by a factor of 20 during the first years of school.

 In the knowledge society, on the other hand, one must favour to the maximum human creativity since it is the central resource. This implies a re-invention of education. This will be an exciting endeavour, but it will require an excellent analysis of ongoing changes, which is rarely done.

 In his masterpiece, *The Post-capitalist Society*, Peter Drucker explains that future education will again form humanists—but humanists who are not solely fascinated by the past, but open to the present and the future challenges. Thus, we are on the brink of a complete revolution in education, equivalent to the one done by Comenius at the end of the Middle Ages, when he created the “modern” school. Drucker also outlines some characteristics of tomorrow’s school[[54]](#footnote-54) (p.198):

1. “It must provide universal literacy of a high order—well beyond what literacy means today.
2. It must imbue students on all levels and of all ages with the discipline to continue learning.
3. It must be open system, accessible both to highly educated people and to people who for whatever reason did not gain access to advanced education in their early years.
4. It has to impart knowledge both as substance and as process—what the Germans differentiate as Wissen and Können.
5. Schooling can no longer be a monopoly of the schools. Education in the post-capitalist society must permeate the entire society. Employing organizations of all kinds—business, government agencies, non-profits—must become institutions of learning and teaching as well. Schools increasingly must work in partnership with employers and employing organizations.”

 Once again, Drucker is ahead of us all in this visionary text. We are going slowly, very slowly in the direction he is indicating.

#### Role of culture

 In the present society, culture is, unfortunately, often considered by political groups like the “cherry on the cake,” a luxury rather than a central value. In the future, this central place might be offered to culture in a society dedicated to favour creativity at all costs. Why? Because, if you cut people off from their culture, you eventually kill the roots of their creativity, and the creativity will slowly wilt in conformity. This would negate the benefits of the knowledge society.

 Thus, we are also possibly on the verge of a repositioning of culture as it comes back to the heart of the knowledge society. In this new vision, *culture becomes one of the main* *ingredients of the production tool*. Once again, this is difficult to believe, as it is so different from the actual marginalisation of culture, and its submission to strictly commercial criteria.

#### Sustainability of progress

 In the knowledge society, *progress* is no longer measured as a quantity, because of an almost infinite quantity of information. There is *too much information* and not enough knowledge and wisdom. Thus, in the knowledge society, the concept of progress becomes *qualitative.* The access to quality knowledge needed in business or elsewhere measures progress.

 Thus, we might be tilting from a quantitative concept, which has ruled our civilization for several centuries, toward a *totally new concept of progress centred on quality.*

 The excellent news is that this basic concept of our new world knowledge society is totally compatible with genuine *sustainability*. Indeed, the problem with the quantitative concept of progress is that it was unwittingly inciting all of us to produce more objects, to pollute ever more without ever stopping. A qualitative concept, on the contrary, pushes us toward quality, and no longer toward quantity. Thus, the fundamental goals of our world society are changing. Tomorrow’s progress will be measured by the quality of knowledge, but also by the quality of life, and that of our children.

 And this new concept of progress is working underground in our societies so that progress today means *that there is no progress anymore if humankind is not moving toward a sustainable future.* In a few years, we have already moved away from “*the bigger the better”* approach, which underlie the ideology of the *quantitative growth* economy. We *already* are beyond the quantitative concept of progress, which has been a huge block preventing humankind’s move toward a sustainable future.

#### Sustainability among intangible assets

 As seen in the Coca-Cola example described above, as well as other examples, an important evolution is taking place… and very quickly. More and more, intangible assets are becoming important. More and more, the responsibility of businesses toward the environment and the social inclusion is being talked about publicly. *The relative importance of the environmental and social sustainability increases enormously among the intangible assets—*so much so, in fact, that we are moving toward a situation where each business, municipality, region, and country will, more and more, be required to convincingly show the public that it contributes to the solution of the social and environmental problems, unlike those who only exacerbate them. This evolution perhaps is on the way to transform the world economy more rapidly than all the great international conferences, which are very useful in other respect.

 A few years ago, I had the opportunity and the pleasure to meet Ray C. Anderson, Chairman and CEO of Interface, a carpet factory in the U.S. He told me the following story at a meeting at the Esalen Institute in California.

 One day, a customer abruptly addressed him, as director, and accused him of being a polluter and accelerating the climatic change on earth. Ray started to think. This customer was right, and it was inexcusable that the hundreds factories of his company were dumping tons of toxic products in nature (rivers and atmosphere). In fact, carpet manufacturing uses a great deal of acids and other chemicals to treat tropical fibres, their raw material.

 He decided to completely change the entire production method of his carpets in all the factories of the group. It represented a huge investment and the business went into debt. Thankfully, the board of directors supported his audacious strategic choice, without too many problems. Within a few years, even though the financial situation of the group was still fragile, it became number one in its industry, and its stock rose to an historical high. Why? How? Because it was the first carpet on the market the production of which was designed to both respect the environment and sell at a competitive price. Thus, buyers would choose Interface, since it was the same price as other carpets the production of which polluted the environment.

 The analysis of his situation, according to the knowledge economy, is simple. Interface’s tangible assets were still very weak because its debt. But suddenly the value of its *intangible assets* increased so much that its shares became star on the New York Stock Exchange. Thus, this was the very interesting case of an “industrial” business, which becomes the king of the market even though it is deeply in debt. We are no longer in the industrial logic. Due to their intangible value, the shares increased enormously, even though the tangible assets were still weak or even negative. The “intangible assets” made the whole difference. As seen, the intangible value is tied to the respect of the environment. *The environmental dimension really becomes a preponderant intangible value.* Ray Anderson’s[[55]](#footnote-55) book gives more information on this story.

#### Society goals

 As seen above, this underground transformation of the concept of progress is already changing the goals of our world society. Indeed, it might be possible to fundamentally redefine the goals of our society. Society, then, could forgo its purely materialistic goal of producing more cheap objects, and decide to *promote the development of human potential* in the largest possible sense, in harmony with the cosmos and including the spiritual dimension. A vast program!

 The conflict between the industrial and knowledge scenarios will essentially be a conflict of visions, a conflict with the goals of tomorrow’s society, and I will address this in the next following chapter.

### Conclusions from Chapter 7

 In this chapter, I have outlined a global vision of all the elements constituting this new knowledge society. It is not easy to analyse the important changes listed here, because we are hypnotised by the industrial mentality, which is like a set of blinders forcing us to look only one way. It might be frightening to abandon the familiar concepts of the industrial society, and we ask might ourselves whether there really is a way out of the industrial vision of the market. It can seem difficult to believe.

 Nevertheless, more and more indices are telling us without ambiguity that we are there already. It is as if we were all asleep, unwilling or incapable of waking up.

## CHAPTER 8: THE KNOWLEDGE SOCIETY—A NEGATIVE SCENARIO

 In the previous chapter, we examined the positive scenario of the knowledge society in detail. We also showed that there are important indices indicating that this scenario is silently emerging in the present-day world. But, there is yet another column in Table 2, above. The rightmost column of that table represents a negative scenario. In this chapter, I will show how the scenario is already developing and is present worldwide.

 This negative scenario is really very easy to understand. It starts from the idea that there is *no paradigm change*—that everything continues as before… “business as usual” in the world… that the world maintains, in businesses and in society, the vision and the behaviour of the industrial society and economy.

 In short, the negative scenario arises from the case in which there is no transition toward the knowledge society. The industrial society simply continues with new, more-powerful tools, many of them electronic tools, called Information and Communication Technology (ICT). Thus, industrial strategies hold their places as the most common strategies employed in the world. More capital and more technology, protected by patents, continue to be needed. The competitive nature of business is strongly reaffirmed as a necessity and no “futurists” talking about networks and collaboration are listened to. New concepts, such as that of the knowledge society, are considered hazy, even dangerous, because they might endanger the structures of competition and industrial competitiveness. (And it is true that some network collaboration practices endanger the industrial strategies.)

### What do to about the environment?

 In the world as described above, it is neither necessary nor urgent to occupy oneself with concerns for the environment. First, since one’s competitors don’t worry about such concerns, doing so will result in a loss of advantage in comparison with them. Second, to care for sustainability is considered by “industrial” economists as a *cost* to be *subtracted from profit*. Thus, there is competition between the demands of competitiveness and those of environmental respect. The environment loses out in terms of investment. (In technical terms, this is called a “trade- off,” and no one thinks in terms of a win-win scenario—only a win-lose scenario).

 In brief, one is content merely with great statements about the environment—rather than action—because one does not want to do much more. All this is perfectly logical to those in the modern, patriarchal society and in the industrial society.

 This way of thinking, which is comprehensible, has already influenced the revision of the Lisbon strategy on the knowledge society (2000–2010). It was also the way of thinking embodied in the U.S.’s rejection (in June 2001) of the Kyoto Protocol, which the new president, George W. Bush declared to be “fatally flawed.”

### The Lisbon II strategy—a return to the industrial society?

 The scenario described above is not that far from us. On the contrary, it is all around us in our everyday life. A concrete example could be the revision of the Lisbon strategy. Indeed, one may ask whether the strategy of Lisbon II, the revision of the Lisbon strategy, which took place in the European Commission after the report of the Dutch politician Wim Kok, is not a return to the industrial strategy. And it is understandable that this might be the case. The Lisbon strategy was a very audacious choice. It inferred a paradigm change, a real jump into a new way of thinking, like Finland was obliged to do in 1989 and did with great success.

 But leadership failed on the Lisbon strategy plan. It was never made clear—not within the European administration, nor in the member States, except perhaps in Finland and in Sweden—that we were changing society and economy. There are no books and no explanations on this topic. It is, therefore, understandable that this return to the industrial-society model occurred.

 But it is a pity, especially, when one sees the disappearance of all the Units, which, in the Commission (Dg Infoso), really were at the front edge of research and creation of knowledge networks. It is disheartening.

### What to do with humans?

 The major problem that one faces in this new type of “industrial” scenario is probably the manner by which human beings will be considered and treated. As I showed above, humans are crucial for the creation of new knowledge, which is the new heart of the creation of value. The classical “industrial” approach will tend to prioritise machine over man as it has done for centuries. In this final phase of the industrial society, man is not so much an asset as a cost to be minimized and, if and when possible, to be replaced by robots. Thus, in this new context, the industrial society and modern mentality will continue prioritizing the machine. It also will try to do without humans. This is deeply ingrained in its logic, and it seems that there are two ways in which it will manifest.

1. The first way is to replace humans with machines.
 Since a computer beat the world chess champion Gary Kasparov, many scientists believe that the computer will, one day, be able to replace the human brain in all its functions, even the most intimate ones. And they massively invest in more and more powerful and performing computers to be able, some day, to get rid of man. Thus, one could some day progressively reach a society without a human dimension. Like it or not, this seems to these scientists rational, unavoidable, and perhaps most disturbingly, ethically acceptable. This is the result of a “modern” vision in which the scientific and rational approach is, by itself, above ethics, since the use of reason and the scientific method is a direct and warranted way toward objective truth. From this point of view, it is perfectly logical and acceptable to replace humans with machines.
2. The second way, in my opinion, is even more dangerous—that is, to *manipulate the human brain*.
 Indeed, by remaining in the industrial and rational paradigm, and as much as the human brain cannot be replaced by computers, the most “rational” way to employ it is to manipulate the human brain to produce the knowledge that we want as much, when and how, we want it.

### A meeting of the European Commission on scientific policy

 In September 2005, I was invited to an interesting meeting at the European Commission in Brussels. It was organised by the Scientific and Technology Foresight Unit of European Commission. The subject was “converging technologies.”

 What is it about? With the spectacular advances of nanotechnologies[[56]](#footnote-56) and also of the cognitive, biological, and informational sciences, one witnesses in the U.S., the European Union and the rest of the world a phenomenon of convergence of technologies and scientific approaches. In fact, when the scientist is working at the level of the very small—that is, at the cellular level, it is difficult to distinguish if one works with chemistry, biology, physics, informational sciences… or nanosciences. In fact, they might well be working with all disciplines at once. Indeed, the traditional distinctions between the scientific disciplines, as we once knew them, are dissolving at the cellular size.

 Science is rapidly changing, and some speak of a new scientific paradigm. At the technological and research level, a similar junction/fusion is occurring between biology, cognitive, and informational technologies and the nanotechnologies.

 This convergence between sciences and technologies at the “nano“ level implies a different approach of all the educational systems, and of student preparation. From the first day, students will need to be educated in a transdisciplinary way and to be able to switch from one discipline to another, or even to navigate in a new one which may be a synthesis of a few traditionally separated disciplines.

 All this also means that the nanosciences now have access to the building blocks that are the essence of life itself. As Dorothee Benoit Browaeys, journalist in Paris, and founder of the project “Living” observed[[57]](#footnote-57), ”If one can observe, manipulate, simulate the bricks of the living, one also can invent new structures. This is the field which has been opened namely by the nanotechnologies.” We are emerging on possibilities that were unsuspected a few years ago, but which pose formidable questions.

 At the beginning of the Conference, the European Commission mentioned the existence of an important report presented to the president of the U.S., George W. Bush in 2002. The Commission pointed out that the vision of the U.S. “raises questions” and suggested another approach to the “converging technologies.” Let us review the U.S. report[[58]](#footnote-58) and make clear the implicit concept of the science and the technology which are at the basis of this report. This will be later very useful.

 It is worthwhile at least to read the summary of the U.S. report. There is a quiet and serene description of the two scenarios we just mentioned—the progressive replacement of man by more and more intelligent machines, which reproduce themselves on their own and, on the other hand, the manipulation of the human brain modestly called “improvement of human performance.“ Science is also mentioned in totally “modern” terms. I would even say in much more purely modern terms than European modernity. Following is this eloquent text[[59]](#footnote-59):

“Science must offer society new visions of what is possible to achieve. The society depends upon scientists for authoritative knowledge and professional judgment to maintain and gradually improve the well being of citizens, but scientists must also become visionaries who can imagine possibilities beyond anything currently experienced in the world. In science the intrinsic human need for intellectual advancement finds its most powerful expression. At times, scientists should take great intellectual risks, exploring unusual and even unreasonable ideas, because the scientific method for testing theories empirically can ultimately distinguish the good ideas from the bad ones. Across all of the sciences, individual scientists and teams should be supported in their quest for knowledge. Then interdisciplinary efforts can harvest discoveries across the boundaries of many fields, and engineers will harness them to accomplish technological progress.”

 Thus, in this report, the scientific approach becomes the altar of objectivity and truth. It is almost revered as divine since its method distinguishes the true from the false (the “good” from the “bad”), and, thus, leads humankind toward the truth. The public can only “depend” on scientists and must be educated, because if it opposes the progress of science, it means that it is in the darkness of ignorance. In brief, it is a marvellous homage to science, corresponding to the “modern” vision of the 1800s in Europe.

 As Jeremy Rifkin[[60]](#footnote-60) admirably says, the U.S. for historic reasons has imported a “modern” vision of science which became frozen in 1800. This vision of science did not change, because it was cemented in the American dream together with the protestant Puritanism. In addition, this gave birth to the powerful American dream that strongly believes in progress generated by science and technology but, at the same time, by the divine blessing which can manifest itself by the economic success of each citizen having the courage and the will to work hard and be honest.

 According to Rifkin, the vision of science has not changed in the U.S. precisely because it was sacralised in the American dream that no one dares to touch or decry. It has remained “deep frozen” since 1800.

 This “modern/1800” vision of the U.S. Report about the convergent technologies brings up frightful questions. This “practically infallible” vision of science permits to totally short-change the ethical debate. So that the report clearly shows that the political and scientific leadership of the U.S. gave the green light, without inner thought, on the one hand, for the development of intelligent robots, capable to replace man, and, on the other hand, they do not hesitate to contemplate calmly the manipulation of the human brain to increase its potential.

 I encourage the reader to go to the Internet to read at least the summary of the report, because I cannot go further in depth here. But I shall here present two reactions of well-known scientists who sound the alarm.

 The first is the very famous article by Bill Joy, the creator of the Java and other programs at Sun Microsystems[[61]](#footnote-61). Bill Joy wrote in 2000, in the fashionable technology magazine, *Wired*, an article that sounds the alarm and tries to launch a debate on the future of technology in the U.S. Here are significant extracts:

 “First let us postulate that the computer scientists succeed in developing intelligent machines that can do all things better than human beings can do them. In that case presumably all work will be done by vast, highly organized systems of machines and no human effort will be necessary. Either of two cases might occur. The machines might be permitted to make all of their own decisions without human oversight, or else human control over the machines might be retained.

If the machines are permitted to make all their own decisions, we can't make any conjectures as to the results, because it is impossible to guess how such machines might behave. We only point out that the fate of the human race would be at the mercy of the machines. It might be argued that the human race would never be foolish enough to hand over all the power to the machines. But we are suggesting neither that the human race would voluntarily turn power over to the machines nor that the machines would wilfully seize power. What we do suggest is that the human race might easily permit itself to drift into a position of such dependence on the machines that it would have no practical choice but to accept all of the machines' decisions. As society and the problems that face it become more and more complex and machines become more and more intelligent, people will let machines make more of their decisions for them, simply because machine-made decisions will bring better results than man-made ones. Eventually a stage may be reached at which the decisions necessary to keep the system running will be so complex that human beings will be incapable of making them intelligently. At that stage the machines will be in effective control. People won't be able to just turn the machines off, because they will be so dependent on them that turning them off would amount to suicide.

On the other hand it is possible that human control over the machines may be retained. In that case the average man may have control over certain private machines of his own, such as his car or his personal computer, but control over large systems of machines will be in the hands of a tiny elite—just as it is today, but with two differences. Due to improved techniques the elite will have greater control over the masses; and because human work will no longer be necessary the masses will be superfluous, a useless burden on the system. If the elite is ruthless it may simply decide to exterminate the mass of humanity. If they are humane they may use propaganda or other psychological or biological techniques to reduce the birth rate until the mass of humanity becomes extinct, leaving the world to the elite. Or, if the elite consists of soft-hearted liberals, it may decide to play the role of good shepherd to the rest of the human race. They will see to it that everyone's physical needs are satisfied, that all children are raised under psychologically hygienic conditions, that everyone has a wholesome hobby to keep him busy, and that anyone who may become dissatisfied undergoes "treatment" to cure his "problem." Of course, life will be so purposeless that people will have to be biologically or psychologically engineered either to remove their need for the power process or make them "sublimate" their drive for power into some harmless hobby. These engineered human beings may be happy in such a society, but they will most certainly not be free. They will have been reduced to the status of domestic animals.”

 Following is another extract leading in the same direction.

“In a completely free marketplace, superior robots would surely affect humans as North American placentals affected South American marsupials (and as humans have affected countless species). Robotic industries would compete vigorously among themselves for matter, energy, and space, incidentally driving their price beyond human reach. Unable to afford the necessities of life, biological humans would be squeezed out of existence.” There is probably some breathing room, because we do not live in a completely free marketplace. Government coerces nonmarket behaviour, especially by collecting taxes. Judiciously applied, governmental coercion could support human populations in high style on the fruits of robot labour, perhaps for a long while.” [[62]](#footnote-62)

 It is most interesting to observe that the report of the U.S. National Science Foundation[[63]](#footnote-63) replies to Bill Joy on page 95, thus.

“Bill Joy has raised such issues with the public, presenting scenarios that imply that nanoscale science and engineering may bring a new form of life, and that their confluence with biotechnology and the information revolution could even place in danger the human species. In our opinion, raising this general issue is very important. But several of Joy’s scenarios are speculative and contain unproven assumptions (see comments from Smalley 2000) and extrapolations. However, one has to treat these concerns responsibly. For this reason we have done studies and tasked coordinating offices at the national level to track and respond to unexpected developments, including public health and legal aspects. So far, we all agree that while all possible risks should be considered, the need for economic and technological progress must be counted in the balance. We underscore that the main aim of our national research initiatives is to develop the knowledge base and to create an institutional infrastructure to bring about broader benefits for society in the long term. To this end, it is essential to involve the entire community from the start, including social scientists, to maintain a broad and balanced vision.”

 We see that all the importance is given to “the need of economic and technological progress“. We still are in the “modern/1800” paradigm, built and based on the concept of quantitative scientific economic and technological progress which is not questioned. It is given a priority over ethical preoccupations (humankind’s future) which must be “handled in a responsible way,” but without giving them a decisive priority.

### Engineering of the human brain?

 Let us now consider the second way to treat humans in this new technological “industrial” vision. Either machines replace humans, or humans are manipulated to continue to adapt themselves to the logic of the machines which remain preponderant. Here one talks of “engineering of the human brain.“

 The National Science Foundation mentioned above suggests that this is only a matter of increasing the human potential, nothing more. Let us take an example that was called upon during the Brussels public meeting of 2004:

“We are in 2035. The school principal summons the parents and tells them, ‘Your child is having difficulties in our school. You are totally free; however, I suggest that you give him a small injection, at school expenses of course, of a mix of nanocomputers the size of a cell. We have observed that often the children increase their performance and become quieter. But, if you do not accept, and I repeat that you are totally free, I regret that the school no longer can assume the responsibility of your child’s education.”

 This is a possible scenario. Moreover, it indicates the second danger of the negative scenario—manipulation of human mind, beginning with the weak and defenceless.

 Is this the direction in which we want to take our world civilization? Are we ready to subject our children or grandchildren to these types of “experimentations”? This certainly merits discussion. The public must be informed as best as possible to be able to fully participate in the debate.

 After Bill Joy, let us go to one of the highest world authority in astronomy—Sir Martin Rees[[64]](#footnote-64), professor at the University of Cambridge. In 2003, he published a book that is a serious warning about the actual evolution of science and technology. He is much referred to by Jeremy Rifkin in the “European Dream“ (p. 315). According to him, “*the odds are no better than fifty-fifty that our present civilization on Earth will survive until the end of the present century*.” Rees warns against the construction of small nanorobots that replicate like viruses and that race out of control, devouring matter and turning the Earth’ surface to a “gray goo”[[65]](#footnote-65). Rees worries also about similar threats posed by genetic engineering and computer technology—especially as technology in the high-tech field spreads rapidly.

 According to Rees, it is urgent to organise a global discussion on scientific research. Many scientists reply that if the same warnings existed when man discovered the fire, we would have remained primitives. But Rees replies that the major difference is that the prior discoveries only had a limited and local impact, whereas the progress of the converging technologies may have a global and lasting impact.

 There also is, in Washington D.C., the International Center for Technology Assessment <http://www.icta.org/nanotech/index.cfm> which is again very critical about some nanotechnology development. Here is a quote from Andrew Kimbrell[[66]](#footnote-66), founder of this Center:

“Corporations, academics, and researchers came to realize, albeit slowly, that current technology is not compatible with life… To deal with this historic dilemma, the techno-utopians and their corporate sponsors outline a breathtaking initiative. This initiative was not to change technology so that it better fits the needs of the living things, as we were so eagerly advocating. No, they had and have a very different and stunningly self-serving approach. They decided to engineer life, indeed reality itself, so that it better fit the technological system**.** It is in this chilling context that the enormous significance of the current revolutions in technology can be fully appreciated. Here we have the key to the otherwise bewildering high-tech headlines and to much of our social malaise.”

 As I will show below, the difficulty is precisely the paradigm, the underlying vision. According to the vision of part of the North American establishment and its present government, they consider themselves “in the truth and objectivity” and are not ready to change, because there are no reasons to change if you are in The Truth. This is, fortunately, not the position of millions of U.S. intellectuals, who are totally conscious of the dangers of not shifting paradigm with this new tool of production.

 So that Rifkin concludes (p.320):

“The divergence in views on science and technology between Americans and Europeans is growing and is now coming to the fore in a myriad of public policy debates, threatening a schism as significant as the divide over our different sense of how best to pursue foreign policy and domestic security.”

 It is time now to go to the European position represented by the European Commission. This leads us into another atmosphere, another vision of the world, another scientific and technologic paradigm. We make a bound from 1800 to 2004.

### Innovative and critical position of the European Commission

 One must acknowledge the European Commission and specifically Mr. Paraskevas Caracostas and his think tank on Scientific and Technological Foresight in the General Direction of Sciences, who initiated a high quality reflection on these crucial questions. They asked a group of experts to provide a report on the converging technologies. This intelligent and in-depth report[[67]](#footnote-67) was published in September 2004 in Brussels. It includes the following items.

1. It clearly warns against any danger of manipulation of the human brain.
 “Some proponents of Converging Technologies advocate engineering of the mind and of the body. (The text has probably the U.S. National Science Foundation in mind, without to say it explicitly). Electronic implants and physical modifications are to enhance our current human capacities. The expert group proposes that Converging Technology research should focus on engineering for the mind and for the body. Changes to the cognitive environment or medical self-monitoring can improve decision-making and health. And the Commission warns against a real danger of surrendering our freedom to the machines: “Either way, humans may end up surrendering more and more of their freedom and responsibility to a mechanical world that acts for them."
 As we can see, the report proposes a strategy which is very different from that of the U.S. Instead of engineering of human brain, they advocate engineering for the brain and for the body. We are in a completely different vision, in which, the human person is in the centre now and not the machine. We Europeans, feel much more at ease in this new vision and new paradigm.
2. Involvement of citizens since the first day as a new strategy.
 The report details different aspects and challenges of these converging technologies, and it strongly advises to involve the European citizens by organizing centres of discussion, which they call “widening circles of convergence”. It insists in the idea that, "*Converging technologies (CT) converge toward a common goal. CTs always involve an element of agenda-setting. Because of this, converging technologies are particularly open to the deliberate inclusion of public and policy concerns. Deliberate agenda-setting for CTs can therefore be used to advance strategic objectives such as the Lisbon Agenda.*"
 Moreover, the report advises that the political goal should be that of the Lisbon strategy which recommends that the Union become competitive in the knowledge economy, but in a sustainable and socially inclusive manner.
3. Ethics is completely integrated inside the creative development process, and scientists shall be educated in ethics.
 The report indeed insists on ethics, philosophical reflection and human science’s contribution[[68]](#footnote-68) “*CTEKS agenda-setting is not top-down but integrated into the creative technology development process.”*
4. In everyday language, this means that usually everything is prepared and the decisions taken before “consulting the public” and politely asking it to accept a well prepared package. But the report says: No: the public must decide *with the scientists, and from the beginning* what these technologies will be used for. Toward which society are we going together? What is the real agenda? We are in a completely different vision of the role of science and scientists in society. And the text continues, ”*Beginning with scientific interest and technological expertise it works from the inside out in close collaboration with the social and human sciences and multiple stakeholders through the proposed WiCC initiative (“Widening the Circles of Convergence”). For the same reason, ethical and social considerations are not external and purely reactive but through the proposed EuroSpecs process, bring awareness to CT research and development*.” Thus, ethics is not an appendix that is added a posteriori without prior consultations. No, ethics is at the heart of the process of the agenda creation. It is at the heart of the reflection. And one also foresees a continued education of scientists in the field of ethics.
5. A new contract between society and science.
 The end of the report mentions “*the new contract between society and science.”* The public is no longer an obstacle to the development of science, but it is an indispensable resource allowing society to choose between the scientific applications which are positive for the future of humankind and those which are not.

We no longer are in the modern paradigm. The vision of science and society is transmodern. The paradigm is different.

### Conclusions from Chapter 8

 Without entering into the technological details of these interesting North American and European reports, I have described a negative scenario for the future and the objective evidence of its existence. I conclude with the most important messages here.

1. The negative scenario exists.
 It is powerful and alive. Indeed, there are huge political, economic, and financial forces which have firmly decided to activate it. For instance, the National Science Foundation of the U.S. and all the important forces gravitating around it. In addition, this is going on since 2002. Let us have no illusions.
2. The main danger is the implicit vision, the paradigm.
 The simple ideas that I would like to present here are that:

The danger exists to lose human freedom.

This danger is not linked to such or such a person or group of persons that might be bad or ill-disposed. Indeed, there are always mafias, but I am not here concerned with that sector for the moment. The danger is not linked with persons.

The danger is not linked to a particular technology. This debate is NOT a technological debate!

*The danger lies in the VISION, the way of seeing and unconsciously acting which I call the modern-rational vision of science. The danger is to keep the obsolete paradigm with the new tools.* The value scale is no longer appropriate for the new era that we entering. We are, in part, reproducing the same errors as at the end of the Middle Ages, when we tried to manage the first industrial tools with medieval agrarian tools and concepts.

1. Our working hypothesis is that some leading elites in the U.S., but also elsewhere in the world, still are totally in the modern paradigm, and even in a modernity frozen around 1800, for many reasons.
2. The danger lies in this obsolete vision or paradigm that pretends to solve the problems of tomorrow with the mentality of yesterday. This U.S. report of 2002 on the converging technologies is an excellent example of a modern concept of science. And in that vision, science is:

*Objective* and capable of reaching and achieving the Truth by itself, thanks to its “objective experimental methodology.”

*Independent from the public.* It is unnecessary to consult public opinion, which is considered as an obstacle to go around or to educate.

*Oriented toward “supply economy.”* The vision is that anything that science produces (supplies) is excellent for Humanity, and must thus be put on the market. Public opinion will have to be “convinced” to buy all that science and technology produces.

1. In the actual context, what seems to us particularly dangerous is to maintain this “modern” concept and vision of an independent science, deified on an altar and separated from the human and from the historical context.
 Prigogine and Stengers wrote splendid and enlightening pages on this unconscious deification of science during the centuries: “*Science, laicised, remains the prophetic announcement of a world described as it is contemplated from a divine or demonic perspective: the science of Newton, this new Moses to whom the world truth came into sight, is a science revealed, definitive, foreign to the social and historic context which identifies it as a human activity. This type of prophetic and inspired discourse can be found all along the history of physics…*”[[69]](#footnote-69)
 As Ilya Prigogine, Nobel price of physics (1977), remarks very well, the problem of the scientific “modern” paradigm is that “modern “science is foreign to the social and historic context which gives it its human character. Since it sees itself as “divine,” inspired, and objective, it is really in danger of becoming demonic.
 The serious danger on the horizon is that science and technology are indefinitely allowed to blindly progress and dehumanise our civilization, without even realizing it. In the end, we are in a logic of death, unable to be stopped. Indeed, in the “modern” context dominated by the almighty reason, there are no possible protective railings. The impression is that an unavoidable development is heading us toward a catastrophe that we prefer not to see. This is the warning of Professor Dupuy[[70]](#footnote-70) who teaches in Paris and at Stanford University, California.
2. The European vision is more transmodern.
 One can feel that the tone of the European document is in a different paradigm and vision. This is because the underlying vision is transmodern, without saying it. The vision of science and its relation to truth and society is very different.

*Science is more critical toward itself.* It does not consider that any scientific discovery by itself is useful to the citizens. The position is more critical and warns against real dangers.

*Science is functioning as a new “Demand economy.”* In a turnaround, one moves from a supply economy where techno-science continues to produce and to “supply” new products that people are supposed to buy, to a “demand economy” where science tries to answer to implicit or explicit demands from society, notably on sustainability and social cohesion.

*Science is linked with its historical and social context.* The EU report situates itself differently with regards to science. Science is here inserted in a historical and societal context. It is not above society; therefore, it dialogues with the other human sciences and with the citizens.

*Science proposes a new pact with society.* A “new science pact” with the citizens is proposed and put in place.

 I will end this chapter with an important quote of Jeremy Rifkin from his well-known book, *The European Dream*[[71]](#footnote-71).

“It is too early to say for sure whether Europe is leading the world into a second Enlightenment. Certainly its multilateral agreements, its internal treaties and directives, and its bold cutting-edge initiatives suggest a radical re-evaluation in the way science and technology are approached and executed. The increased reliance on the precautionary principle and systems thinking put Europe out in front of the United States and other countries in re-envisioning science and technology issues in a globally connected world. Still a word of caution is in order. The old power-driven Enlightenment science remains the dominant approach in the research, development, and market introduction of most new technologies, products, and services in Europe, America, and elsewhere in the world. Whether the EU government can effectively apply new-science thinking in its regulatory regime to old-science commercial applications in the marketplace remains to be seen. In the long run, a successful transition to a new scientific era will depend on whether industry itself can begin to internalise the precautionary principle and systems thinking into its R&D plans, creating new technologies, products, and services that are, from the get-go, ecologically sensitive and sustainable.”

 However, this leads us naturally to the following chapter, which analyses the relationship between the knowledge society and the transmodern and planetary paradigm.

## CHAPTER 9: THE KNOWLEDGE SOCIETY—TRANSMODERN AND PLANETARY

 In this chapter, I shall show that the knowledge society is necessarily a transmodern society, and that if it does not function well it can even function very badly, it may even lead to catastrophe and to death. I will first define the four dominant paradigms (see Table 3, below)—the pre-modern (agrarian) paradigm, the modern or industrial paradigm, the post-modern, and the transmodern or planetary paradigm, and I shall add the matrifocal paradigm from 5000 years ago, which forever relativises the patriarchy, as we have seen.

 Table 3 provides a synthetic view of the paradigms and their differences in various fields. This is the plan that I shall follow for the presentation of this chapter. We discover more and more that we are like an amalgam of four different paradigms. However, the modern paradigm is losing its preponderance. In addition, we are entering the transmodern period after rapidly passing through the postmodern period.

Table 3: The four paradigms of our roots

|  | MatrifocalBefore 3500 B.C.E. | Pre-modern3500 B.C.E to 1700 A.D. | Modern1700 to 1980 A.D. | Postmodern1980 to 2000 A.D. | TransmodernBeyond 2000 A.D. |
| --- | --- | --- | --- | --- | --- |
| TIME & SPACE | Sacred circular timeSacred limited space  | Linear sacred irreversible time. Symbolic space icon  | Linear time, history.Reversible time.Space: perspective | Idem | Irreversible timeSpace is fullConsciousness precedes matter.New sacred. |
| POWER structure | Goddess Mother is life-giving power.Woman is sacred.No armies. Non-violent values | God the Father on top of Pyramids. Women inferior SinArmies dominateViolent values  | Reason of top of Pyramids of powerWomen better, but.. Violent values | Pulling down all pyramids…But nothing else…Women: same thingViolent values | Networks of sharingKnowledge Pyramids in crisisWomen are excellent here.Non-violent values  |
| CLERGY | Great PriestessWomen manage the sacred | Clergy male only knows what God thinks ! | New male clergy = technocrats & economists. | Sharp critic of “specialists” | Citizens do not accept any “sacred” intermediaries. |
| MAIN OCCUPATION | Shepherds and fruits pickers. No private ownership | AgriculturePrivate OwnershipFight for landWomen is “owned” | IndustryFight for ownership of means of product.Autonomy of human intelligence. | Industrial paradigmIntolerance toward any “system” | Knowledge economy = post capitalist & post industrial paradigm |
| TRUTH(epistemology) | Tolerance respect.Life is sacred | Intolerance. Clergy imposes laws in God’s name. Obscurantism. | Intolerance of all non-modern culturesWE have the truth = civilization !! | Negative definition of Truth. Rather weak. | Radical tolerance.Table hollowed in the centre.New definition of Truth |
| METHODS | Intuitive and smooth | Dominated by the sacred and theologyAnalysis of nature = sacrilege ! | Analytical method. Descartes, Newton.Weak synthesis. No global vision. | Analysis until its ultimate limits.Not any reconstruction. | Holistic approach= each part reflects the whole. Global vision is important. |
| SCIENCE & TECHNOLOGY | Very few technological creations. No writingShepherds economy | Dominated and controlled by clergy.Nature is sacred.Agrarian economy | Autonomy of science & technol. = true. & No ethical concerns.Supply-economy | Same scientific paradigmNO Ethical concerns Supply-economy | Man is not above but IN nature. New science paradigm. Ethics.“Demand-economy” |
| VIOLENCE | VERY Little | Much more violence. Dominance of the Matrifocal people. | Non-violence inside the State.War is “Foreign Policy” | Much ViolenceIdem | Non-violence between States. Terrorism up.New women-men conflicts. |
| WOMEN & MEN | Women carries the sacred = LifeMen not despised | Patriarchy = Women despised | Women’s liberation, but structures remain patriarchal | PatriarchyNo changes | Post-patriarchal values. New values cocktail, less violent |
| Spiritual aspiration in public | Yes toward Goddess-Mother | Yes toward God the Father on all continents | NO. Religions are private and disappearing | NO | YES. Distinction but not separation between sacred and profane. |
| LIFE AFTER DEATH | Yes, evident. Blood of life on the deads. | Yes, evident. Reward after judgement. | NO. EvidentNothing after death. | NO | YES, rediscovery of the forgotten dimension |
| THE BODY & SACRED | Body & sex are temples of the sacred. | Body & sex are totally desacralised | Desacralisation continues. Abstraction of body. Mental. | DesacralisationContinues | Resacralisationof Body & sex.New harmony of body, mind, heart, sex,soul. |
| LEFT BRAIN OR RIGHT BRAIN | Right brain very active | Right brain somewhat active | Left brain dominates and “kills” right brain | Left brain dominates | Return of the right brain. Harmony between the two brains |

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### The matrifocal before the patriarchal

 I shall come back to details later on the matrifocal society and the stakes for the knowledge society. However, it seems to me important to point out already here the matrifocal paradigm. It is evident that this antique vision represents a very different fundamental view—*another image of the divine, of the sacred and of life, death, circular time, and space.* Nevertheless, as we have seen, since the patriarchal narrations appear everywhere as the primordial narrations, they succeeded in obscuring almost perfectly the civilizations that preceded them. This is another dimension of the intolerance of the pre-moderns because they are clearly patriarchal. Thus, it is fundamental to have the matrifocal view rise again from the non-existence where (patriarchal) history engulfed it.

### Pre-modernity, agrarian period—“The Angelus” by Millet

 The symbol of pre-modernity for me is a painting called ”The Angelus” by the French painter, Jean-Francois Millet (1817–1875). It depicts a man and a woman facing each other. They have stopped working. The man has removed his hat. He bows his head and recites the Ave Maria of the Angelus, facing his spouse who does the same. In the background, the church steeple can be seen in the twilight.

 Pre-modernity is still lived by several billion people who make their living by farming. Indeed, when one makes one’s living from farming, the underlying vision is completely different from the industrial modernity, because the farmer is dependent on the divine forces that bring the rain and the sun at the right time…or not. He absolutely cannot influence the growth of the crop. He can only plant. Nature does the rest. Thus, his world is poetic and sacred, whatever his religion. Time is sacred. His values are stable and immutable. The proverb that describes well this paradigm is the one of Horace: “*There is nothing new under the sun.*”

 The global horizon of pre-modernity is precisely that *meaning is stable and given by the divine, from eternity.* There has always been a divine and a human dimension in life. In addition, this eternal truth does not and should not change. So that the transmission of values to the next generation is not a problem, since the basic values are stable. One can say, like Max Weber, the German sociologist, that pre-modernity is sacred and enchanted, whereas modernity “disenchanted” the world.

 A very important component of pre-modernity is the respect of Nature. Nature must be respected because God gives it to us. *Nature does not belong to man.* It is not at his service. It is sacred because it is God’s creation.

 This vision certainly is common to pre-moderns and transmoderns, as we shall see. The fact that Nature does not belong to us, but on the contrary, that we belong to it, is being rediscovered today, in transmodern times. In some ways, we are rediscovering a “sacred” reconnection with the divine or cosmic forces. Moreover, those forces are no longer called in the same manner, and they function differently. There is a rediscovery of the sacred, but it no longer is a vertical sacred, in a vertical space. Transmodern sacred is a horizontal sacred of “reconnection with Nature and the cosmos,” in networks. This new sacred is rooted in the body and in the present.

 This sense of the sacred is perhaps what will make the transition from the pre-modern paradigm to the transmodern one, while leaping over the modern paradigm. Indeed, in modernity, at least in Europe, one would sound stupid for talking about “sacred” in public. Except perhaps in the U.S. where, as we have seen, the American dream combines an ultra-modern and secular vision with a sacred Puritan faith.

 In transmodernity, this view of the sacred will take a different shape. In pre-modernity, the sacred was symbolically tied to verticality and, thus, to separation. God is above us in the sky. Cathedrals like Chartres and Notre Dame de Paris lift the souls toward the heavens. They are spaces of “vertical sacredness.” In the pre-modern vision of the sacred, one had to leave the world and to separate from it in order to be able to approach the sacred and the divine. One needed to go to a monastery and part ways with sexuality and from every day life…to search the divine in seclusion.

 In transmodernity, the sacred challenge for everyone is to “reconnect” with the divine forces of the cosmos, since we are not above Nature but part of it. In addition, this broken connection has brought us is the dangerous unsustainable situation Humanity is in.

 On the other hand, this sacred and stable pre-modern world faces some difficult problems in today’s world because it has *a pyramidal and patriarchal-like* structure. All values proceed from the Divine and are transmitted again by the male power of the clergies of the different religions, at least for the three “religions of the book.” These pyramidal and patriarchal structures, which exclude the women from the sacred, do not match very well with our contemporary mentality. This might be the part of pre-modernity which will not be included in transmodernity or planetarism.

 The other aspect of pre-modernity that is not acceptable today is its *strict* *intolerance*, even its missionary dimension. This is intolerance is normal, since society is entirely structured around the ONE Divine, which gives meaning to everything. There is no possibility to accept another definition of the Absolute, of the sole and only God the Foundation of the system. Indeed, to accept the possibility of another foundation is to relativise the absolute and thus destroy the basics of the religious faith and vision. Therefore, no bargain is possible on dialogue with other Faiths. This is one of the most difficult aspects to accept by transmoderns and, of course, by the moderns. In a global world, everybody understands that this paradigm is non operational.

### What is modernity?

Modernity is a powerful and courageous project of autonomisation and, thus, of liberation of human intelligence with regards to all obscurantisms. This liberation movement occurred by changing the vision of the world, by changing the ultimate value at the horizon. As is happening today with the transition to transmodernity, the first moderns changed their visions and their Horizon.

 One has to go back in the context of the end of the Middle Ages to understand the terrible level of human stupidity and wickedness in the repression of human intelligence by the Inquisition and its tribunals, which did not tolerate any scientific autonomous research. Indeed, only a few isolated people started to think and act differently from the norm—Michelangelo and the audacious Italian artists, Descartes, Galileo, and also out of Italy, Copernicus, Jean Huss, Luther, etc. Some perished at the stake. They were not conscious of the fact that they were the founders of the Renaissance and modern times. They thought of themselves as isolated thinkers who were marginal and threatened by the Inquisition.

#### New ideas of space with perspective and geometry

 It was thrilling in the Renaissance to open up the horizon, to create a new vision, and give life a new meaning. When, for example, Donatello, Ucello, and Piero della Francesca begin to introduce perspective in their paintings, they are not conscious that they tilting Europe toward modernity by completely transforming the perception of space. By introducing perspective, they transform the medieval space into a modern space. *Modern space,* indeed, is geometric and defined by scientific criteria. It is not anymore a symbolic and flat space, like icons, for instance.

#### New mechanical time—the clock

 A small machine came to slowly structure time—the clock. In the monasteries, the days for the monks were shorter in the winter and longer in the summer. In addition, everybody followed the churches bells. The monks themselves invented the clock and, henceforth, held their prayers according to it and no longer by following the sun and other cues from Nature. Thus, they anticipated “modern” time, measured by machine. The far-reaching consequence of this mutation is the reform of efficiency invented by Taylor which made it possible to time down the motions of chain workers to increase their output. Time has been completely mechanised by the industrial modernity.

 It is most surprising that the modern vision took back, maybe unwillingly and unknowingly, the pyramidal power structure, exactly like in the pre-modern vision that they criticised. However, they replaced God with the goddess of Reason.

 Moreover, most surprising also is that modernity transposed the clerical structure. Modernity gave itself a new, invisible clergy—the economists. And this clergy has its cardinals and the Holy Inquisition, which calls to order the economists or the Chiefs of State who deviate from the orthodoxy of the ”free market.” Indeed, the free-market economy functions as a rational and scientific religion. This is normal because the rational truth, as Prigogine notes well, was improperly elevated to the rank of implicit divinity. Without *this* faith, it is impossible to reach important positions, for instance in central banks and national governments.

 The change of vision and paradigm was accelerated and reinforced by the fact that the European society passed progressively from agriculture to industry. When making objects in a factory, there is no need anymore to go in procession to pray for the divinity’s help. Humans have become completely autonomous in the process of value creation. With reason, one functions perfectly well. No need for anything else. One becomes rational, because rationality is enough to live well. There is no need for anything else. In addition, the idea is that probably religion was a pure invention of human mind. One can understand why modernity has become sceptical concerning the inner dimension of humans.

 As I have already mentioned, Prigogine and Stengers were the first to emphasise this point. Modernity, in fact, unconsciously, gave *science an almost* *divine role.* Why? Because modernity kept the pyramid and replaced God with Reason. Since science is rational, *it leads us, therefore directly to the Truth,* which is the “divine” apex of the pyramid. And this, without us having the need for churches and clergies. Science succeeded in its complete autonomisation with regard to religions and obscurantisms, but it acquires an exceptional, almost divine, status. It is above ethics, it is above responsibilities since it is good and true. To criticise it is to be ignorant.

 As I showed in the last chapter, this is one of the major dangers of the current global situation we are in. We are tackling technologies that concern life and our survival as a species, but we tend to use the modern vision of science and technology, which are not adapted to the gigantic planetary stakes that are present. The major danger is to have a vision and a horizon that are maladapted to the stakes of our era.

 *Technology also*, in this modern world, functions on the *model of a supply economy*. This is normal since technoscience is considered true and, thus, good. It is normal, therefore, that everything it supplies is a benefit for humankind and, thus, must be bought. This leads us straight to the consumer society. We realise very well that we cannot, through the 21st century, continue to consume in an unsustainable fashion.

 Let us now approach the famous scientific *method*. It, too, is considered to be a direct track to the truth, since it is rational. By the mere fact that it is “rigorous” and “objective,” it *must* be considered as leading directly to the Truth. Thus, it is unassailable, in the modern vision.

 Nevertheless, it is very important to note that our entire scientific, but also administrative, and even political operation functions along the same analytical method proposed by Descartes—that is, when facing a difficult problem, cut it into pieces and resolve the parts of the problem. This has been done for centuries. This analytical method has given wonderful results, but it is naturally incapable of providing synthetic results to global questions such as that on the future of humankind. This is the reason why it *has lost* its legitimacy *as the unique method*. It remains only *one* of the possible methods, besides other more holistic approaches. Thus, we must abandon the supremacy and domination of the “modern-scientific” method as the only possible method of approaching the future. In spite of all its qualities, it does not help us find today a solution to the problem of our continuing survival.

 One should not underestimate the great jump that modernity allowed humankind to achieve with regard to *violence between persons*. Indeed, one of the State functions, a modern creation, has been to completely suppress violence between individuals. The law in the modern State now makes violence illegal. Revenge, even against the killer or the rapist of one’s daughter is not allowed. It must be reported to the police and to a judge. This system appears obvious to us today, but centuries were needed to get there. Even royal princes had to be imprisoned before they came to understand that duels were no longer allowed. In the transmodern paradigm, this non-violent component will be maintained and expanded outside the national borders, between States.

 At the national level, modernity invented national armies, national arms factories, national military service (ala Napoleon). It created the concept of national war. Before Napoleon Bonaparte, those concepts were absent on Earth. On the other hand, Clausewitz[[72]](#footnote-72) and Machavelli held that war is the continuation of foreign policies through other means. Thus, in modernity, war is institutionalised and a national (and global) event which coins national unity “by the blood of the braves poured on the earth” and is part of foreign policy.

 Thus, modernity integrated violence and war between States as something entirely natural. There was no alternative. If a State was not satisfied through negotiations, it was absolutely normal and understandable to go to war, if there was a possibility to win it. This attitude is held today in George W. Bush. It should not shock us, however—it is what we have done for centuries.

 So why are we shocked by Bush’s policies, which are totally “modern”? Because *our* horizon has changed and we, the global public opinion, are no longer in the modern paradigm, even if we are not always aware of it. Bush helps us, the citizens of the world, to become aware that we are not anymore in his vision. He is like a revelatory catalyst of our transformation. He helps us to become conscious that we are changing worldwide.

 In this regard, we must say, “Thank you, Mr. Bush. You make us all understand that it is urgent in this global world to invent a new framework, a new (transmodern) *paradigm of* *non-violence between States.* It helps us all to go quickerbeyond modernity.”

 Certainly, modernity has advanced the cause of women. The suffragettes and the feminist movement and, for instance, the writings of Simone de Beauvoir, in France, are modern movements. However, for women, the problems are far from being resolved. Indeed, women continue to be subjected to discrimination, or harassment at the workplace. Today, in many places, women still need twice the competence to reach the same level of responsibilities as men. Then, there is the “glass ceiling” in many businesses and administrations that prevents women to exceed a certain level of responsibilities. There has been undeniable progress with regards to persons and mentalities, but the structure remains too often pyramidal with the last steps inaccessible to the “weaker sex.” In addition, are the salaries equal for equal work? This does not appear to be the case everywhere in the European Union.[[73]](#footnote-73)! Thus, the modern structures still are strongly patriarchal, in most of the cases.

 Modernity also completely *separated the practice of a religion from the public domain. It consigned religion to the sacristy.* It is not allowed to mention religious motivations in public. In France, this separation is the strongest. Indeed, numerous countries which, in other respects, are very modern, like the U.S. and the United Kingdom still have their presidents swear on the Bible.

 Modernity went even further. It spread the word that *religions were due to disappear* someday, since they were not rational. Only the rational is real. Some spoke of a “religion of the secularity” which tended to spread this vision of the end of religions as a new ”missionary religion.” Indeed, in Europe, we have associations of atheists, which preach atheism and are openly anti-religious. Modernity has not been able to maintain a real openness to the inner dimension of humans. It has become very materialistic.

 When one reads Jung and the great thinkers of the human psyche, we see that they did emphasise the importance of the inner dimension in human beings, and of the human soul. In this, Jung prefigures transmodernity. Whereas, Freud and Lacan seem more rationalist and materialist and not very open to this inner dimension of human psyche, at least much less than Jung. In this sense they are more modern, and, thus, more representative of the 20th century.

 This brings us to the belief of *life after death.* I think that when the history of the 20th century and modernity in general will be written, one of the most negative points of its evaluation will be that this century succeeded in totally suppressing, in public opinion, the conviction that life continues after death. This vision of life after death has always been affirmed by all the world civilizations for thousands of years even if that afterlife was expressed very differently. The modern official vision is that there is absolutely nothing after death, and that we return to naught. In so saying, modernity generated a generalised anguish of death which manifests itself as a desperate, and vane, search for security. Here is what Willis Harman was writing in the nineties. He is one of those who best explains the current change:

“Modern Society has a peculiar characteristic, namely, that it teaches fear of death, and that fear underlies many other fears. If in fact we fundamentally evolved by mechanistic processes out of a material universe, and if life is regulated by coded messages in the DNA, then when those processes stop we die, and that is the end of us as physical organisms. If our consciousness, our cherished understandings and values, our individuality, our personhood, are simply creations of those processes, then when those processes stop we are no more. That is surely a fate to be feared, and, indeed, the fear of death permeates our society, disguised in a multitude of ways in which we seek ’security.’”

 Thus, modernity generated an enormous collective regression at the level of the individual and collective consciousness. We came to completely forget and negate life after death. This is absolutely barbarous and regressive. And it has infiltrated our world society with deep fear of death that we disguise in a lot of research for security. However, this modern vision is perhaps not the last world on the question. Willis Harman continues:

“But the ‘perennial wisdom‘ of the world’s spiritual traditions has disagreed, has asserted that we are in an essentially meaningful universe in which the death of the physical body is bur a prelude to something else. The mystical and contemplative traditions have often gone on to give more details.”

 Willis goes even further and speaks about scientific evidence of life after death.

”Serious attempts have been made to explore the concept of the continuation of personhood after physical death, and the evidence gathered has been disturbing to both positivist scientists and convinced religionists, because it fails to conform their preconceptions. However, if that evidence is explored with humility and open-mindedness, it seems to point to features of an emerging ‘new story‘ quite different from the prevailing worldview.”[[74]](#footnote-74)

 What Willis is suggesting here is that we are all so modern, rational, so right-brained, that we are unable to accept evidences proving the existence of life after death. In order to accept those experiments and discoveries, one has to shift worldview, or paradigm[[75]](#footnote-75). I invite the reader to go and read the whole of the Chapter 5 of Willis’ book. He is a very great thinker.

 Let us now see what modernity has done to *our bodies*. They have been completely disarticulated, desacralised, and atomised. Indeed, the famous analytical method has patiently taught us to leave out our emotions, our sexuality, our bodily needs, and our feelings to concentrate on the efficiency and the yield of the industrial production, which moves faster and faster. So that our lives are atomised, separated into different boxes which contain parts of us. We have a hard time finding ourselves again and reconnecting the boxes in an integrated whole. Moreover, the desacralising process generated by modernity has invaded our body, our sexuality, the woman, and our relation to nature and life itself. We see that this desacralising process of women, the body and sexuality was already well under way with the pre-modern patriarchs. We live next to ourselves, next to our lives. We have become ”mutants” which for the Australian aborigines are no longer true men[[76]](#footnote-76).

 Meanwhile, the number of people who do not find a meaning to their life and, even more, youth suicide is alarming. These youth suicides, which most of the time are kept quiet in our “developed” countries, are a measure of the flagrant inadequacy of our declining industrial society to the implicit expectations of the young generation. A drama which the following testimony, out of an excellent Canadian inquiry, measures the horror.

” I did everywhere what I had to do. I did not bother anybody. However, deep inside me, it was totally black. I was like a roving dog but it was hidden in me. I kept face. I felt very soon that my parents did not know what to do, what to say when I told them that I was losing it, that I had problems, that it was crying inside me. They panicked, and so I did not talk about it again…. I am 23 years old, I have a normal life, but I feel myself empty, emptied, without motivation, without inner breath and without any inner direction. I find the world incredibly meaningless and tasteless.”[[77]](#footnote-77)

 These words demonstrate the lack of meaning of our modern civilization in crisis.

 Finally, to top it off, we have been taught to function only with our *left brain*. We have become handicapped with regard to the right brain. We almost no longer use it, except when suddenly the knowledge society asks us to be creative and to have our right brain run at a smart pace.

### Postmodernity, the last avatar of modernity

 In Table 3, above, I included a column to describe postmodernity because, in our conferences, the question of postmodernity is recurrent. I would here like to thank the postmodern thinkers, like Derrida, who had the courage and the tenacity to disassemble the intellectual fortress of modernity. Because, indeed, this fortress is very solid. However, one should also obviously note that this disassembling is provisional.

 Nevertheless, the position of this book is precisely to capitalise on this useful deconstruction. Yes, the modern narrative, the modern vision had to be deconstructed, in order to allow intellectuals to go further. Thank you, postmodern thinkers. Now, we have to build a new narrative, a new vision of the world and of our future, where the young generation will be able to find hope and energy to build a real sustainable future.

 In order to go further we need a new narrative, a new story a new vision. That is my intent in writing this book—to begin where postmodernity finishes.

 Jeremy Rifkin says it perfectly well[[78]](#footnote-78):

“The postmodernists engaged in an all-out assault on the ideological foundations of modernity, even denying the idea of history as a redemptive saga. What we end up with at the end of the postmodern deconstruction process are modernity reduced to intellectual rubble and an anarchic world where everyone’s story is equally compelling and valid and worthy of recognition.

If the postmodernists razed the ideological walls of modernity and freed the prisoners, they left them with no particular place to go. We became existential nomads, wandering through a boundary-less world full of inchoate longings in a desperate search for something to be attached to and believe in. While the human spirit was freed up from old categories of thought, we are each forced to find our own path in a chaotic and fragmented world that is even more dangerous than the all-encompassing one left behind.”

 It is impossible to stop at deconstruction while our planetary survival is seriously threatened. We need to go further. It does not provide a way to build a new narrative, a new political paradigm with a vision.

 Postmodernism today, is being surpassed. It was the last avatar of modernity because the postmodern method is also purely rational. It is the same as the modern method but turned around itself. In addition, this avatar played its role; therefore, *“C’est fini.!”* (See more on postmodernity in Appendix 2.)

### What is the transmodern vision?

 What is transmodernity? Is it the end of rationality and of science? Are we moving toward a worldwide global “new age“ and toward totally irrational ways of thinking? Are we going back toward medieval obscurantism? This seems to be the fear of some intellectuals at least in Europe.

 Yes, we are in a mutation. Yes, we are leaving modernity. And, as we leave the room, there is a back door that frightens us all, the return to past obscurantism, to religious wars, to “fundamentalisms”(which often are pre-modern) of all sorts.

 However, and this is the master idea of this book, *there also is a front door* which is less evident because we have to create it. And, the knowledge society can really take off only if it joins the transmodern view, if it departs modernity by the correct door. This new door is more difficult to find because the way to it does not yet exist. We must create it. We have to invent it together.

 What is this new door? What is this new transmodern synthesis? One takes the best of modernity, and the best of pre-modernity and goes farther, invents a new orientation, a new vision, and a new “politic of Life” for humankind. Thus, we shall recuperate the good things of the scientific method. We will capitalise on the wonderful achievements of science and technology. We will rediscover the harmony with nature and the cosmos, and the spiritual depth of the pre-moderns. However, these tools will be directed anew toward the realization of a completely sustainable and socially inclusive civilization. Science and technology will not be questioned but well their fundamental orientation, their basic axioms, and their link with humankind’s goals which will be fundamentally defined again.

### Knowledge society is transmodern

 Let us review the different topics (rows) of information shown in Table 3.

#### Time, space, matter and consciousness

 The first row in the table concerns time, space, matter, and consciousness. Prigogine and Stengers[[79]](#footnote-79) show that modernity established and sanctioned the reversible time invented by Newton. When the latter measured the interval for the apple to fall from the tree, he could do the same experiment again, ad infinitum, and the results will always be the same. The experiment is, by the definition itself of a scientific experiment, reproducible ad infinitum. One may go forward in time and do the experiment again. Thus, the “scientific” time of Newton is reversible. All physics and classical science are based on this reversible time, which is the condition for a possible “scientific method” since it is based upon the “reproducibility of the experiment.”

 Today, the studies of Prigogine show that Newton’s physics constitute an exception with regards to physics altogether. For instance, when one considers the “dissipative structures,” the study of which won him the Nobel price, time in the analysis of these dissipative structures is no longer reversible, since if I measure a dissipative structure at time *t*1, I shall not obtain the same result if I measure it at time *t*2. Thus, one comes back to the same time as that of poetry and daily life, which obviously is not reversible. Consequently, the reversible time of Newton is okay only for a small part of physics. One understands that these changes induce some confusion in the scientific circles. Indeed, this is the very keystone of the scientific method which crumbles down!

 Prigogine told me in a private conversation before his death that he was still receiving everyday letters of insult, accusing him to have demolished the very foundations of the scientific method. Fortunately, there were some other letters of congratulations and awarding him many honours.

 In the vision of Newton and Descartes, which still dominate the modern paradigm, the *space* in between the stars and in the atom is an *empty space*, and matter is considered as inert. Now science proposes a new, somewhat different, vision—that is, of a space that represents an important energy reserve and which, until now, was not exploited by our technologies[[80]](#footnote-80).

 Teilhard de Chardin suggested intuitively that matter is endowed with consciousness. Einstein was the first to show a link between matter and energy. In his famous theory of “general relativity,” he demonstrated that matter was like condensed energy. He proposed and demonstrated the equation linking energy (E), mass (*m*), and the speed of light (*c*) in E = *mc*2. Thus, there is a direct relation between mass and energy. Indeed, we are in another vision of reality. Moreover, curiously, one realises today that some Richis of India already were saying similar things about matter thousands of years ago.

 However, let us go farther in the relation between matter and consciousness. According to Willis Harman, matter even proceeds from consciousness. His studies[[81]](#footnote-81) are my references on this subject because, to my knowledge, they are the most advanced and, at the same time, the easiest to read and understand. According to him, we are on the brink of a second “Copernican revolution.” Because it is the philosophical understanding of the universe (paradigm) which topples under our eyes, without us realising it. Indeed, *a type M1 metaphysics clears the way for type M3 metaphysics.* Which are these three types of metaphysics? What is matter?

 In metaphysics M1, the basis of everything is matter combined with energy. To study reality, one should start from the measurable world. Measure what is measurable as the only scientific way to know. Consciousness issues from matter. It is even located in certain cells of the brain. All that we know about consciousness is to be related to the functioning of certain cells of the human brain.

 Whereas metaphysics M3 starts from consciousness—it considers that *the foundation of the whole universe is consciousness.* In brief, in this new vision (M3), spirit and consciousness are first, whereas the matter-energy proceeds, so to speak, from consciousness. The metaphysics that we are accustomed to is, thereby, turned back like a sock. If one deals with quantum physics, one realises that the most recent research precisely move in the direction anticipated by Willis.

 Metaphysics M2 is dual in that it places side-by-side two foundations of the universe—matter-energy as first and consciousness as first. M2 is a mix of M1 and M3. It is like the transition between M1 and M3.

 Is M3 a shocking hypothesis? Yes, it is. It is like a hurricane coming to us in silence and threatening to change completely the very nature of intellectual reasoning. It could change completely the way we will work in our universities and in the approach to science and technology. It could change also the way humans relate to reality. We are here like in the eye of the hurricane of change, in which we are entering in complete silence, because it changes completely our vision of life. In announcing this change, Willis goes further than Prigogine and many others. He has been one of the most advanced pioneers of this paradigm shift.

 Who is Willis Harman? Is he serious? Can we trust him? Well he is one of the great thinkers behind the Silicon Valley project. He was at that time an eminent member of the Stanford Research Institute. He also is the co-founder of the World Business Academy. He also was the Director of the Institute of Noetic Sciences. Yes, Willis, who passed away in 1997 was somebody *seriou*s. Therefore, his reflections, even though they are very advanced, cannot be set aside with a backhanded stroke. On the contrary, his hypothesis might well become *one of the nodes of the new paradigm,* as much as the discovery of Copernicus and Galileo became the essence, the cornerstone of the modern paradigm.

 When working in networks in the knowledge society, one rapidly faces phenomena of collective consciousness within the network. Indeed, the communication inside the network can become more than only good communication. Sometimes it is almost like telepathy, intuitive communication, linking people in new ways that are beyond rational explanation. The works of Sheldrake[[82]](#footnote-82) stand out concretely and even operationally. He talks of a morphogenetic field that links not only humans to humans but also dogs to their masters, instantaneously, whatever the distance. This morphogenetic field operates as metaphysics M3. The management in networks may have to consider this very seriously.

 My feeling is that our understanding of time, space, and matter is changing fundamentally. At the high scientific levels, those questions are already seriously discussed, but this discussion does not yet trickle down to the public. This is one of the basic challenges of the knowledge society, because it can only function within these *new concepts of time, space, and consciousness.* Unfortunately, we try and retry to make it function in the old, industrial frame.

 In parallel, one also sees at a rapid and profound evolution of the sacred sense among generations. We as we have already seen, for the generation born before 1900, the sacred is linked to the ascetic path. This path to the divine presupposes the humans to take distance from sexuality, the body and material life, in order to the able to ascend toward the divine which is located “above” (vertical sacred).

 One now sees a complete turnaround of the notion of the sacred.[[83]](#footnote-83) For the younger generation, it seems that the sacred is linked to a “reconnection” with nature and the cosmos (horizontal space). The sacred is next to us and in us. Therefore, I speak of *horizontal sacred.* One needs to reconnect *because we are part of the cosmos* and, in any case, we cannot consider ourselves “superior” or “above” or dominant. This *new sacred* is linked to the danger of collective death—we are obliged to reconnect with nature if we want to survive. The younger generation understands that, if we do not reconnect to the cosmos, if we do not adopt a less Promethean attitude, extinction of the human species is at risk. This is their implicit sacred, an implicit sacred but a very strong one. (I will come back to this subject in Chapter 12.)

#### Disposition of power in networks

 Here, things are clear—it is impossible to create knowledge in a pyramid. It does not work. The pyramid of power increased industrial/modern efficiency, but here it is maladjusted. On the contrary, the network becomes the indispensable tool allowing exchange and thus creation of knowledge. With regard to power, this is very subversive since there is no way to control power in a network, and there is a strict equality between members. We saw this in the previous chapter.

 Nevertheless, what is important to note is that, for the first time in millennia, the disposition of power *seems* to move toward non*-violent schemes*. This is very important if confirmed within the positive scenario at least. It might indicate that humankind is—finally—rising to a new level of consciousness.

#### The future of “clergies”

 I showed above that modernity has transposed, without knowing it, the pyramidal structures and the clericalism—which is always extremely long-lived—as a form of control of the economists between themselves, for instance, but also of the economists’ position with regards to the government, the medias, and the society. Economists continue to “preach” the true and, very often, the false without being disturbed or even the least bit questioned. This is astounding—somewhat like the theologians who continued imperturbably to dissert about the sex of the angels in the midst of the religious wars.

 In the knowledge society, everybody has access to knowledge on the Internet. And the new generation, which works in network in this new society seeks *experience*, or perhaps guidance, in their spiritual advance, but certainly not an intermediary who “knows” what the divine thinks and who provide orders. In fact, the notion of “intermediary” or even “expert” is probably in crisis.

#### The main occupation—the knowledge economy

 This is the theme of this book—that we are changing production and, therefore, the world vision, the “Weltanschauung”, the paradigm. The main occupation is not any longer agrarian/pre-modern or modern/industrial. They continue to exist but are not the main activities anymore.

#### The concept of Truth

 This is another very important point. Indeed, the pre-moderns and the moderns both have an intolerant concept of the truth. In a global world, this is a major problem. This is the feeling one gets when one reads the famous article of professor Samuel Huntington from Harvard on the “clash of civilizations”[[84]](#footnote-84) (1993). The mentality and the vision underlying this article are modern and intolerant. This is the same intolerance that one finds in the American foreign policy which, besides, seems to have adopted the vision of the article—the clash with Islam no matter the cost.

 The new epistemology, the new definition of the truth that is slowly coming to the fore, is totally different. Here, we touch a very important element of transmodernity. The image that I suggest is that of the “hollow-centred table.”

 When I worked in the Forward Studies Unit of the European Commission, we had our weekly meetings around the table that had been built for the first reunions of the Commission. Legend has it that Jean Monnet himself designed it. The table is composed of triangles like slices of a tart that fit together, but the centre of the table is a circular hole.

 For me this idea of the hollow table is the most potent symbol of transmodern and planetary paradigm (see Figure 4).



Figure 4: Transmodern truth—radical tolerance

 *The centre is hollow*, but also full of life and light. No one possesses the ultimate truth. Everybody is invited to proceed toward the centre, but no one is able to own or possess the ultimate truth (the divine). It also is the way witnessed by the mystics—whether Jews, Muslims, Christians, Buddhists, or atheists. The more one proceeds toward the centre, the more one lives out powerful experiences that are beyond words, and the less one is able to speak and to “know” the less one wants to formulate the truth in theological terms, and the less one remains attached to his own theological formulation.

 *All the slices of the tart are equal*. This means that in this new vision, every culture of the world is equal in value to the others, every culture contains part of the truth, and no one culture contains it all. And finally, every culture is invited to contribute to the solution of the world problems of survival from its own creativity and richness, on an equal footing.

 At the same time, *the more one moves toward the centre, the less he knows, the less he “possesses” the truth, and the less he tries to impose it to others*. This is the concept of truth that one finds again with the mystics of all world religions. They all witness the same vision of truth in their deepest inner experience. It seems also that the new generation finds itself much at ease with this new vision of truth, because they are much more transmodern than us.

 One can also apply this vision of the Truth to the political governance of European Union. One can say that each partner, each State is sitting on equal footing around the table of the Council of European ministers, in Brussels. The countries of the Union are equal, whatever their size, even Luxemburg. No country is allowed to dominate the others. In addition, this is what I observed—that the more government officials become used to working with each other at this European level, the more they acquire a new level of political consciousness. The more they become conscious of the global responsibilities of the EU in a world in crisis. The more they become conscious that what they sign in Brussels is of a different level than what they sign at home, in Berlin, Lisbon, or Warsaw.

 It is evident that we are far beyond the postmodern conception which, by decomposing the truths, ends up dissolving the possibility of truth and leads us toward relativism.

 Any new civilization that grows up around this knowledge society is a civilization that is intrinsically non-violent and tolerant, but not relativist. Truth exists, but nobody controls it. The current political leaders have not gotten used to the idea. The European Union is getting closer to the idea but does not explain it well to its citizens.

 The struggle between tolerance and intolerance is always hard and difficult to manage. How to counter in a non-violent manner people who are violent and intolerant? Indeed, what to do as a tolerant transmodern in a conflict with an intolerant “modern “or “pre-modern”? The transatlantic dialogue, in fact, is a dialogue between the modern/1800 (U.S.) and the transmodern paradigm (EU) which does not dare give its name.

#### The scientific method

 In the knowledge society, we are not going to get rid of scientific analysis, but in a global world in jeopardy, one can no longer be content *merely* with such analysis. As I mentioned above, the basis itself of the legitimacy of the scientific method disappears with the advent of a new concept of irreversible time. In addition, we absolutely need a synthesis that allows us efficient action. One even goes beyond the synthesis, toward the *holistic* approach, where each part reflects the whole or is an image of the whole.

 We also must mourn the beautiful image of “objective” science, wherein the observer is completely independent (outside) of the experiment “scientifically” observed, and the experiment is, therefore, indefinitely reproducible, and thus, true. This is the modern vision, and it does not stand up against the criticisms of the thinkers of the new physics, such as Prigogine and all those who came after him—for instance, those who work in the convergence of technologies around nanotechnologies. So the scientific approach becomes again *a poetic approach of nature* as Prigogine says so well at the end of his beautiful book, *Order Out of Chaos*[[85]](#footnote-85). Obviously, there still are ferocious battles ahead. And many are those who do not even realise that they are conducting rear-guard fighting.

#### The future of science and technology in the knowledge society

 It is obviously out of the question to abandon science and technology or all the bright conquests of modernity. What is changing in our world is the horizon—the goal of our research. The change is both small and enormous. The goal is no longer the one of emancipation, of autonomisation of science and technology from any obscurantism, where it is perfectly free to develop in all-possible directions since it is intrinsically good and true (the philosophy of the supply economy). The new goal arises from the realisation that we are now in a crisis, confronted with the question of the survival of humankind. Thus, one must redirect this marvellous and potent scientific tool toward the realisation of a sustainable world and a future for our offspring (the philosophy of the demand economy).

 I saw this new goal profiled for science and technology in a report at a meeting of the European Commission in 2005.[[86]](#footnote-86) The report indicated to us a fundamental orientation change toward a desire for a much more sustainable world. This was an indication that, once more, the EU is at the forefront at the global level.

 But, evidently, there are other powers, and potent ones, that are moving in the opposite direction. The dinosaurs were very strong. Fortunately, they disappeared in a few years.

#### Personal and structural violence

 I have shown that modernity created a space of non-violence, the national soil, thanks to its creation of the structures of the State, namely the separation of powers (Montesquieu). Today’s difficulty is that terrorism is bringing violence back to the State. Thus, it is necessary to approach structural violence and economic justice between the States.

 This is indispensable because everything is linked.

 The trend for us is obvious. In a global world, we must extend non-violence at the relations level between States. To this end, we must set up a world economic system that is genuinely inclusive and just. Such a system does not currently exist. Our world system is neither sustainable nor inclusive. We saw earlier that presently there is no longer any rapturous vision, no ultimate goal for the great majority of humankind. This is extremely dangerous. As the Bible says, ”When there is no vision, people are unrestrained” (Proverbs 29:18). And if we do not rapidly act in that sense, we shall experience an enormous increase in terrorism from all over. Despair leads indeed to violence.

 On the other hand, with regards to war justification, we would attend the emergence of a *“peace culture,*” according to Frederico Mayor, past general Director of UNESCO[[87]](#footnote-87). He argues that in fifty years the ”burden of proof” (that is, the need of justification), has shifted *from the pacifist to the warrior*. Today, to resort to war, the warrior must first really demonstrate to the public that there is no other solution. In the past, the pacifist had to justify why he refused war. In this regard, our world really has really toppled, even and foremost if one considers the campaigns of George W. Bush.

 And the knowledge society keeps stressing the pressure toward political non-violence. Indeed, we feel more and more that we are working in a global network where everybody is on an equal footing, and that the more the interaction is creative, the more everybody is enriched with a new knowledge. The knowledge society represents a great movement toward a non-violent society.

 Once again, in this sphere, the EU is a precursor, but how badly it sells its goods! The EU is the first *alliance of strict non-violence between States. It is the first transmodern structure in the world.* Unfortunately, too often the political actors and the governments of the Member States of the Union present the Union as just a “*market.”* To do is to take the means for the ends. The market is simply one of the means to reach the true end, which is the total stabilisation of our continent in on-violence between States.

 I shall discuss in detail the relations between men and women in the following chapter. Let us now consider the spiritual aspiration in public in our modern States.

#### Spiritual dimension in public—religions and society

 The transmodern and planetary knowledge society discovers again that spiritual yearning, whatever its form, is deeply part of human nature. Jung recalled this to us almost a century ago. Modernity, therefore, erred importantly and dangerously by separating the human from its inner dimension. In this, modernity was a regression at the level of wisdom and universal consciousness. And this secularisation[[88]](#footnote-88) has been more radical in Europe, for example France, than in the U.S.

 We now observe a resurgence of the religious in all its forms. There is an effervescence, a bubbling up, an excitement, but also a mix of the best and the worst. This is normal in the re-emergence of something that was suppressed for too long.

 Where are we going? Probably toward a new acceptance by the political structures of the existence of this inner dimension. We probably shall conclude that a total separation is not possible because one cannot cut off one of the dimensions of man. But one must maintain a distinction. As my old philosophy professor was fond of saying, in Latin, *“distinctio sed non separatio*”—that is, “we have to distinguish without separating.“ It is obvious that the religious leaders of a country should never be also the political leaders, and vice versa. The Iranian example is an excellent one of what the future should not be. It is not possible to completely exclude the religious component from politics. We drove it away through the door but it comes back to us through the window and the cellar.

#### Life after death

 Another characteristic of the transmodern civilization will be a different vision of life after death. Humankind will awake from a nightmare in which he was controlled by a deep and hidden anguish of death, because life after death was completely negated and rejected. Suddenly, the new generations will rediscover (and this is already silently occurring) that which the world’s wise men and women have always said—that life continues after death and that everyone’s road extends toward light in a more or less circuitous way. That which was considered obvious for thousands of years will come back. The level of humankind’s consciousness is rising. Nobody will stop this phenomenon.

#### The sacredness of the body

 The knowledge society is good news for our bodies, which were desacralised and marginalised set aside from our own lives. The movement is already giving back a sacred dimension to the body. For instance, the rediscovery of the sacred character of the body by some movements, like Tai Chi, and by meditation. The practices are nothing new; all this has been in the Chinese culture for 8000 years. But millions of Chinese are rediscovering it *today.*

 Such examples are plentiful, as I shall show in Chapter 10. The rediscovery of the sacred character of our bodies is under way. For too long, we have forgotten this dimension of our lives. Suddenly, it is as if an enormous awakening was occurring. Certainly with excesses, but this is normal. The human body shakes itself as it is awakening.

 Transmodernity is thus a path of personal and collective re-enchantment.

#### The return of the right brain—balance

 The knowledge society will be a society that will re-establish the nobility of the right brain. For centuries, the industrial society has asked us to work almost exclusively with the left-brain—so much so that, finally, the educational system resolved itself to it and, while abandoning its humanist aims, it began to emphasise more and more the working and use of our left brains and pushed aside the impulses of the right brain.

 And then, suddenly, the gurus of the knowledge society request from us creativity in order to create knowledge in networks. There is, then, panic because creativity was completely choked.

 But now a few visionaries[[89]](#footnote-89) are setting in place formations and trainings that reactivate the right brain. This is absolutely necessary and urgent. Obviously, the goal is to arrive at a new balance between the two brains. This is what we all are hungry for…without knowing it.

### Conclusions from Chapter 9

 The issues discussed in this chapter are among the most difficult to understand for the modern mentality, because what is questioned is the *framework itself,* the manner how modern mentality reasons and works. It is very difficult for sincere “moderns” to understand what is happening in the world, because they live beyond and above criticisms, since they think of themselves as being “perfectly objective” and thus unassailable. Dialogue is, therefore, almost impossible, because they accuse any “other” approach of being “ideological” (as opposed to completely objective, which is how they see themselves). And any critical approach is implacably rejected in the “obscurantisms” camp.

 This is easily understood. They maintain the strategy that was successful for them from the beginning of the Renaissance until the 20th century.

 On the other hand, for those who, among the public opinion, already fall in some manner in a different vision or paradigm, this same chapter may deeply resound in them. By putting words to their uneasiness (malaise), I hope to allow them to think aloud what they have been thinking silently. In this chapter, I hope to help them in their reflection. That is my only wish.

 Finally, this chapter is capital in the architecture of this book, because it shows the possible alternate interpretations, the different paradigms currently available. It shows how much the knowledge society is a different society if one integrates the important and vast changes that have taken place in almost all spheres and that will come to maturity in one generation.

 Yes, we are changing society and we already have available the new economic and political tools of tomorrow if we take the trouble to use them correctly. But I repeat here, in conclusion, that it is dangerous, even suicidal, to manage the knowledge (transmodern) society with the modern tools. To do so is understandable but dangerously irresponsible.

## CHAPTER 10: THE KNOWLEDGE SOCIETY IS POST-PATRIARCHAL

 Every time I lecture, especially when talking to Human Resources (HR) people, I realise that the audience is most often made of women. And this is so whether I am speaking in Belgrade, Sofia, Ljubljana, Zagreb, Skopje, Rabat, Fès, Savonlinna, Brussels, or Stockholm. As I talk, I can see in the women’s eyes a growing understanding even as the gaze of many men in the audience becomes more empty and puzzled.

 Why? It is very simple to explain. The actual values of his new society no longer are “command, control, and conquest”—that is, the patriarchal values. I discussed this in detail in the chapter on the knowledge economy. The implicit values of the knowledge society are post-patriarchal. They are more feminine, more “yin.” This characteristic of the knowledge society is quite clear, but nobody says so out loud. And the heads of most businesses rush into this new economy with an industrial and patriarchal mentality.

 They must beware! The machine is no longer the central production tool and, therefore, man’s creativity must be nourished and people must be cared for so that they can become and remain creative. Humans must work in teams.

 This kind of attitude is foreign to many men but not to women, because they face such problems in their everyday lives—for example, when raising their children. They team up in networks, often intuitively and naturally. They are not holders of command-and-control values. Networking is not a major issue for them; neither is leaving the power pyramid. Yes, it seems that 90% of women understand the need to depart from patriarchy—but a few (10%) are still deeply patriarchal.

 For most men, it is more difficult to accept that we no longer are in the industrial society. First they are unhappy because nobody explains to them what is going on. Next, nobody tells them that the patriarchal values are obsolete in the knowledge society. (Nobody clearly sees it.) And, foremost, nobody dares to say it because no one has the mandate to do so. Thus, everybody remains silent.

 And why is this shift away from patriarchy happening just now? This system has been going on so long—so why is it happening today, if it is happening at all?

 For most men, these questions are puzzling.

 In brief, for men, there is an uneasiness (malaise) which is kept silent, but which is felt in Congresses and Conferences. I feel it in myself and in the public everywhere.

 Indeed, for men, to work in networks and share knowledge so that they can enhance it in each other… is really a *new* and *radical* behaviour. This hurts the primitive hunter in each of us. It takes us back 5000 years to when we were fruit pickers and shepherds, when Mother-Goddess reigned, and when the dominant concept was that of collective property.

 These ideas and behaviours grate against our basic male intuition.

 And, even if we agree intellectually, after an intelligent presentation on the knowledge society, we still need to work hard to adapt ourselves and invent new behaviours. Indeed, for men, there is necessarily a deconstruction phase, for we intuitively work in patriarchal and pyramidal systems. We have been nurtured for centuries in the patriarchal pyramids, and they and the idea of “command, control, and conquest” have become second nature to us—imprinted deep in our bodies and our unconscious behaviours.

 Thus, one should not underestimate the difficulty that our leaders face. And one should not underestimate the difficulty in reinventing behaviours in a professional or businessman.

### Conclusions from Chapter 10

 The values of the knowledge society skew more toward feminine values than toward masculine values. This skewing is simply a consequence of the society itself; these new values are adapted to the new production tool—the human.

 Is the knowledge society “against” men? No, clearly not. But it invites every man to reconsider himself and his behaviours in a post-patriarchal society. It is both a challenge and a way of liberation, a change of consciousness level.

 Thus, I will repeat what I said before—the principal danger in the mutation we are in lies in attempting to manage the new economy and the new society with the old modern, industrial, and patriarchal values. The danger is to “pour the new wine in the old goatskin bottles”[[90]](#footnote-90) as the Gospel says. It is the constant theme of this book. The danger is not the change, but the way we handle it.

 Moreover, the policy of “business as usual”, which now dominates, is dangerous, even suicidal.

## CHAPTER 11: KNOWLEDGE-SOCIETY VALUES ARE ALREADY EVERYWHERE

 In this chapter, I have excellent news to report. The values of the knowledge society appear everywhere already in the world!

 Indeed, several hundreds of million people throughout the world are changing values and behaviours each day. They become more sensitive to ecology, to family values, and to their neighbourhood community. They are more open to an inner dimension of their life, and open to other cultures and languages, and to exotic culinary arts. They are very suspicious of politics and politicians. However, they are conscious that humankind must change its vision of politics and economy if it wants to survive. At least fifty million of these people live in the United States, one hundred million in Europe, two hundred million in the midst of the Muslim culture, but also on the other continents—China, Japan, India, and Latin America.

 Moreover, *66% of these “cultural creatives” are women.*

 Here, we touch now the deep root of the silent Renaissance which is developing under our noses. By changing their vision of the world, people are preparing themselves in silence for the great oncoming mutation. What is coming is a mutation toward a new global consciousness of our “planetary” responsibilities with regards to the future of us all. As so well-said by Willis Harman:

”We are living through one of the most fundamental shifts in history: a change in the actual belief structure of the Western society. No economics, political or military power can compare with the power of a change of mind. By deliberately changing their image of reality, people are changing the world.”

 No political power is capable to counter such a change of vision and of values. And to put it positively, it is at this almost subconscious level that the energy resides that will help us all plunge into this mutation and make it succeed.

### The subconscious refusal of death is the real engine of change

 This inquiry unveils an unexpected dimension—like the hidden face of the atmosphere of death that we described in Part One—an extremely powerful and omnipresent impulse of Life. This impulse is a very powerful engine which already runs at full throttle. Unfortunately, one does not see it, because it lies deep within us, at a subconscious or barely perceptible depth. The engine of the ongoing change is the *subconscious refusal of the collective death of humankind by the world citizens.*

 Moreover, people who feel the impulse are numerous, abnormally so for an ordinary mutation. Indeed, Arnold Toynbee, the historian of civilizations explains to us that, for important mutations, about 5% of people silently prepare the values of the oncoming era. Now here we are a group five times larger than usual, according to Toynbee. Thus, the mutation may be five times more important and vast since the collective unconsciousness is five times stronger.

 Thus, in this chapter, I show that humankind has already decided that is does not want to die. It does not want to die and, therefore, it is in the process of reprogramming at full speed millions of individuals around the globe toward the life-affirming values.

 One might say with my friend Rupert Sheldrake, whom I met for the first time in San Francisco[[91]](#footnote-91) at the State of the World Forum[[92]](#footnote-92) that a new (morphogenetic) field of consciousness is appearing and silently infiltrating our subconscious. This field bears potent and rapid transformation of the basic values, the basic paradigm, in each individual.

 One also might compare the collective subconscious of Humankind to animal species, which increase or decrease female fecundity by a subconscious reprogramming, according to whether there is scarcity or plethora of the species.

 Let us recall that the values of death are expressed as unconsciousness with regards to the future and our obligations toward the generations to come. This unconsciousness may take the shape of:

General unconcern and indifference

“War on Nature”—war on life values

Short-sighted vision and the desire for instant gratification

The “business as usual“ approach

On the other hand, the life-enhancing values express themselves as:

Anxiety over our collective future and that of our children

Reconnection with the cosmos

Higher level of consciousness (consciousness of the fate of the earth)

Acceptance that we have to change and that it is nobody’s fault

 Thus, humankind seems to reprogram itself to organise its survival. This reprogramming manifests as changes in values and behaviours of people the world over. This “happens” in the deepest part of each person’s personality and, even, in the deepest part of each one’s body.

### The law of “complexity consciousness“

 The genial Jesuit Pierre Teilhard de Chardin, was born in France and died in New York. He explains his famous “law of complexity-consciousness” in his visionary writings. The more complexity on earth increases, the more there will be leaps in the level of humankind consciousness. According to him, at the beginning of this new millennium, we might attend the tipping over of humankind toward a fundamental directional change. Instead of always moving toward more complexity, we suddenly might reach a trend reversal, a tipping over toward a progressive bringing together of people, which he calls “omegatisation.” After a period of maximal divergence, humankind would move in progressive convergence, toward a point omega, which is the Cosmic Christ. It suddenly would move toward more love, more consciousness, since the cosmic Christ is a source of light, and infinite and divine love.

 Sri Aurobindo and the Mother, his vision sister and spiritual partner, announce the progressive descent into each of us of the “Supraconscious” and of the Supramental. The Supraconscious is a much higher spiritual energy. In simple terms, it is a progressive divinisation of humans. And this divinisation is part of the human evolution on earth. According to them, and to Teilhard, as well, human evolution is not terminated and it actually is in the process of “jumping” into an important period.

 And this process has already entered a decisive stage. This process of the Supraconscious descent is influential on our bodies and our cells. The Mother has written books and testimonials on what she experienced herself in her body. She felt a transformation from the inside of the cells of her body, sometimes very painful. She called this phenomenon an enlargement of the “cells consciousness.”

 This inside transformation was their remarkable and astonishing secret fight. According to their witnesses, Aurobindo and the Mother foreshadowed in their bodies the consciousness mutation which is ongoing globally.

 Thus, the people of the world are changing without exactly knowing why or how. Humankind changes, but this change is still invisible because it infiltrates itself through our personal lives and our basic values which move, through new questions which come into our view, through our bodies which change and through our vision of life which moves full speed but silently.

 The change to the knowledge society is likely to take place in two stages. The first stage (which we see now) is the change deep inside millions of citizens. The second will manifest as important political and economic crises.

 According to my own contacts and information sources throughout the world, the mutation is ongoing with an unsuspected strength and depth on all continents. Humankind is preparing itself to live in the 21st century.

 And, thus in the deepest, secret, seldom-visited part of our collective subconscious, we have discovered a discreet and potent engine that silently pushes the transformation of our civilization with an unsuspected strength. It is somewhat like the “Gulf Stream” which is potent and that no one can stop nor deviate, but which is deep and invisible. In any case, this transformation engine is running full throttle and is changing us all inside on all continents. This movement also starts from the coldest waters. It will take time to come to the surface. Jacques Delors often said in private during the visit of world philosophic or religious personalities that it was necessary, in this time of mutation, not to concentrate on the waves of the sea, but on the undercurrents in depth.

 But let us look at this phenomenon in detail. I base the following observations on the inquiry of Paul H. Ray in the U.S. and later also in Europe.

### The inquiry on the “cultural creatives”

 By extending to the whole of American society his methods of market and customer analysis, Paul H. Ray was surprised to discover, next to the Republicans and the Democrats (the latter of which are more or less like the European left) a new family of citizens—the “cultural creatives.” These are women and men who create new values and who, without knowing it, are activating the 21st century paradigm. They are fifty million American citizens who are “invisible” in the system because, most of the time, they do not vote and do not read the traditional newspaper. They are “invisible” also for the media, which do not talk about them since they do not know that they exist.

 This family of citizens is “neither right, nor left, but ahead.” It wants something else. It mainly wants to integrate and combine the best elements, actual or bequeathed by both traditional political families. In brief, it wants to reconcile that which was analytically fragmented by modernity.

#### 66% are women—they silently lead the change

 The majority of these new citizens are women—66% in this emerging group. It is thus understandable that, in this group, new life-enhancing feminine values are rising and asserting themselves. We have found this trend again all along in this second part of this book. Everywhere in the wings of what is changing or getting ready to change, there are women anticipating and already quietly going to work in another way. Little by little, they are sewing back our torn Humankind. A number of women already are on the last curve of Figure 2 and are astonished when they are asked about it. They find this entirely natural.

#### The *values* of the cultural creatives

 In his research, Paul H. Ray[[93]](#footnote-93) provides some very enlightening statistics. The first numbers reported hereunder express the percentages registered among the group of 24% of cultural creatives. In the following list, the *italicised* numbers in parentheses represent the percentage of positive answers in the American population as a whole.

Very interested by ”voluntary simplicity”—79% (*63%*)

Work at reintegration and reconstruction of the social link in their local, regional and worldwide communities—92% (*86%*)

Reconnections with nature and reintegration of ecology in the economy—85% (*73%*)

Ready to bear more taxes to end pollution and the warming of the atmosphere—83% (*64%*)

Rediscovery of sacred character of nature—85% (*73%*)

Revaluation of the sacred dimension and the spirituality in their lives; they want to rebuild themselves from the inside—52% (*36%*)

Consider important the ability to develop their own professional creativity and they are willing to earn less to that end—33% (*28%*)

Reconciliation between the religions and synthesis of what is best in the great Western and Eastern traditions; they rediscover meditation and spiritual experience—53% (*30%*)

Tend to believe in paranormal phenomena, reincarnation, life after death, the importance of divine love, conceive God as immanent—53% (*30%*)

Reconciliation also of science and spirituality, of medicine with a more holistic vision of body and soul; use alternative medicine—52%

Overstepping the too rigid frames of traditional psychoanalytic approaches with transpersonal psychology—40% (*31%*)

Altruistic, involved in voluntary commitment—35% (*27%*)

Their inner progress work does not remove them from their social engagement, on the contrary—45% (*34%*)

They like to travel, are xenophilic and love foreigners—83% (*70%*)

They have a sense of responsibility for Gaia, our little blue planet, which is in danger—85% (*73%*)

Things they are suspicious or afraid of include:

Growth at all costs, of polluting industrials, of big business in general—76%

Violence, particularly toward women and children—87% (*80%*)

Finally, as any group, they also define themselves by rejecting some values:

They refuse the consumer’s society and the model of hedonistic happiness it proposes—90%

They refuse the disenchantment of those who live day after day, without an ultimate goal—81%

They are against those who, in the business world and on the right, deny decisions and measures favourable to the environment—79%

They refuse the winner’s ideology, competition ay all cost, the run after money—70%

They fear losing their employment an that their partner loses his—62%

They refuse materialism and the endless search of material and financial goods—48%

They refuse fundamentalisms of all nature and intolerance, namely with regards to abortion—46%

They refuse the cynicism which makes fun of social solidarity and the care of the other—40% (*27%*)

#### The *behaviours* of the cultural creatives

 The characteristic behaviours of this group of American citizens are also interesting.

They are those who *read the most*, listen to the radio the most, and watch television *the least*. They really do not appreciate the content of the programs, and they are active in protecting their children against television advertisements.

They are voracious consumers of *culture.* They paint, carve, create art, and visit exhibits. They read and write articles and attend work groups where books are discussed.

They are *critical consumers* who want exact and precise information on the origin of bought articles. They hate deceitful publicity, car salesmen, or the superficial press.

They want to buy cars and houses that last a long time, that do not pollute or pollute little and are made of healthy and durable materials. They choose genuineness against artificial food.

They are experienced gastronomes who appreciate the culinary art of other countries. They like to talk gastronomy and exchange recipes.

They hate the typical middle class house which is praised in advertisements. They *individualise their house* to the maximum with what they bring back in their travel from the four corners of the world.

They *travel the most* and the most intelligently, among others through organizations that promote educational and spiritual trips, the eco-tourism, the safaris-photos. They are open to the true discovery of other cultures.

They are the principal *consumers of sessions and conferences on spirituality and the inner search as well as on alternative medicine*. They do not consider their bodies as machines to be fed or cared for with drugs, but well as an ally to be listened to, loved and preserved.

 *Why this silence*?

 Why, asks Ray, do the media not report on this important section of the population which is growing steadily, whereas the two other groups are in a more or less slow but continuous decline? According to him, the American media are incapable of considering positive information as news. ”Good news is no news.” If one discusses with journalists who reflect on those issues, many will acknowledge that the actual modern paradigm is not working so well, anymore. However, they seem incapable to imagine what else humanity could do. With this state of mind, imprinted with conservatism, a 25% group of cultural creatives does not weigh heavily in the eyes of the professional reporters. Thus, the silence remains. Today, all those who would like to come out of the beaten tracks, particularly the young, keep believing that they are solitary marginals (lonely cowboys), because nobody tells them about the fifty million U.S. citizens who can be considered “cultural creatives.”

 After ten years of experience in this field, my own interpretation is that it is a question of vision, of the “eyeglasses” I spoke of earlier in this book. People only see what their current eyeglasses allow them to see. Or, to say it differently, it depends on which curve in Figure 2 the media and the politicians find themselves on. Are they on the industrial curve or on the rightmost curve of the knowledge society? If, as a reporter or as a politician, I place myself on the curve of the industrial society, all these inquiries on cultural creatives will seem to me like hot air, without meaning, like some type of opium of the “New Age,” to be distrusted. But if I am on the curve of the transition or on the knowledge society curve, this inquiry will confirm to me that I am not crazy, but that I am among the millions of pioneers of the planetary and transmodern era.

### One never” forces” anybody to change paradigm—it is impossible to do so

 After doing hundreds of interventions on this subject for ten years now, I have come to realise three things.

1. In no case should one try to convince someone else to change paradigm, because insisting that someone do so can be taken as an imposition and will only stiffen positions.
 Indeed, people feel attacked in the basic values upon which they have built their lives. And when you feel that somebody, even with the best intentions, wants to undermine your basic values, your reflex is to strongly react in self-defence. Thus, to make a frontal attack on someone’s paradigm leads nowhere or even may worsen the situation since any transformation will be rendered more difficult.
2. Many politicians and media people “officially” still are on the industrial curve in Figure 2. Even if, sometimes in private, they ask themselves very intelligent questions.
 This is the principal reason for the current blocking. We are in front of a typical blocking of paradigm changes, as very well explained by Thomas Kuhn[[94]](#footnote-94).
3. The only thing to do is to help the millions of cultural creatives, who listen to you (30% of your audience) to bring to the surface that which they already think inside.
 I see myself as a true “organic intellectual“ in the meaning of Gramsci, an intellectual at the service of people trying to help them to explicitly articulate what they already implicitly feel and think.

### Paul Ray’s inquiry in Europe

 I had the fortune and the honour to meet with Willis Harman in 1996 in California at the Institute of Noetic Sciences shortly before his death. We became friends almost instantly. What a wonderful human being.

 He much insisted on the importance of Paul Ray’s inquiry that was just published. I read the book he gave me and became instantly enthralled. Thus, I proposed to Jerome Vignon, then Director of the Forward Studies Unit of the European Commission to invite Paul Ray in Brussels. The Forward Studies Unit then invited the Statistics Office of the European Commission, called Eurostat, to carry out a preliminary inquiry in the fifteen members of the Union using un part the American questions.[[95]](#footnote-95)

 Eurostat conducted the inquiry between June and September 1997. However, the analysis of the results was entrusted to an outside consultant, Research International in Paris. The results were presented at the State of the World Forum in San Francisco by the Forward Studies Unit in November of the same year. The European results clearly support the trends evident in the American inquiry.

 In 2002, the Club of Budapest decided to initiate a vast inquiry with the questions of Paul Ray, but intelligently adapted to each country. I do not yet possess all the results of this second inquiry.

### The cultural creatives in Europe—the same trend as the U.S.

 According to Jean-Francois Tchernia, the author of the study requested by the Forward Studies Unit, “*it is strongly likely that a group of similar nature as the American cultural creatives may be identified in Europe… It seems possible that a non-negligible minority of Europeans, for instance 10 to 20%, presents features close to those of the ’American cultural creatives’.”[[96]](#footnote-96)*

#### A hundred million cultural creatives in the European Union!

 If the numbers of the preliminary inquiry are credible, these 10–20% of Europeans represent 50–100 million people, of which 33–66 million are women. Unfortunately, they live like a marginal minority, and they feel lonely even though they are numerous. It is a huge crowd which lives and prepares changes in depth.

#### A smaller proportion of “cultural creatives” in France?

 In my travels, I have come to realise that everywhere in Europe the same proportion of the “cultural creatives“ exist. However, I would say that it is in France that I met the smallest percentages in my audiences. In 2005, I was invited to address a hundred CEOs of an important French conglomerate in its Paris headquarters. I perceived that what I told business leaders seemed rather new, even deviant to them. I somewhat observe the same ignorance, even refusal, about this problematic type of society change among my Executive International MBA students in an important French Business school where I teach every year.

 A study just came out on the “cultural creatives“ in France.[[97]](#footnote-97) It estimates at 17% the emergence of cultural creatives in France. Indeed, it is lower than in other countries. But, to this group, one must add the 21% that the inquiry calls the “alter creatives,” who share the same aspirations but NOT the “spiritual dimension,” an expression which seems to rebuff the French lay and secular sensitivities. By adding the two groups, one gets a number of 38% which is larger than I would have expected.

#### In Italy, the tidal wave—80%

 Here are the preliminary numbers[[98]](#footnote-98) of the Italian inquiry coordinated by professor Enrico Celi of the Sienna University. They will be published soon and they are even more eloquent. In Italy, the group of cultural creatives is 35% to which one must add the group of those who are sensible to those new values, at 45%. Thus, the total is 80% of the population, which is almost incredible. Nevertheless, it likely agrees with the Italian mentality, much more open to the proposed new values.

### Opening to the world change in businesses and in Eastern Europe

 These days, I give more and more lectures for the world of business. And I am always surprised that what I have to say does not elicit major debate. The world of business seems much more open to new ideas, namely through the knowledge economy and the intangible assets in the stock market.

 In Eastern Europe, where I often work, especially since I was appointed dean of the Cotrugli Business Academy, I perceive an opening to change that is much more important than in Western Europe. I sometimes have the impression that Eastern Europe and the new East European members of the European Union might move faster in the society change and toward the knowledge society than the old members of the Union which are still comfortably installed in the industrial society even as it comes to an end.

### Existence of cultural creatives in Japan

 In 1990, I had the pleasure and the honour of visiting Japan. The goal of this visit was to talk to the Japanese about their cultural and ethical vision of science and technology for my report on religions confronting science and technology.[[99]](#footnote-99)

 One of the strongest impressions from that trip was the emotion of the Japanese people, some moved to tears, that some official of the European Commission came to ask them questions on their ethics and their philosophical vision of science and technology. Another very strong impression was a meeting with Dr. Takeshi Umehara, a futurist and a high-level intellectual. He talked to me of the paradigm change in which our societies have been engaged for years. The same paradigm change was occurring in Japan, but nobody talked about it and this was occurring “under the surface.” He even told me: ”If President Delors wants to initiate a dialogue on this passionate subject, I would be very interested.” This same Umehara was accused of conservatism by the “modern” and “rational” Japanese press which, like ours, dominates the media and did not want to understand his message. Here is a citation by this exceptional human being[[100]](#footnote-100):

“My hope now is to discover the cultural origins of Japan not only a new value orientation, which would benefit us as we forge the values our children can live by in the 21st century, but also to contribute to the whole of humanity a new value orientation that suits the post-Modern age with its overriding ecological imperative (p. 22).

 This last phrase is very important. He perceives the paradigm shift that he calls the “postmodern age with its overriding ecological imperative.” He sees also the necessity to prepare the new values that “our children can live with in the 21st century.” He is also very critical of the “industrial Japan” because it betrays the core values of Japanese culture (Shintoïsm) which considers everything in nature as “kami”, sacred.

“It is hard to avoid being pessimistic about the **outlook for Japan’s leaving a valuable legacy after its days of economic glory are over…** Personally, I would have to agree with those who say that mere economic prosperity is evil if it fails to produce things of cultural value—and that a country that pursues this sort of culturally empty prosperity is harming rather than helping the rest of human race. So I am forced to conclude that we are not in a position to take pride in our economic prowess.” (p. 23)

 He knows that he is in a minority.

”There is no question that the modern Japanese reality contradicts the ideal I put forward. Unfortunately, my opinion is a minority view in Japan. I ask you to wait 10 years. By then, I believe my opinion will be the majority view.” (p. 31)

 Fortunately Japan has kept the faith in the eternal cycle of life and death.

"Japan's strength is to have preserved, more than other supposedly civilized peoples, a 'belief in an eternal cycle of life and death'. The forest civilizations probably had a similar philosophy… Thus the Japanese have no reason to be ashamed of the ’primitiveness‘ of their deep beliefs, at a time when the whole world is discovering that ‘we have to reconsider our feeling of superiority over nature’ and at the precise moment when ‘modern’ science has shown that life is one and that living beings and their environment form part of the same ecosystem. After our death, our genes live on in the next generation, in a continual cycle of rebirth. We must revert to the multimillenary wisdom of pre-agricultural civilizations…

The Japanese must escape from their cultural inferiority complex and have confidence in the value of their culture in the world-wide debate on the ecological future of our planet. If at the same time the West were to shed its cultural and scientific superiority complex, a fruitful dialogue could take place…

Many Europeans do not consider Japan capable of contributing to the international debate on world problems. I am convinced of the opposite. Yet we can no longer survive with the modern paradigm of uncontrolled growth. That is the essence of post-modernism. If Mr Delors is interested in this conversation, I am available."

 This long citation is almost as eloquent as the statistics I quoted above. Through this intellectual, one perceives that the same subterranean movement operates in Japan, as it does for us in the West. *The change is occurring quietly. But it occurs.* Every time I went to Japan, I was told about the women’s action and their enormous struggle to be recognised as such in the Japanese society. But the same movement of values change is ongoing with the women at the head of the pack, but probably under completely different forms.

 One sees all over that intellectuals or common people are sensible to the planetary problems and are in the process of changing values and mentality. But it is very difficult to apprehend the phenomenon in the local press, which either ignores them or attacks them.

 And this leads us to China…

### Existence of cultural creatives in China?

 My experience during my travels to China is similar. I had no background to help me, apart from the testimony of some intellectual friends. In brief, they tell me that 10% of Chinese intellectuals[[101]](#footnote-101) (that is, about five million intellectuals) are indeed conscious that China is engaged in a development model that is unsustainable and directly leads to an ecologic and social catastrophe. They are looking for a way to “leapfrog” the too-polluting industrial phase and to enter directly the post-industrial phase of the knowledge society. Thus, they are looking for contacts with intellectuals across the world that are on a similar search. Unhappily, those intellectuals have not enough financial means to travel abroad and not enough foreign contacts with cultural creatives in the West.

### Existence of cultural creatives in the Muslim world

 In May 1998, the Forward Studies Unit—in collaboration with the cabinet of the President of the European Commission, Jacques Santer, and the World Academy of Art and Science, based in the U.S.—organised a conference in Brussels on the theme “Governance and civilizations.” The goal of the conference was to ensure that we were not moving toward a ”clash of civilizations” and cultures, in opposition to the hypothesis proposed by the Harvard professor, Samuel Huntington. Our hypothesis was that these conflicts rather were between contradictory interpretations (paradigms) inside each of the great religions.

 The most remarkable (and most remarked about) intervention certainly was that of Ziauddin Sardar, a university professor and advisor to numerous Muslim governments in Asia, and chief editor of *Futures* magazine. He confirmed that in the midst of contemporary Islam, there no longer was any rational and secularised “modern”, but that an important part of Islam was composed of believers who remained attached to their tradition, which was life-enhancing and was most sacred for them. However, they were also very interested in adapting their religion to the current world. The matter was to take the positive elements, but not the negative ones, from “modernity.” He affirmed that the great majority of current Muslims in the world are transmodern in the sense that we had defined in our initial presentation*[[102]](#footnote-102)*. This silent majority in the Muslim world wants and is doing a creative synthesis between tradition and the positive elements of the contemporaneous civilization. He added that the major problem was that the Western chancelleries were so modern, or even postmodern, and rational that they were incapable to perceive this deep change that was occurring in the midst if Islam.

“Transmodernism is the transfer of modernity from the edge of chaos into a new order of society. As such, transmodernism and tradition are not two opposing worldviews but a new synthesis of both. Traditional societies use their ability to change and become transmodern while remaining the same! Both sides of the equation are important here: change has to be made and accommodated; but the fundamental tenets of tradition, the source of its identity and sacredness, remain the same. So we may define a transmodern future as a synthesis between life enhancing tradition—that is amenable to change and transition—and a new form of modernity that respects the values and lifestyles of traditional cultures. It is in this sense that traditional communities are not pre-modern but transmodern. Given that vast majority of the Muslim world consists of traditional communities that see their tradition as a life‑enhancing force, the vast majority of Muslims world‑wide are thus more transmodern than pre‑modern.

 Most politicians, bureaucrats and decision-makers do not appreciate this point. The reason for this is that when traditions change, the change is often invisible to the outsiders. Therefore, observers can go on maintaining their modern or post‑modern distaste for tradition irrespective of the counter-evidence before their very eyes. The contemporary world does provide opportunity for tradition to go on being what tradition has always been, an adaptive force. The problem is that no amount of adaptation, however much it strengthens traditional societies, actually frees them from the yoke of being marginal, misunderstood, and misrepresented. It does nothing to dethrone the concept “Tradition” as an “idee fixe” of western society.

The West has always seen Islam through the lens of modernity and concluded that it is a negative, closed system. Nothing could be further from the truth. Islam is a dynamic, open system with a very large common ground with the West. But to appreciate this, Islam has to be seen from the perspective of transmodernism and understood with its own concepts and categories.”

 If this hypothesis is confirmed, it would mean that at least 300 million Muslims in the world might be in full mutation and embarked in the same cultural creation than the rest of the citizens of the world. And this is happening without any Western government noticing it. In that group, women play a very crucial role.

 Indeed, another remarkable encounter confirmed to me the hypothesis that Islam was on the move. I encountered Mrs. Sona Kahn, a lawyer from New Delhi, in a meeting in Stockholm organised by the Swedish Ministry of Foreign Affairs. She later approached me in Brussels asking whether the European Commission might give her 10000 euros to finance a transmitter that would allow her to communicate more easily with her network of 30 million Muslim women in India. This network, she explained to me, intended to rewrite the Sharia (Islamic law) that many consider too patriarchal and flagrantly unjust toward women. She herself is working for the Supreme Court of India and is in contact with her colleague of the Supreme Court of Pakistan who does similar work. She has also contacts with Iranian colleagues.

 For me, these Indian and Pakistani women are operating the transmodern synthesis that Sardar talks about. Let us not forget that the Muslims in India represent a minority of more than 120 million people.

 It is possible that I might be totally wrong, because we do not have solid numbers outside Europe and the U.S. Nevertheless, there is a convergence of indices which make me think otherwise.

 Most other “observers” do not move in the same direction and do not share the same vision. Do they have the correct eyeglasses to catch sight of all people who move everywhere?

### Conclusions from Chapter 11

 The values of the knowledge society are gaining ground everywhere, incredibly rapidly, and intensely, and in a perfect silence. They are in the minority all over, and thus, invisible.

 One may, perhaps, present the statistics differently and state that 20% in each of us is in the process of mutation and of changing values silently, whereas 80% in each of us remains anchored in the old modern and rational industrial values.

 In any event, the change is happening. Our values are moving, although this movement is barely visible.

## CHAPTER 12: TOOLS FOR GENUINE SUSTAINABILITY

 In this final chapter, it is time to bring all of the threads together to weave the fabric of the knowledge society and transmodern (planetary) approach to create a genuinely sustainable future.

### What is genuine sustainability?

 Genuine sustainability is achieved when the footprint of humanity on Earth becomes positive. This means that the overall impact of human activities should be positive, not negative as it is today. This also means that we would be *cleaning* the environment and *improving* the global situation for our children.

 This is possible if we realise that our industrial-modern and patriarchal paradigm is dead as a credible pattern for the future. Indeed, few people would affirm that we can continue with the same non-sustainable, industrial economic system for one more century. This is what I have tried to explain in this book. Yes, this industrial economy is still there but more and more it reveals itself as not representing the solution for our future. What prevents our governments from changing is the absence of vision of what tools we could invent after the modern industrial society.

### We have the tools

 On both sides of the Atlantic, and in the BRIC (Brazil, Russia, India, China) countries the need exists to become competitive in this new knowledge economy, and it important that we realise how much we are in this new economy already and how much this is a new frame, a new vision, a new paradigm. Once we become aware that one part of the business worldwide is already in this new management based on knowledge (and is prospering in silence), we become able to understand that this new paradigm in which business people and 20% of the citizens worldwide already exist contains the tools we are looking for. We have the tools in hand but we do not see them.

###  Sustainability becomes a very important intangible asset

 Why? Because, as I have shown in this book, the more business is working for the environment, the more it will accumulate “intangible assets,” and the more the stock markets will reward such businesses a positive reputation, which increases the value of such intangible assets even more! I have shown examples of businesses succeeding in this new paradigm—and there are plenty of them. Newspapers do not speak about them because good news is no news, as we know. Therefore, the examples are before us, but we do not see them.

### A win-win logic is possible between environment and profit

 We are discovering that it is possible to shift *now* from a classical industrial vision of a necessary trade-off between environment and growth toward a win-win approach. Indeed, a new win-win-win (business, environment, citizens) logic is already in working in many businesses, although it is totally new to the “industrial” and “free-trade” adherents. What I have shown in this book is that it is possible even now to change the course of our world economy from a win-lose approach, with its classical trade-off approach between growth and environment, toward a win-win-win approach, which is the only viable solution for the future. We have the tools in hand, but we do not see them because we stick to our old ideas and visions.

### And we have a new concept of qualitative progress in hands

 We have another tool in our hands, as well—the concept of progress. The whole of our vision, of our paradigm, for the last three centuries has been dominated and structured around the concept of *material, quantitative progress*. The more we produce, the better. The more we expand, the better. The more growth we have, the better. Everything in our economic vision, and in our mentality, is structured consciously or subconsciously around this fundamental concept of quantitative and mechanical growth.

 On the other side of the coin, we are coming to feel that this “*more is beautiful”* approach will not work in the 21st century anymore, because it is not sustainable. Indeed, it is strictly impossible to prepare for a genuinely sustainable world with this old concept of progress. The problem is that this concept has been ingrained in us for the last several hundred years. It is also fixed into the basic bricks of the American dream, as Jeremy Rifkin has reminded us.

 And suddenly on the scene appears a new concept of *progress based on quality*. Because we have seen that in the knowledge society *more* information is not the issue—there is plenty! The battle is now for *higher quality* of knowledge and wisdom. We are seeing a fundamental shift of the cornerstone of our Western civilization that was place three centuries ago—the concept of progress reversing completely. And this is wonderful news!

 Finally, here is the frame we were lacking for imagining a genuinely sustainable future in the 21st century. We have splendid new tools and concepts in hands, yet we hesitate to use them. The real battle of the coming years will be regarding how quickly we will grab the new tools and the new vision.

### The political tools of the 21st century

 I have shown in this book that we also have the political tools in hand to plan the shape of the future—*a geopolitics beyond war as a normal means of foreign policy.* Without knowing, and with the help of the U.S., Europe has been obliged to invent after World War II, the first transmodern political structure of the 21st century—an *alliance of permanent non-violence between States*. It was totally incredible as a project in 1950, when Jean Monnet, in the name of the French government visited Konrad Adenauer in Bonn. It is now a fact. And its success is attracting attention and134 imitation, like a magnet.

 What is important to understand is that this European Union represents, despite all its defects, a new political paradigm. It is opening a new post-war era for the 21st century. Once again, Jeremy Rifkin, from U.S., is in my opinion, one of the best observers of this paradigm shift. And this paradigm shift is only at its initial phase. It could lead us in the 21st century toward a completely new management of violence worldwide. Will violence disappear? No. However, as we have succeeded in taming violence at the level of the national space inside the borders, it evident that the EU has become a space of non-violence between States. It is conceivable that this model could slowly become the norm. Will then wars disappear? Probably not, but they will occur less frequently and will not anymore be considered as “normal” foreign policy instrument.

 In this new political paradigm, it is thus thinkable that our disproportionate spending in arms, armies, and arms trade could decrease during the 21st century. And we could imagine instead *a huge world investment in a new greening and cleaning economy instead*, creating millions of meaningful jobs, as Hazel Henderson was proposing in the European Parliament in Brussels, in November 2007, at the Beyond GDP[[103]](#footnote-103) conference.

 All these things comprise the vision contained in the positive idea of the knowledge society.

# FINAL THOUGHTS

 The transformation that I describe in this book is not easy to live. I myself lived through the personal challenges of undergoing this paradigm change in 1990, and I needed nine months of recovery! Initially, I was a modern and rational intellectual, but in the end, I found myself as a transmodern, planetary intellectual. This transition changed my life profoundly and the process is still ongoing. ( This personal transformation will be the topic of my next book.)

 I have written this book as a clarion call for action and for the rekindling of a hope that already resides in each of us. We possess the tools to confront the challenges of the 21st century, but we need to change our eyeglasses to see them. And this is most difficult for those who do not believe that they have eyeglasses on in the first place—especially because the eyeglasses render themselves invisible.

 It is when one has them on that one can’t see them.

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# APPENDIX 1:

# THE GROWING IMPORTANCE OF INTANGIBLE ASSETS IN THE STOCK MARKETS

 In this book, I have analyzed how the internal logic of the knowledge economy differs from that of the industrial capitalist economy. I have shown that this economy is really "post-capitalist" and post-industrial. I have also shown that most economic actors are still in an industrial mentality and try to manage a post-industrial economy with industrial tools. This is perfectly understandable, because there is not enough information and valuable debate on this shift between the industrial economy and the post industrial knowledge economy.

 And this is perhaps why the intelligent and prestigious "Lisbon strategy" of the EU is not working so well. This EU Lisbon strategy was set up in March 2000 at the EU (Heads of State) Council meeting in Lisbon. Its aim was to make the EU the most competitive economic actor in the knowledge society before 2010, but in a socially inclusive and sustainable way.

 Now, in analysing how this Lisbon strategy is working, one observes that the strategies are probably too "industrial" to be successful. Once again, it is perfectly understandable, because the EU and its prominent economists, have not explained to the citizens and the business actors the post-industrial economic transformation we are in. But it is sad to see a waste of money and energy in the execution of such a good project.

## Double standard

 Susan Mehrtens, one of the most advanced visionaries of the U.S. business in the 21st century says[[104]](#footnote-104):

“American business, today wears two different faces. One is the face of the large multi-national, publicly traded corporations. They manifest an intense, single-minded focus on the bottom line, and are prepared to sacrifice almost everything to the quest for constant quarterly profits, to satisfy the Wall Street stock analysts. These companies practice an ethics of expedience (what works is right) and encourage extremely addictive behaviours among their personnel, most notably in the form of work alcoholism…Not surprisingly we are seeing more and more people leaving this dysfunctional environment.

The other face of the U.S. business is much more viable in terms of the future. It is the world of the small, privately held company… It is not subject to the dictates of the stock analysts of Wall Street… Many of those small companies are owned or operated by women, or are informed by feminine values. It is these companies – small, nimble, fortunate by virtue of their marginal status – that will find smooth sailing on the waves of the future.”[[105]](#footnote-105)

 This double standard seems to be an accurate vision of the situation of the business today, in U.S., in the EU and elsewhere. On one side, you have many enterprises in a classical traditional (industrial) logic. They are under market and short-term revenue pressure and are not treating humans in a very positive way. They seem to go backwards. And on the other side, you have those (often women-owned) small enterprises who care a maximum for the human dimension. They “will find a smooth sailing on the waves of the future.” This second vision corresponds to the witness of Rinaldo Brutoco, president of the World Business Academy. The management of Men’s Wearhouse, in which he is involved, is of the second type, and doing very well.

 Those "new" enterprises have understood the new logic. In the knowledge society, and in this paradigm shift toward transmodernity, respect for humans is not only important, not only ethical; it is *essential* for the very survival of the enterprise for the simple reason that knowledge becomes every day more important. Only creative humans can create new knowledge in inventing new knowledge through creative exchange of the knowledge they have. This creativity is like a flower that will blossom only if it is treated well, very well. This means much more than a decent salary. It means that the enterprise must have an excellent human capital management, but also a positive social and environmental impact on society. It means also that creativity will stop if there is any fear of sanction in case of mistake. Creativity supposes the possibility to make mistakes!

## Lack of theory

 However those enterprises of the second type, which are very promising, lack a theory. They are, in fact, switching to a post-industrial paradigm. But they are working in an intellectual void. Here is what Allee, a worldwide consultant in knowledge networks management is saying[[106]](#footnote-106):

“Today we do believe that people are our core asset, that the way we use our knowledge and intelligence is the key strategic advantage of the company, that ethical principles do create value, that a company’s culture is key to success. Yet we are bound by the golden handcuffs of business, financial and economic models and frameworks that continually pull us in very different directions.… Virtually all of our business and economic models, as well as our day-to-day management tools, are leftovers from the industrial age. Time and again I watch managers and executives try to move forward into new ways of working and managing only to be frustrated by tools and frameworks that are inadequate for the new economy.”

 She warns the reader that the knowledge or intangibles economy is forcing us to a radical change.

“It is rewriting the rules of business and forcing a radical rethinking of corporate value and business models. This change is the most significant shift since the industrial revolution."

## Intangible assets—three dimensions

 Now, there is good news. We have one piece of the new vision—the so-called "intangible assets."

 In 1986, a Swedish scientist named Karl Erik Sveiby, wrote the first book worldwide on "intangible assets." This book had a little success in Sweden, but it became famous when it has was translated into English and spread throughout the U.S. and in the whole world. It has laid down the first stone of the post-industrial knowledge economy. For many people already active in the knowledge economy, it was the beginning of the new theory they were looking for.

 Sveiby has, since the beginning, proposed to distinguish three types of intangible assets:

1. *Human capital*—the human competence of the personnel. The people's implicit knowledge and how this implicit knowledge is made explicit*[[107]](#footnote-107)* and shared inside the company.
2. *Structural capital*—the internal structures and management of the company, its ICT technology, and the way it is used and improved by the personnel, its patents, its databases, etc.
3. *External capital*—the external structures and relations of the company, its alliances, in which networks it is actively involved, networks of suppliers, of consumers and of citizens. Let us not forget also the trust that the people have in the company. (Are the people trusting more Tupolev or Airbus, for example.) And, finally, the reputation, the "brand" of the company. We will see in this appendix that brand and reputation become everyday more and more important.

 Authors like Verna Allee, stress that the model is not static. There is a knowledge flow between those three categories of intangible assets. She gives in her book this interesting quotation:

"A company increases and utilizes its intangible assets by creating, sharing and leveraging knowledge to create economic value and enhance economic performance[[108]](#footnote-108).”

 Knowledge is created by sharing. And one could say that knowledge is like love, the more you share, the more you have. This is quite shocking for "classical" ears of an "industrial" economist. But the value creation process in the knowledge economy is quite different from the value creation process we are accustomed to in the industrial production. Indeed, industry produces objects, and adds value to an object—from a block of steel I make a Renault; therefore, I have added value to this block of steel.

 But in the knowledge economy, there is no object—just knowledge. And the value creation process consists in adding knowledge to knowledge. Personnel are paid to add value to knowledge.

 Let us take as an example a small company that a friend of mine created for setting up websites and providing webmasters. This company won the bid to run the website of the European Commission in Brussels and Luxemburg. The contract stipulated that every official text issued by the EU Commission had to be on the web within 48 hours, translated in all official languages. The personnel of the company create value in translating the given knowledge. They add knowledge to knowledge. (No objects.) By the way, the management is completely different. Indeed, the CEO is incapable of controlling and commanding. He is not fluent in all EU languages. So he has used networks to make sure that quality is the best. How? Take, for example, the Greek language. He organises receptions that include a network all the Greek language people in Brussels—Greek Commissioner and Greeks in the Commission, Greek MEPs (Members of European Parliament), Greek in the Council of Ministers, Greek Ambassador, newspeople (radio, television, written press), Trade Unions, Consumers, intellectuals, etc. They all have a stake in having the best possible Greek texts to work on. And the CEO, after a glass of champagne asks them to let the team know whatever error or problem could occur. Control is outsourced to an external network.

 It is a completely new type of management.

## Ethics (values and purpose) are back in the picture

 Verna Allee shows that a company's values and purpose are the primary organizing principle determining who its customers are, what type of people are attracted to work there, and what type of structures and systems are required. As Verna explains well, the leading force in this new game are the company's "values and purpose," while in the industrial world the main leading force is linked to the amount of profit made. We are touching here a very important difference.

 And this means that most of the intangible assets, because they are value- and purpose-based, are qualitative and not quantitative anymore.

 Finally, ethics and values are thus coming back full speed in the picture, while most of the "industrial and scientific" approach was considered "value free" and out of the realm of ethics, because they were considered as "objective".

 We are indeed in another world.

## Intangibles are future oriented—hence their importance for stock markets

 Let us now add another dimension to this intangible-assets concept. They are "future oriented." In another definition given by Baruch Lev in a book[[109]](#footnote-109) on intangibles prepared by the Brooking Institution in Washington, D.C. this new future dimension is underlined:

“An intangible asset is a claim to future benefit that does not have a physical or financial embodiment. A patent, a brand, and a unique organizational structure…I use the terms intangibles, knowledge assets, and intellectual capital interchangeably."

 This definition gives us a very important new element—future benefit. And suddenly we discover that the "industrial" measurements of a company, which are based on tangible assets, like financial and other material assets, are oriented toward the past. We are so accustomed to this approach that we do not even acknowledge that those tangible assets are giving us information of the company's performance from yesterday until today. You can measure if the company has done well or not, according to the assets it has accumulated until today. But this accumulation of tangible assets does not give any information on how the company will perform in the future.

 Meanwhile, and this is the new element, intangible assets are concentrating just into those other elements, which are crucial for the company's future. One understands here immediately why intangible assets are so important today for the stock markets analysts and the banking and finance community.

## Accounting is dead—the problem is urgent for the banking community

 According to Thomas Stewart, editor of the *Harvard Business Review* and known author on intellectual capital[[110]](#footnote-110), we are in a deep silent crisis, because we are still unable to measure correctly those intangible assets. This is a real threat to our accounting system worldwide:

“Accounting, long dead, is not yet buried, and the situation stinks. Okay, that overstates the case, but not a lot. In the past several years, the inadequacies of industrial-age accounting have been proved again and again. Both financial accounting, which appears in annual reports, and management accounting, the data that lands on your desk, go wrong in specific ways, and with demonstrable consequences...” (p. 268)

 And what is wrong? The industrial-age accounting system seems incapable of taking into account intellectual capital and intangible assets:

“Accounting‘s failure to disclose intellectual capital is not just a theoretical problem. It costs investors money—perhaps you dear reader, among them... We are not talking fraud, except in a few cases—we are talking irrelevance, with the result that investors are kept in the dark and managers are operating by guess and by gosh.” (272).

 And so there is, according to Stewart, a real urgency to be able to measure intangible assets.

## How to measure intangible assets—two paths

 Baruch Lev observes that it can be difficult to measure intangible assets, because they can exist in the form of physical assets and labour, and they interact.

“Intangibles are frequently embedded in physical assets (for example the technology and knowledge contained in an airplane) and in labour (the tacit knowledge of employees), leading to considerable interactions between tangible and intangible assets in the creation of value. These interactions pose serious challenges to the measurement and valuation of intangibles. When such interactions are intense, the valuation of intangibles on a stand-alone basis becomes impossible.”

 In other words, the classical economic quantitative measurement methods are not working. What to do? How can we find a way out and measure the intangible assets? Economists envisage two ways today.

 One way is to try to quantify the qualitative intangible assets. And this is what the majority of economists are doing today. This is like trying to recuperate those new post-industrial concepts into the classical "industrial" frame of thinking. It is truly understandable, although it is perhaps not the way to the future. Nevertheless, KPMG has even invented a mathematical formula[[111]](#footnote-111). Others like Leif Edvinson and Stewart himself have proposed rating the intellectual capital. Others like the Saratoga Institute are proposing a "human capital index"[[112]](#footnote-112).

 The alternative is to say, “Okay, those intangibles are qualitative. This is almost impossible for classical economy to cope with. But we accept the situation and we try to invent a new economic approach which is more qualitative.” Here, we accept that we are in another values system. But the difficulty is that shifting to a non-material qualitative approach will suppose a real paradigm shift in economic methods, and basic economic axioms. And there are not many publications speaking to this direction.[[113]](#footnote-113)

### Intangible assets are becoming more important every day

 The majority of economists agree that the EU and U.S. economies at least around 40% in the knowledge economy[[114]](#footnote-114). Therefore, the proportional importance of intangible assets in the evaluation of a stock must be around 40% at least, and in many cases much higher.

 The more we enter into the knowledge economy worldwide, the more the intangible assets will become important. It is like a huge bulldozer advancing upon the industrial society and mowing it down in a very short period.

 Now we are in a strange situation where a bit less that 40% of our economic indicators are "intangibles" and non-material, and we still do not know very well how to cope with them, how to measure them, how to give them the due importance in the stock markets.

 Figure A1-1 is a variation of a figure prepared for a research project financed by the European Commission, in 2003[[115]](#footnote-115).



© [www.neskey.com](http://www.neskey.com/)

Figure A1-1: Relative importance of intangibles in the knowledge economy

 This figure shows the growing importance of intangibles (including sustainability) in the knowledge economy. It illustrates that intangibles were negligible in the past (as recently as 10 years ago) but that today they have as much importance than tangible assets and in the future (perhaps 10 years from now), they could become twice as important as financial (tangible) assets. We are thus in a rapid and important change and we *must prepare for it.*

 But I will end this appendix with two pieces of good news. First, the more we enter this knowledge economy, the more the content of the intangibles is evolving. The relative weight of sustainability and of social inclusion is growing in importance everyday. Second, the stock market analysts are like forerunning the community of the economists. They use their intuition to quantify the intangibles, into the actual values of most enterprises worldwide.

### Sustainability and social inclusion increase their shares in intangibles

 The more we enter in this world economic transformation, the more on one side we begin to feel more and more aggressive reactions against this "new management," "those networks," “this dematerialisation,” etc. Some industrial managers feel threatened by the changes going on. They more or less subconsciously feel that their power will diminish and die... and they begin to react negatively.

 But on the other side, I am puzzled to observe that from year to year, as a dean of a business school, I see that our students are becoming more and more sensitive and interested to orient their companies toward full sustainability and social inclusion.

### Stock market analysts are measuring intangibles... every day

 Some stock markets analysts tell me that it becomes more evident every day that the content of the intangibles are becoming more and more influenced by sustainability and social inclusion. The younger generation is increasingly eager to run companies that are "part of the solution". They do not want anymore be working in companies that are "part of the problem."

 The shift is really rapid, and the intangible assets are like the driving belt of this paradigmatic change. They push through sustainability and social inclusion in the business' agenda, through the stock markets.

 Yes, stock market analysts are silently measuring intangible assets. And speaking with them is very instructive. They are of a precious help in the transitional period.

*NB: This appendix is a reprint (slightly revised) of an article published in “Banking and finance European platform for Financial professionals.” N°3 July August 2007. (*[www.bankinfandfinance.eu](http://www.bankinfandfinance.eu/) *) It is included here with their kind permission.*

# APPENDIX 2:

# ANALYSIS OF THE PARADIGMS

 This appendix contains expanded explanations on the paradigms and figures I referred to in this book. I provide them as an aid to the reader.

## Paradigm analysis as a means of fostering tolerance and reducing violence

 Differences between the paradigms through which people view the world can produce a lot of conflict. To live in peace, one must be able to say, “Okay. That person is in that paradigm, and I am in another, but eventually we share the same faith. Let us tolerate the other’s paradigm.”

 Thus, paradigm analysis is not simply a theoretical exercise. It is a way to avoid, or at least reduce, potential long and difficult conflicts… or even religious wars. It has the potential to reduce violence, because it enables one person to name another’s paradigm—the other’s different view—and to understand why the other is considered a threat to his subconscious values. Such analysis can reduce one’s own anguish and, thus, his possibility of aggression. In this way, paradigm analysis deflates the potentially unconscious violent clashes. It is the opposite of the analysis leading to the clash of civilizations. It is a lesson from the school of deep tolerance.

 We shall see in this type of analysis that in *every culture and every religion* we can detect *the same* pre-modern paradigm, with more or less *the same characteristics*. And this is the most intriguing element—the real divisions are more *inside* each culture than *between* the cultures.

## The three basic paradigms

 In this book, I speak of three basic paradigms in society—pre-modern (agrarian), modern, and transmodern (planetary). Let us look at each one in turn.

### The pre-modern (or agrarian) vision of life

 Figure A2-1 shows the pyramidal structure of society in the pre-modern (agrarian) world view.



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Figure A2-1: Pre-modern (agrarian) pyramidal societal structure

 In this structure, God is at the top, and is the guarantor of societal values, which do not change. The clergy is considered knowledgeable regarding what God thinks and wants and has the exclusive management and control of the sacred. The clergy gives orders to the politicians, who give orders to the men, who give orders to the women and children. And the cosmos and Nature are respected and cared for, because they are parts of God’s creation.

 This figure is a description of the landscape of subconscious values and of the mentality and the behaviour of populations living mostly on agriculture. Therefore, it is also called the agrarian paradigm. In this paradigm there is a deep sense of the sacred, of the rhythm of seasons and weather, which are not changeable by men. God is the source of life cycles and values and He is eternal and transcendent. And because God is the absolute and only truth, it is naturally impossible to conceive that other faiths could exist that could lead to God.

 To understand this paradigm, one must look at its various characteristics. For the pre-modern (agrarian) paradigm, those characteristics are as follows. (I will discuss these same characteristics when describing the other paradigms in order to show how they differ from one another.)

1. The paradigm is **vertical and authoritarian**.
 Authority comes from the top, from God himself who transmits this truth directly to the clergy. The clergy is allowed by God Himself to teach governments and the faithful, men, and finally women. The animals are lower than the humans, and the plants are lower than the animals. The cosmos is lower than the plants. This means that there is an eternal hierarchy that governs the relationships between beings. However, everyone must be respected because everyone is sacred—being part of God’s creation.
2. The paradigm is **patriarchal**.
 God the Father (not the Mother) is the head of this order where men dominate women. Men are the only bearers of the sacred. Women are assumed not to have access to the sacred. Therefore, they must stay at home and care for the children’s education. If a woman dares to oppose this order, for example when asking to become part of the clergy, she is immediately considered to have committed a sacrilege, because she is threatening the whole patriarchal pyramid.
3. Pre-modernity is **intolerant**.
 Its Truth is exclusive. It is only “our religion” and no one else who owns the Truth. God Himself has trusted this Truth to us. It is thus impossible and impious to even think that another Truth could exist. Holy wars, Crusades, and the Inquisition are normal consequences of this concept of Truth. And killing a “pagan” is a good deed. It can even save a believer from Hell.
4. Pre-modernity **opposes secularisation**.
 The very concept of secularisation is considered as a blasphemy. To refuse the very existence of God is the worst crime, because it is like attacking the very foundation of society. Today in the West, pre-moderns tolerate atheists, only because it is not allowed anymore to kill them.
5. This symbolic system of pre-modernity has the great advantage of being **stably poetic**.
 Everything has a deep meaning, which is decided by God “forever and ever.” There is never a crisis of values. The younger generation has no difficulties in reproducing the values of their parents, because those values are sacred and stable. This system is built to last forever.
6. This system is **enchanted**.
 The Cosmos reflects God’s glory. Everything is full of poetry and sacredness. Believers have a deep sense of the sacred.
7. The theological and **political** **weight of the clergy** is evident.
 At least in the three “Religions of the Book” (Jews, Christians, Muslims), this clergy has a powerful hold on the souls and the bodies of the faithful. This can lead and has led to the worst religious and political abuses.
8. There is only **one valid science**—**theology**.
 Everybody spoke Latin in the “*Universitas”* of the Middle Ages. There is a real universality of thought and of language, which prevailed for centuries.
9. Pre-modernity has a **sense of the sacred**, which is self evident and not disputed.
 The whole of creation is sacred; Nature and the environment should be respected because they are part of God’s creation. God’s plan for the world has to be respected. As an example, Christians today do not feel much sympathy for the Inquisition or for the Crusades. In my hypothesis, this is so because the Crusades and Inquisition were pre-modern, while we are in the modern or in the transmodern vision today. We observe also that many Western women do not feel sympathy with the actual leadership of the Christian churches. It is likely that the reason for this is that this leadership is mostly pre-modern, or modern, and patriarchal, meanwhile many Western women are post patriarchal and planetary-transmodern.

### The modern vision

 Figure A2-2 shows the structure of society in the modern world view.



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Figure A2-2: Modern world view

 In this case, the pyramid has been retained (without moderns being conscious of the fact). The only difference is that instead of God, moderns have granted divine status to reason, rationality, and the scientific method (as Prigogine has noted). This unconscious divinisation of the scientific method and of reason is one of the main problems of modernity today.

 In this modern world view, women have acquired more freedom, but only in the private sphere. In the public sphere, the pyramid does not give them much more space! Also, animals, plants, and the cosmos in general have been removed from the pyramid entirely and transformed into “things” without much value, which can be exploited (used and abused) without thought.

 Modernity slowly emerged in Europe between the 16th and the 18th centuries. It was a very healthy reaction against the clerical obscurantism, which condemned Galileo. Modernity was a liberation movement led by very courageous intellectuals like Kepler, Galileo, Descartes, and Newton. An analysis similar to that presented above for the pre-modern view is as follows.

1. Modernity is still **vertical and authoritarian, bur secular,** in the public sphere.
 It has NOT suppressed the power pyramid of the pre-modern Middle Ages. It has simply switched God with the goddess Reason. This means that what is not rational has no value anymore, at least in the public sphere. And in this secular and disenchanted world, animals, plants, and the whole of the cosmos are “things” to be used and abused. Nature exists to be used. God’s project to give Nature to man’s custody, becomes “Nature at the exclusive service of man”.
2. Modernity is still **patriarchal** in the public sphere.
 Despite what is publicly claimed, the modern view continues to exclude women. Obviously modernity has helped the liberation of women, first in the private, and now slowly in the public sphere. However, if women are to remain in the public power structure they must comply with a rational approach; otherwise, they will be accused of being irrational and incapable of taking rational public decisions.
3. Modernity is **intolerant***.*
 Its concept of truth is exclusive—there is NO truth outside a rational truth, at least in the public sphere. The non-rational approach is simply NOT considered, even refused. Intolerance or ignorance is systematic also toward the non-Western ways of thinking. This leads to new and subtle forms of crusades, inquisitions, and holy wars in the name of progress, development, and modernisation.
4. Modernity has **secularised the world**(secular defines itself without reference to any God).
 Modernity has introduced a very useful *distinction* between religious and profane, but this distinction has become a *strict separation*. On one side you have now the serious public rational, masculine, economic, and scientific pole, which has the power. And on the other side, in the private sphere, you have the intuitive, philosophical, religious aesthetic, and feminine pole. But the latter has been relegated in the private sphere, without political power. A wall of absolute separation has been built between the public and the private spheres. Religion cannot be taken into consideration in foreign policy, for example. It is only acceptable as a private choice. In this secular world, Nature is not anymore God’s creation. It is to be used and abused by man.
5. Modernity has switched the concept of *stability* with one of ***progress***.
 Progress is considered as a value in itself without discussion. The concept of stability has been lost and is even considered obsolete.
6. Max Weber was perfectly right: modernity has **disenchanted the world***.* Our souls cannot breathe anymore in this secular society. Outside of goddess Reason, there is no basis anymore for fundamental values. Every allusion to an inward and deep dimension of human existence is forbidden in public except for burials or exceptional occasions. The world is only rational. Religions are expected to disappear slowly but forever. The only possible enchantment is provided by the progresses in science and technology.
7. Renaissance has used reason to get rid forever of the power and obscurantism of the **clergies**.
 This has been a liberation, but modernity has reintroduced unconsciously a new pyramid, a new dominating class, a new clergy, which is functioning exactly in the same way—**the technocrats and the experts**. One of the best examples is the economists. Their power is as important and undisputed as the clergy’s power in the pre-modern paradigm, even when they are wrong. They are ordering the politicians and to the public at large, without reaction.
8. The distinctions between disciplines have come to embody **strict separation and compartmentalisation**.
 In introducing new and sane distinctions, and enhancing the role of rational thinking and *“scientific[[116]](#footnote-116)” method***,** modernity has allowed the birth of science and technology and of all the other disciplines used today—like ethics, aesthetics, philosophy, history, mathematics, physics, chemistry, and later sociology, psychology, anthropology, ethnology, etc. Unfortunately, those distinctions between the disciplines have become strictly separated and compartmentalised, which forbids any real transdisciplinary creative work today. The global holistic view has been progressively lost. Modern science is excellent in analysing every leaf, every tree, every branch, every root, etc. but is unable to see the forest. We are trapped in the very rational analytical method that has given birth to modernity.
9. In the public sphere, modernity leaves absolutely **no** place for any form of **sacred**.
 In this disenchanted world there is thus a crisis of the value’s fundament. Meanwhile, science is reintroducing a kind of sacredness of rationality and technology. If a decision is “rational,” it is in principle acceptable everywhere and in every culture, at any time. And if a phenomenon is not explicable in the frame of rational science, it simply does not exist. However, this dominant rationality is also in crisis today, simply because fewer individuals believe that science and technology are capable of solving by themselves the huge problems of today and of tomorrow.

#### Where are the “moderns”?

 Modernity is a way of seeing life that has influenced slowly the whole world. It has permeated the mentality and the *political structures* and policies of all our governments at every level—local (city council), regional (Sates), national (U.S. government), continental (NAFTA, MERCOSUR, The European Union), international (the United Nations).

 Modernity is also the vision permeating all of our *education system* worldwide, all our schools, institutes, and universities. It also influences the scientific community and the whole of intellectual reflection and research worldwide. It is influencing each of us in our day-to-day life. In our relation to progress, happiness, religion, sacred, politics, work, etc. Modernity has become the air we breathe, without being conscious of it. It is really the frame in which the dominant structures of the world are functioning today.

 Modernity was born as a liberation movement, against the intellectual, spiritual and political obscurantist domination of the Church, at the end of the Middle Ages. However, it has become itself a subtle oppressive system. Modernity today is like a tunnel, in which to travel forward you are obliged to think in a linear analytic way, with no lateral thinking, no fantasy, no creativity, no possibility to think out of the box. You have to be rational and only rational. Other points of view, other cultures are tolerated, but not really accepted, because out of modernity there is no real progress, no real truth.

 Modernity has become a tunnel out of which it is time to exit. Which leads us to the third paradigm—the transmodern (planetary) view.

#### The postmodern offshoot

 Figure A2-3 shows the structure of society in the postmodern world view, which is an offshoot of the modern world view.



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Figure A2-3: Postmodern world view

 This figure illustrates that the structure of the postmodern paradigm is identical to that of the modern world view. The only difference, and it is a *very* important difference, is that there is nothing above the pyramid. Not God, not Reason, not Truth. Nothing.

 Thus, postmodernism represents a necessary phase of deconstruction, but it has *not* deconstructed the pyramid. The transmodern paradigm (see below), on the other hand, has completely changed the *frame* of thinking and the way to conceive of Truth.

 This is why, to prepare for the 21st century, we *must advance beyond the postmodern paradigm*—which is incapable of even conceiving a new mobilization for our common survival.

### The transmodern (planetary) vision

 Figure A2-4 shows the structure of society in the transmodern (planetary) world view.



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Figure A2-4: Transmodern (planetary) world view

 This figure illustrates one possible metaphor of the transmodern paradigm. There are no pyramids anymore—no power structures owning the Truth. The Truth does exist, but it is in the centre of the circle, which is empty with regard to ownership rights and theological descriptions. The more one approaches the Divine, the less one is able to say anything about the experience of doing so. This is the core experience of mystics in many religions. In this sense, the centre is empty and full of light. One could also say that the centre is the place were perennial wisdom is located. And nobody owns it.

 In this model, we see also that women and men of all cultures are sitting around the table as equals, in order to decide together about our common future. Every culture and every religion has access to the truth following its own path.

 Animals, plants and the whole of the cosmos are not “things” anymore. They are sacred again, because they have also a certain level of consciousness. They belong in the circle. We are all related, interconnected.

 This metaphor attempts to represent the implicit vision of the world of 20% of the citizens of the West and perhaps of the world. It shows an idea of this new framework, which is a radically tolerant and democratic and inclusive definition of Truth.

 Just as I analyzed the pre-modern and modern view, I analyze the transmodern view as follows.

Planetary-transmodernity is **democratic**.
 Everyone is seated equally at the table in order to discuss together common problems, putting personal and national interests momentarily on the side. There is a strict equality between women and men and between the cultures of the world. This represents an ethical quantum leap[[117]](#footnote-117). Animals, plants, and the whole of the cosmos are connected and related. They also have a consciousness. Hierarchy between them has disappeared. In its place is connectedness and independence.

Planetary-transmodernity is **postpatriarchal**.
 There is no reason anymore to discriminate between women and men. On the contrary, women’s visions and intuitions are indispensable in order to invent together innovative urgent solutions. Patriarchy is over as a value system, but it can still be very violent and aggressive.

Planetary-transmodernity is **tolerantby definition**.
 This tolerance is active. Its definition of the Truth is inclusive. All cultures and all citizens in the world are included. Everyone is encouraged to follow his or her own path toward the centre, toward supreme wisdom and illumination.

Planetary-transmodernity establishes and redefines a **new relation between religions and politics**.
 On the one hand, one must avoid the confusion between religion and politics, as existed in the Middle Ages, but on the other hand, one must abolish the modern separation of religion and politics, which becomes finally a refusal of any spiritual dimension at all and produces disenchantment of society. Planetary-transmodernity is, thus, post-secular. Religion is considered as an (ambiguous) element, to be taken into account in politics

Beyond pre-modern stability and modern quantitative progress.
 Planetary-transmodernity proposes the concept of **qualitative progress***.* The aim is a better personal and collective **quality of life** for Humanity and for the environment.

Planetary-transmodernity is able to **re-enchant the world,** because we will have again access to our souls.
 The spiritual dimension is not taboo any longer. Planetarism helps us toward a new kind of reconciliation between our bodies, souls, minds and hearts, and with the entire cosmos. This reconciliation will unleash an enormous amount of positive and creative energy, which is the opposite of disenchantment. Re-enchantment begins with the freedom of our souls when hope for a better world is possible again. However, planetary transmodernity could degenerate in a deeper disenchantment if this transformation is not real and profound.

Planetary-transmodernity downsizes **the concept of clergy**, of technocrat of expert.
 In every domain, citizens want to have the power on their own lives, and on their most intimate relation with the divine. The concept of necessary intermediate between God and men becomes less and less accepted. Instead of a clergy, what is looked for is more in the way of spiritual mentors who can help in our spiritual journey. But the same is true also for the experts. They are not anymore the undisputed gurus above everyone.

Planetary-transmodernity redefines fundamentally the **relation between science, ethics and society**.
 Science itself is going through a deep transformation. It is decompartmentalising the various scientific disciplines and is looking for real and radical transdisciplinarity. It tries to integrate ethics and meaning at all levels. The very distinction between hard and soft sciences becomes obsolete.

Planetary-transmodernity is trying **to rediscover the sacred** as a dimension of life and of our societies.
 The power structures are here horizontal. And the definition of Truth is inclusive. This rediscovery of the sacred is a very difficult task, because it is like a reinvention of new sacred places rites and times.

#### Where are the Planetarians?

 As I mentioned elsewhere in this book, you will find planetarians everywhere today—in every continent, in every country, but probably more in the Western hemisphere. According to my information, they are also very numerous in the Muslim culture, but Western modern politicians are not able to distinguish them from pre-modern Muslims. They just do not know the essential difference—planetarians are tolerant. And most of them are women.

 It is likely that the administration of G.W. Bush as president of the U.S. has increased their number in a significant way, although this is not evident in the media, and not very visible. I say this because many people in the U.S. and around the world have felt subconsciously that something changed forever when Bush came to power—even prior to the terrible terrorist act of 9/11—and that perhaps the domination of the Western values and of the Western power is coming to an end.

 This Western domination is primarily the intellectual domination of the modern rational and consumer values that the West spreads through many means, like development policies, trade policies, double standards in human right policies, etc. It is also a military and power domination by the U.S. and to a lesser extent by the EU.

## Conclusion—Which one is your vision of life (your paradigm)?

The purpose of this appendix is to introduce the reader to paradigm analysis of the three basic paradigms (world views). Equipped with this analysis, one can define himself or herself as “pre-modern,” “modern,” or “planetary-transmodern.”

 The answer might well be some mixture of the three—because we are complex creatures and can participate in two or more paradigms. Regardless, however, the paradigm shift that I describe in this book is acting inside every one of us.

# APPENDIX 3:

# MY OWN EXPERIENCE OF RE-ENCHANTMENT

 *In this appendix, I describe how I came to encounter and experience in my own life the re-enchantment that I speak of in this book. It is my hope that my personal account will provide the reader with the insight that a first-hand experience with re-enchantment can bring.*

## The first discovery

### The contract

In 1989, I was given a one-year contract with the European Commission’s Science Department to write a report on what the major religions of the West, and Japan, were saying concerning science and technology.*[[118]](#footnote-118)* My plan going in was simple—I would analyze each religion and synthesise its main teachings on science and technology. I would then establish some comparisons between the religions, underlying the similarities and differences. This was what the Science Department (called General Direction) of the Commission was interested in. Because of my background in theology and philosophy, the task seemed rather easy. For the next several months, I read and studied books from different religions to prepare for my written report.

 The whole thing was all very interesting until I became aware that there was a real problem with the way I had envisaged the work. A crisis came when I discovered, to my great astonishment, that some Catholics held exactly the same beliefs as some Protestants, Muslims, Jews and Humanists on topics such as the participation of women in science, or abortion (I was to discover later that those who held these views could be called the “pre-moderns”) while other Protestants, Muslims, Catholics, Jews or Humanists were defending opposing positions on the same subjects (I later understood that they could be called the “moderns”.) I also discovered in every religion another unusual cluster of people (many of them women) who held a really new vision on almost every subject, and it seemed impossible to classify them as the moderns or the pre-moderns. So what were they?

### Feeling lost

 These discoveries laid my beautiful plan in ruins. It was meaningless to stick to my original strategy of comparing the underlying similarities and differences between the religions when there were so many differences in the beliefs among the believers. How could I possibly present THE position of any religion?

 The task was impossible. The question I had been asked to answer did not fit with the reality I was observing. What should I do? I felt I must resign. I could not sleep for several nights, turning the problem over and over in my head. I did not see any solution. I was feeling lost. My whole intellectual, rational and analytical approach was of no help. Reality was sending me information that was completely destroying my deductive approach. I felt humiliated in front of a task that I had foreseen as easy, and my whole intellectual system was in crisis.

 I started having nightmares in which I relived childhood memories of my eldest brother breaking some of my favourite toys. Yes, my favourite intellectual toy had now been broken. It was no longer the brilliant apparatus with which I could solve every problem in the world. My ego was shattered, and I did not know where to go for consolation. Loneliness, sadness, and feeling of impotence washed over me. I was feeling like a lost little child.

### A light in the tunnel

 Then one morning, I opened book named *On Purpose* by an Australian professor named Charles Birch[[119]](#footnote-119), and I read the following:

“Postmodernism challenges modernism, which can be said to have begun with seventeenth-century mechanism, petrified with eighteenth-century rationalism, nineteen-century positivism and twentieth-century nihilism. As contrasted with the modern worldview, which is sustained, more by habit than conviction and which has promoted ecological despoliation, militarism, antifeminism, and disciplinary fragmentation, the postmodern view is postmechanistic and ecological in its view of nature, post reductionist in its view of science, postanthropocentric in its view of ethics and economics, postdiscipline in relation to knowledge, and postpatriarchal and postsexist in relation to society. Postmodernism is not a call back to the pre-modern but a creative synthesis of the best of the modern, pre-modern and new concepts in the forefront of holistic thinking.”

 This passage felt like an electric shock in my mind. I was astounded and could not react immediately because Professor Birch’s words were destroying the whole of my mental construction. I closed the book and went for a walk. For several days, I was unable to do any productive work. I was writing and reading but my mind was bubbling with new questions. Are we really getting out of modernity? Is this true, or is it an Australian fantasy?

 After a week or two, I began to experience a new feeling—like a little light at the end of a long tunnel. Here was a new and unexpected solution. Yes, Professor Birch was right! In fact we were in a time of rapid transition from modernity to post-modernity (which later I will call transmodernity or planetarism), with many people in our global world still pre-modern, with the majority of the moderns not understanding the challenge, and with yet another previously unidentified group of transmoderns.

 If all this was true, the solution was obvious. I had the key. I could write this report from a completely different mental frame. Yes, there were differences between religions, but the main differences were between the paradigms or mental frames inside each religion, precisely because of the rapid transition between paradigms that the world is experiencing at this time. Within each religious group there are subdivisions struggling with the same challenges. That was the key. The subgroups are the same in each religion—pre-moderns, moderns, and transmoderns. My research had shown that the Jewish “moderns” were very similar to the Reformed moderns and to their Muslim and Catholic or Humanist colleagues. The same thing was true for the pre-moderns and for the transmoderns.

 Progressively, I arrived at the conclusion that the main differences are not so much between the religions and between the cultures, as Professor Samuel Huntington tried to show in his famous article announcing that the next war would be a clash of civilizations.[[120]](#footnote-120) No, the main conflicts are inside each religion and inside each civilization. This was the new vision, which was imposing itself on me.

 Yippee! I had a new frame—a very rich frame, but one that was difficult to handle. It had completely destroyed my first plan, but I was happy and excited. Even though I still felt like I was still in the tunnel, the light was there, and it was bright. I could see a solution.

### Out of the tunnel—the re-enchantment of the vision

 It took me another couple of months to get out of the tunnel. This transition and personal transformation happened imperceptibly in the process of writing the report. Without knowing it, I was in the process of changing paradigms. I initiated the report in September 1989 fully in the modern paradigm and finished it in July 1990, in the planetarist transmodern paradigm.

 It was around April or May of 1990 that I suddenly became aware that I had grown out of the tunnel. With that came an awareness of a new feeling growing inside me—a feeling of re-enchantment. I was out of the tunnel, and there was the sun and the mountains and the colours of Nature, and the trees and the fresh wind, and the beauty. I was rediscovering a wonderful new landscape. What a joy! Growing inside of me was a deep sense of liberation.

 I was out of the tunnel—out of the rational only approach of modernity. Out of the tunnel where the walls are painted in black in order to impede any lateral thinking. Out of the tunnel where all thinking happens in the closed box of one single discipline, with no possibility of communication with the other boxes. Out of the tunnel where you are forced to look in one single direction and to follow the rails—the rational analytic ones that market logic and university scientific discipline. Out of the tunnel, where the spiritual dimension is pushed aside in the “private life” or completely ignored. Out of the tunnel where art, aesthetics, and ethics are marginal. Out of the tunnel where the feminine is not taken into consideration.

 I was rediscovering the possibility of new links between my body, my feelings, my intuition, my analytical and rational intelligence, my masculine and feminine sides, my yin and my yang, and my soul. Finally, life was giving me the opportunity to put together the separate pieces of my life. What a sense of wholeness! I was discovering that we are part of Nature, not above it. What a deep sense of belonging, of rootedness! I was discovering again inside me a feminine dimension of intuitive feelings that put me in touch and in direct contact with life. I was feeling reincarnated.

 This extraordinary feeling of deep joy, hope, and dynamism felt like a new life exploding inside me. My soul was out of a centuries-long prison. It was exploding and spreading energy through my entire body and mind. This new circulation of energy between my soul and my body, between the spiritual and the other dimensions was filling me with an incredible joy and a tremendous energy. It was as if that energy was waiting for centuries to pop out into the open air. This enormous amount of energy was originating from my soul’s liberation and it was circulating and uniting all parts of my body, mind and soul.

 I understood later that I was experiencing first phase of re-enchantment—the re-enchantment of the vision. When the horizon clears up, hope becomes possible again. I was no longer in a “no future” situation. The soul deep inside me was finding oxygen again, and I realised how dry and silently desperate I had become, without even being aware of it.

 First feedback—negative

 I was so happy about my breakthrough that I began to explain with vibrant enthusiasm to my colleagues and friends what I had discovered. The general reaction was polite, but negative. I heard statements like, “Marc, this is very interesting but I have to rush to a meeting.” My intelligent friends and colleagues were not accepting the idea that we could be leaving modern culture.

 What was happening? My first reaction was to become angry with my colleagues, because they did not understand my exciting and brilliant vision! To calm my anger, I gave myself a very logical explanation—they were all stuck in modernity and did not understand the culture shift that Humanity was going through that, fortunately, I did understand. What I was experiencing with my colleagues and friends was a culture clash, but a horizontal one between different paradigms.

 In my enthusiasm, I continued trying to persuade people, with very little success. I went to see my head of office, and tried to explain how important my discovery was. He advised me to stick to the initial plan, and to “simply” explain what each religion was saying. I was deeply disappointed.

 Some months later, because of this very report, I was invited to join the most intellectually prestigious group in the European Commission—the Forward Studies Unit— the think tank directly helping the president of the European Commission. I was thrilled. I was finally feeling recognised and full hope that this group had understood and liked my report. However, during the next ten years, although I tried, I did not succeed in having even one single deep conversation on the paradigm shift or any similar topic. They simply were not interested. What a frustration!

### The shadow of my own re-enchantment

 It took a lot of time for me to understand what was happening. One day the Chief of the Forward Studies Unit (where I had been working for nine years) told me, “Marc, you are advocating a new paradigm of tolerance in an intolerant way.” Later that day, I told my wife what he had said and she answered, ”He is right.” I was flabbergasted! But as I look back, this comment marked the beginning of my personal evolution.

 Slowly (very slowly), I began to acknowledge and identify my shadow side that emerged in four waves of recognition. I discovered that after twelve years of university studies of mathematics and philosophy and the obtaining of a Ph.D. in Russian and Greek theology, I had become a very good modern rational being. I was cut off from my feelings and was too much in my head. I, therefore, found myself announcing the arrival of the planetary transmodern culture in a very rational, analytical, modern style. This was the first shadow wave.

 The second wave came when I realised I was announcing this planetary transmodern culture, fundamentally tolerant in its approach of the Truth, in a very intolerant way.

 The third wave swept over me when I discovered that I was patriarchal. I was functioning exactly like the most classical description of the patriarchal family. I remembered something I had successfully blocked out for many years—that I had been dominated and psychologically tortured by my father, a model patriarch. To my horror, I realised that I had done the same with those I loved. I was soft with people I feared, like my father, and I was violent and verbally abusive with those whom I perceived as weak (for example, women and children). The saddest thing is that it took me almost 50 years to understand that my violence was totally buried in my subconscious. I was verbally abusive to my own children, my first wife and my second wife, Isabelle who was courageous enough to work with me to reach this awareness. It is still a process but with her loving guidance she has taken me by hand through a lake of tears on my journey to re-enchantment. Thank you, Isabelle.

 The fourth wave was even more arduous to accept. I was discovering that despite and probably because of my important theological background, and my so called spiritual experience, I was nowhere in my spiritual evolution. I had searched for God above anything, disconnected from body and material considerations very high in the sky,... and I was discovering that the real spirituality consisted of finding God inside myself in confronting my shadow and in transforming my relations with myself and with my neighbours. I was nowhere! It was time to start from scratch.

 The light of re-enchantment illuminated my shadows and enabled me to begin my slow and difficult transformative path. It also helped me discover how deeply I was buried in the very tunnel I was criticizing. I can now see a light at the end of my own tunnel and a way out of hyper-intellectuality, intolerance and patriarchal violence, toward a new type of spiritual path. This is my personal path toward re-enchantment.

 I have come to realise that this paradigm shift is something much more serious than I had first thought. The vision, although crucially necessary, was not enough. It was only the beginning—the first step. A very necessary and indispensable step, because it opened up the horizon. But it was not enough, because when I announced my re-enchantment, people looked at who I was to see if my soul was in accordance with my vision. Although this paradigm (or culture shift) is about a shift in collective consciousness, life has taught me that it is also a fabulous shift in my personal consciousness. During this journey, it has been my great fortune to have, in addition to friends and advisors, my dear wife Isabelle whose love and discernment have been decisive on my way to awareness and re-enchantment.

##  Ilya Prigogine and the new science

While I was writing my report, I discovered the concept of re-enchantment in reading *Order Out of Chaos*, a book by Nobel Prize winner Ilya Prigogine.*[[121]](#footnote-121)* This book presented a new vision of physics and of science that fascinated me. Science was no longer an objective, neutral, value-free, and independent observation of Nature in order to discover its hidden implicit laws. No, Prigogine showed through his experimentation and research on “dissipative structures” (for which he got the Nobel Prize) that physics is not value-free. His experiments showed, for example, that if a chemical reaction is observed, it is possible that the very system you are observing is modified simply by your observation. In other words, the chemical reaction is not the same if it is observed. This means that there is no objective observation in science. Every observation is subjective. It involves the subject. Science is not an objective discipline anymore! This new approach is still today, after 20 years, shocking many scientists.

 In his famous book on paradigm shift in science*[[122]](#footnote-122)*, Sir Karl Popper defines a paradigm like the implicit eyeglasses, the implicit vision through which scientist perceive and understand reality in their field of research, and through which they are able to formulate appropriate responses. A paradigm is like the common language a community of scientists uses to communicate together. When a part of this community starts to put into question this dominant paradigm, a crisis arises. And a scientific revolution is coming. Usually those scientific revolutions are accepted only by a small minority.

 I was excited by Popper’s ideas. This was sounding appropriate to the situation. However, I discovered that Prigogine and Stengers were going further than Popper himself. According to them, Popper did not go as far enough, in his description of the paradigm shifts. He was not rethinking the very relation between the scientist and reality. Prigogine was going further, rethinking the very dogma of scientific objectivity and stating that every scientific experience was subjective. He was also proposing a new role and a new societal responsibility for science in the 21st century.

 Prigogine’s book also drew my attention to the fact that modernity had unknowingly reintroduced the same power pyramid that the pre-modern paradigm. This was a real shock. I was so proud to be modern and rational. It really was a great intellectual shock and later a re-enchantment.

 Prigogine re-enchanted me intellectually. Science for him was not neutral, not objective*[[123]](#footnote-123)*. It was subjective and imperfect like any other human intellectual endeavour, and he was announcing a re-enchantment of the world through a new alliance of science with nature and the other human disciplines.

 A few weeks later, I had the honour of meeting with Professor Prigogine himself, and I was amazed to learn that ever since the publication of his book many years ago (1979), he had been receiving daily letters of insult, accusing him of destroying the “objectivity of science.” Fortunately, he has also received letters of congratulations as well as many honours.

 Announcing a new paradigm, a new way of seeing things, is not an easy task. The more I read and conversed with people around the world, the more I discovered the same type of syndrome—people innovating and pushing a planetary transmodern vision in their university departments, businesses, organizations, institutions and research labs, with a lot of problems and difficulties. Another discovery I made was that in their search for new values of a “planetary” or “transmodern” culture all those innovators were feeling alone, terribly alone, surrounded by a blending of intense negative and positive currents. I felt as if I was discovering a new silent minority worldwide. This led me to the new area of the social and political dimension of re-enchantment.

## Discovering the “cultural creatives”

### Meeting Willis Harman and Avon Mattison

 In 1996, I had the good fortune to meet Willis Harman at the Institute of Noetic Sciences in Sausalito, California*[[124]](#footnote-124)*. This proved to be a new step in my journey to re-enchantment.

 Willis was a human being of exceptional intelligence and lucidity on the actual state of the world. He was one of the founders of the Futures Department at the famous Stanford Research Institute (SRI), president of the Institute of Noetic Sciences, and founder of the World Business Academy. (I later discovered the very high level of his publications.) When we first met, I was immediately struck by the human quality in his eyes. In a few minutes, we felt like we had known each other for years. We discovered that although we had very different life experiences, we had come to the same vision on the present and the future. This was a very deep and new life-changing experience for me.

 How was it possible to meet someone and in such a short period of time experience such similarity in our visions of the world? I was discovering the phenomenon of *synchronicity[[125]](#footnote-125)*. This new planetary culture was awakening in the minds, souls, and consciences of many individuals around the world, and meeting for a few minutes was enough to recognise each other as part of this new consciousness.

 Willis invited me to be part of the “path-finding process” which he was organizing with Avon Mattison, president of Pathways to Peace. It was a process of creative reflection and personal transformation with a group that met every six months for four years at the Fetzer Institute in Kalamazoo, Michigan. Avon is another exceptional personality who exhibits a brilliant blending of political and intellectual judgment, a well-developed intuition, and a great spiritual depth. After Willis’ death in January 1997, she became the manager, the convener and the spiritual inspiration of the group. We all owe her infinite gratitude for what she has provided us all.

 The first meeting was for me another very strong experience of collective re-enchantment. I had the impression of finally being home! I was with people who were feeling the same hopes and joys, the same angers and despairs, sharing the same visions about our planet and its future. I was touched in my intellect, my feelings and in my soul. I had met the first transmodern group of people! All the frustrations I had experienced for the past five years in the European Commission were behind me now. I realised I was not a maverick. I was validated in my research and in my thinking in a way I had never before experienced in my life.

 This was a real experience of re-enchantment. It filled me with hope and energy, and those Kalamazoo meetings have been a white stone on my journey.

### Meeting Paul H. Ray

 The Kalamazoo experience also brought me into contact with Paul Ray and his wife, Sherry Anderson, and to the next dimension of re-enchantment—the numbers.

 As a very creative sociologist, Paul had discovered a new method to analyze the social and political landscape of the U.S. citizens. In a first inquiry in 1995, he arrived at an amazing conclusion—that 24% of the North American citizens were in the process of a shifting values system and 66% of the group were women. He called them the “cultural creatives,” because they were silently weaving the world of tomorrow and women were at the forefront of leading this cultural transformation of our world. It was then that I realized with amazement that this group of people I had met in Kalamazoo was part of an enormous crowd of 60 million Americans!

 I invited Paul to Europe to present his work and research in the European Commission’s statistical department. And, after some discussions, in September 1997 the European Commission did a preliminary study using part of Paul’s questionnaire. It arrived at similar conclusions—between 10% and 20% of Europeans could also be classified as cultural creatives.

 In my travels to Japan, China, Australia and Eastern Europe I have discovered cultural creatives everywhere, at every level of society. Re-enchantment was a worldwide phenomenon!

## Women and the sacred—another earthquake

### Meeting Sherry Anderson

 I had also the great pleasure and honour to meet Sherry Anderson, Paul Ray’s wife. And she described to me the genesis of her latest book[[126]](#footnote-126). She had interviewed women all around the United Sates, with her co-author Patricia Hopkins, asking them always the same question: What is your experience and deep intuition concerning God or the sacred?

 Many of the women interviewed were deeply touched by this question nobody had ever asked them, and burst in tears. In reading this book, having listened to Sherry’s witness, I realised for the first time that the males on Earth had confiscated the whole of the sacred, in our Western religions and in many others. There was no way for the women to be allowed to have a direct relation to the sacred. They had to go through a man—priest, pastor, rabbi, or mufti. This was new for me, but became, from that day, evident and as clear as daylight.

### Meeting Riane Eisler

 Later, one Belgian friend, Nicou Dubois Leclercq, introduced me to Riane Eisler[[127]](#footnote-127). In reading her books and discussing with Riane, I realised how deep her questioning was leading me. It was indeed putting into question the very myths at the origin of the Bible, the Torah, the Koran, and other religions.

 I discovered suddenly that according to the interpretation of Riane Eisler and of Françoise Gange, a French writer[[128]](#footnote-128), the first pages of the Bible could be interpreted as the killing of the ancient matrifocal myths, and the instauration of the new patriarchal myths. This means that all the sacredness of the ancient matrifocal myths (sacredness of life, sacredness of women, sacredness of sexuality, of creativity and arts, sacred blood as symbol of life, power as enabling force) were dethroned, ridiculed, and replaced by a new definition of the sacred—sacralisation of death and suffering, desacralisation of sexuality as shameful and impure, of woman as sinner and temptress, sacralisation of power to dominate and kill, sacralisation of blood as symbol of death, etc.

 This was an earthquake in my vision of the world. It put me in another crisis, because the whole of my vision of Christianity was affected. I had the impression that 80% of the Ph.D. in theology I had studied during eight years was dissolving in a few days. And it was not an easy transition.

 However I felt I had to accept most of those ideas, or at least begin to reflect in this broader context of a post patriarchal society.

### Inviting Hazel Henderson in the European Commission in Brussels

Impossible to finish this part on visionary women without to speak about Hazel Henderson[[129]](#footnote-129). Hazel has understood the changes going on in economy, politics, science, media, communications, values, etc. She saw all the changes way before everyone else. Since 30 years she has written excellent books on paradigm shift, the solar age, the new win-win logic coming up, the failures of the actual economic system, and on the global ecological crisis approaching.

When I was at the Forward Studies Unit, of the European Commission, I invited her to meet our Think Tank and I organized a conference for the civil servants of the European Commission. Civil servants appreciated her, but I am not sure that everyone understood all the implications of what she was saying already, that time. However one of the top economists of the Commission, took me apart and said to me: “*You have betrayed us bringing here a woman who is destroying all we are trying to maintain! You should not have done this!”.*

Yes Hazel is leading the way in a global reflexion on the crisis of today’s institutions, and also on the financial crisis that she calls the “Global Casino”. She has also created an ethical investment fund, and has published the most advanced set of quality of life indicators for the investors and the Political authorities.

Thank you Hazel for your inspiration worldwide.

## Final reflections on my experience of re-enchantment

 Re-enchantment has been and still is for me a very deep personal experience of light and shadow. But it is also a synchronicity between consciences around the world—a rise of a new collective consciousness—as well as a social and global phenomenon. The numbers are really impressive but, strangely enough, very few politicians have grasped the enormous challenge cultural creatives represent.

 Re-enchantment is a personal and collective hurricane of positive energy waiting to unleash itself in our world. Re-enchantment is the energy humanity will need to accomplish the extraordinary leap forward in consciousness level.

 Re-enchantment is a spiritual experience incarnated in my own life and in political and social reality. It is a personal and a collective experience.

 The collective side has yet to fully rear its head… but that might require nothing more than time.

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RIFKIN Jeremy: « The European Dream : when Europe’s vision of the future is outdating the American dream. » Jeremy Tarcher Penguin, New York, 2005.

ROSTOV W.W.: [The Stages of Economic Growth: A Non-Communist Manifesto](http://www.amazon.com/Stages-Economic-Growth-Non-Communist-Manifesto/dp/0521409284/ref%3Dsr_1_1/105-7759264-4447646?ie=UTF8&s=books&qid=1181122162&sr=1-1) Paperback - Feb 20, 2004.

SATHOURIS Elisabeth: *Earthdance* 1999, 432 pages. iUniverse.com

SHELDRAKE Rupert & Mathew FOX, *The Physics of Angels : Exploring the Realm Where Science and Spirit Meet*, Harper, San Francisco, Paperback, September 1996.

SHELDRAKE Rupert: *“The Sense of Being Stared at: And Other Aspects of the Extended Mind,* Random House 2005.

SMITH General Sir Rupert: The utility of Force: the art of War in the modern World. Penguin books 2005.

TEILHARD DE CHARDIN Pierre: See for example his last book *The heart of matter.* Ed. William Collins & Son, 1978.

TOEFFLER Alvin: *"The future Shock"* , Bantam books, U.S., 1971.

UMEHARA Takeshi :  *The civilization of the forest* Published in “NPQ” Japan, Summer 1990 pp. 22-31.

WORK FOUNDATION” : *The knowledge economy in Europe : A report prepared for the 2007 EU Spring Council »* <http://www.theworkfoundation.com/Assets/PDFs/KE_Europe.pdf> London, 2006.

WHITE BOOK ON GROWTH COMETITIVITY AND EMPLOYMENT, European Commission, 1993, Luxemburg. (Jacques Delors)

1. What do I mean by new level of consciousness? Let us take an example. Everybody today agrees that there is a problem with the environment and that we cannot continue the way we pollute for the next century. Our consciousness is today higher than it was in 1972 when the “Club of Rome” launched the much-criticized book called “Limits to growth”. [↑](#footnote-ref-1)
2. As announced by three important authors: Pierre Teilhard de Chardin in the West, Sri Aurobindo in India, and the “Mother” (Mira Alfassa), who worked and reflected with Aurobindo for many years and founded the experimental city of Auroville, close to Pondicherry, in the South of India. [↑](#footnote-ref-2)
3. Rupert SHELDRAKE speaks about “morphogenetic” fields. According to him, humans are linked together, but also humans and animals are linked by a kind of communication field, that he calls “morphogenetic” fields. See also:

 Rupert SHELDRAKE: “Seven Experiments That Could Change the World: A Do-It-Yourself Guide to Revolutionary Science” Park Street Press UK, 2002.

 Rupert SHELDRAKE & Mathew FOX, *The Physics of Angels : Exploring the Realm Where Science and Spirit Meet*, Harper, San Francisco, Paperback, September 1996. [↑](#footnote-ref-3)
4. This “Nobel Prize of Environment” had been created in Sweden in 2010 to reward a young (woman) Brazilian minister who succeeded to stop the destruction of Brazilian and other South American rainforests. [↑](#footnote-ref-4)
5. *“Positive footprint.”* We know today that Europe is polluting so much that it would need 2.4 Earths to absorb its pollution. So we say that the “ecological footprint or EU is -2.4. The U.S.’s footprint is - 4.5—almost double that of Europe. Globally, Humanity’s footprint is more than -2. So we are heading toward catastrophe. A positive footprint would be the situation where Humanity’s influence on earth would be globally positive, because it is globally cleaning its environment. This is the ONLY possibility for the future. At the moment, we are only diminishing the harm we do to the environment *without reversing the global trend*. [↑](#footnote-ref-5)
6. Bernard LIETAER, one of the leading thinkers on alternative currencies, is proposing a new currency based on a [basket](http://en.wikipedia.org/wiki/Basket_%28finance%29) of the twelve most important [commodities](http://en.wikipedia.org/wiki/Commodity) (according to their importance in [world wide trade](http://en.wikipedia.org/wiki/World_Trade_Organization)). Lietaer opines this would provide a [currency](http://en.wikipedia.org/wiki/Currency) that wouldn't suffer from [inflation](http://en.wikipedia.org/wiki/Inflation). Moreover this alternative currency would simplify [barter](http://en.wikipedia.org/wiki/Barter). Those commodities are basic resources and [agricultural](http://en.wikipedia.org/wiki/Agriculture) products such as [iron ore](http://en.wikipedia.org/wiki/Iron_ore), [crude oil](http://en.wikipedia.org/wiki/Crude_oil), [coal](http://en.wikipedia.org/wiki/Coal), [ethanol](http://en.wikipedia.org/wiki/Ethanol), [sugar](http://en.wikipedia.org/wiki/Sugar), [soybeans](http://en.wikipedia.org/wiki/Soybeans), [aluminium](http://en.wikipedia.org/wiki/Aluminium), [rice](http://en.wikipedia.org/wiki/Rice), [wheat](http://en.wikipedia.org/wiki/Wheat), [gold](http://en.wikipedia.org/wiki/Gold) and [silver](http://en.wikipedia.org/wiki/Silver). See <http://www.transaction.net/money/>. [↑](#footnote-ref-6)
7. This idea, but is a much more elaborated version has been proposed to the UN in 1995 under the name “UNSIA”. An excellent article by its authors: Hazel Henderson and Alan Kay explains this project in details: <http://www.hazelhenderson.com/financing_un.html>

 This project has also been assessed by the Centre for Defence Information, in Washington DC. See Daniel M. SMITH: *The United Nations Security Insurance Agency (UNSIA) proposal.* in *The United Nations: Policy and Financing Alternatives: Innovative proposals by Visionary Leaders.* Harlan CLEVELAND, Hazel HENDERSON, Inge KAUL.1995 Elsevier Press. [↑](#footnote-ref-7)
8. Jean Monnet has been one of the main thinkers behind the creation of the European Union. He has also helped greatly in the victory of World War II, working from Washington D.C. [↑](#footnote-ref-8)
9. Koïchiro MATSUURA, General Director of Unesco: “ *Trop cher le développement durable? C’est l’inertie qui nous ruine !*  Le Figaro, Thursday January 11, 207, page 14. [↑](#footnote-ref-9)
10. My answer was: “Yes it is the end of a given France. The industrial, pyramidal, modern and unsustainable one.” [↑](#footnote-ref-10)
11. Louvain University was founded in 1425. Louvain (Flemish) & Louvain-la-Neuve (French speaking) are 25 km East of Brussels, and 350 km North of Paris. [↑](#footnote-ref-11)
12. It is humorous that this man, who remains in European history the symbol of the one who did not understand the period change, was chosen to give his name to the Building of the Council of Ministers of the European Union! His bronze statue is in the main entrance. There is no way to miss it. [↑](#footnote-ref-12)
13. Vaclav HAVEL: *“ Il est permis d’espérer*”, editor: Calman Levy, Paris 1997 page 150. [↑](#footnote-ref-13)
14. Nicou Dubois-Leclercq is a Belgian friend, a pioneer and visionary woman, a “beguine of the 21st century” who daily lives the power of sacred love [↑](#footnote-ref-14)
15. Riane EISLER : Sacred Pleasure, Sex Myth, and the Politics of the Body. New paths to power and love. Shaftsbury, Dorset, UK, 1995. [↑](#footnote-ref-15)
16. Marija GIMBUTAS: *‘ The Goddess and Gods of Old Europe*, Berkeley, University of California Press, 1982. See also GIMBUTAS: “*The Language of the Goddess”*, San Francisco, Harper and Row 1989 and GIMBUTAS: ”*The Civilization of the Goddess”*, San Francisco, Harper and Row. 1991. [↑](#footnote-ref-16)
17. Riane Eisler and Gimbutas propose the world « Matrifocal » (mother-centred) to describe both the religious and family organization of these more peaceful and egalitarian societies. It indicates also that there was no domination of the men by women. [↑](#footnote-ref-17)
18. Françoise GANGE: Les Dieux Menteurs, Editions “Indigo” and “Coté Femmes”, Paris, 1998. [↑](#footnote-ref-18)
19. Jiayin MIN (editor) : The Chalice and the Blade in Chinese culture : gender relations and social models China social Sciences Publishing House, Beijing, 1995. [↑](#footnote-ref-19)
20. Saint Augustine is the great inventor of the concept of the “original sin”, which is so important in Christianity. [↑](#footnote-ref-20)
21. Thomas KUHN: *The structure of the scientific revolutions*. Second Edition, Enlarged, The University of Chicago Press, Chicago, 1970²(1962).

 See also Karl DOPPER, *Objective Knowledge,* Oxford Clarendon Press, 1972 [↑](#footnote-ref-21)
22. Willis HARMAN, *An incomplete guide to the future* San Francisco Book Co, San Francisco, 1976. Willis HARMAN wrote the best book that I know on the paradigm change: *Global Mind Change: the promise of the 21st century*, Second edition 1998, Berret-Koelher publishersBerret-Koelher publishers, San Francisco. [↑](#footnote-ref-22)
23. Alvin TOEFFLER: *“ Future Shock”* Original edition in 1970. Now available by “Mass market paperback”, 1999. [↑](#footnote-ref-23)
24. Jeremy RIFKIN: *The end of work.*  Tarcher/Putnam, 1995.

 See also Jeremy RIFKIN: “The European Dream: when Europe’s vision of the future is outdating the American dream”, Tarcher Putnam 2005 [↑](#footnote-ref-24)
25. Daniel BELL*: ”The Coming of the Post-Industrial Society*”, New York, Basic Books, 1973 [↑](#footnote-ref-25)
26. See the article of “Spiegel online/English” <http://www.foet.org/press/interviews/Spiegel-%20August%203%202005.pdf> [↑](#footnote-ref-26)
27. This song says: *“The first who says the truth will be executed”* [↑](#footnote-ref-27)
28. W.W. ROSTOV: *”The stages of Economic Growth: A Non-Communist Manifesto”* Paperback. 2004 [↑](#footnote-ref-28)
29. Help means “subsidium” in Latin, hence the name given to the “subsidiarity” principle. This principle is called “federalism” in U.S. [↑](#footnote-ref-29)
30. If the reader wishes to learn about the principle of subsidiarity, he may be interested in reading the research note, which the “Forward Studies Unit” prepared for the President of the Commission in 1992. See “subsidiarity” on my blog—[http://vision2020.canalblog.com](http://vision2020.canalblog.com/). [↑](#footnote-ref-30)
31. General Sir Rupert SMITH: “The utility of Force: the art of War in the modern World. Penguin Books 2005. [↑](#footnote-ref-31)
32. Newsweek, “Special edition: The Knowledge revolution” Dec 2005- Feb 2006, page 60-62. [↑](#footnote-ref-32)
33. In a letter to Vera Zasulic in 1881, Karl Marx clearly asserted that he was not a “Marxist” and that he did not want to affirm whether the future of Russia necessarily was going through a revolution! It is on Marx the sociologist that we lean here. [↑](#footnote-ref-33)
34. Peter DRUCKER:  *“Post-capitalist society”* Harper Business, 1993 page 1. [↑](#footnote-ref-34)
35. This definition comes from Peter Drucker in “Post Capitalist Society” page 42 [↑](#footnote-ref-35)
36. Peter Drucker quotes here Karl POLYANI (1886-1964) *The Great Transformation* (1944) as being the most cogent of the critics of capitalism. [↑](#footnote-ref-36)
37. Thomas A. STEWART (editor of Harvard Business Review): “The Wealth of Knowledge” Nicholas Brealey, London, 2002. [↑](#footnote-ref-37)
38. “THE WORK FOUNDATION”: The knowledge economy in Europe: a report prepared for the 2007 EU Spring Council. http//:www.theworkfoundation.com/Assets/PDFs/KE Europe.pdf London, 2006. [↑](#footnote-ref-38)
39. “Serf” means in Latin “servant”—being totally and unconditionally to the service of the Landlord. It was slavery without the name. The church helped enormously by imposing baptism with the attribution to everyone of a “Christian name” different than the Landlord’s name. It was a huge operation of humanisation and of respect of the persons and of their elementary rights. In this sense one can say that the Church is at the origin of the notion of human rights. [↑](#footnote-ref-39)
40. Jeremy RIFKIN *The end of work.* Tarcher Penguin 1995, 2004. [↑](#footnote-ref-40)
41. These organizations can all easily be found on Google.com [↑](#footnote-ref-41)
42. See the Cotrugli Business academy website: [www.cba.com.hr](http://www.cba.com.hr/) [↑](#footnote-ref-42)
43. Harlan CLEVELAND: *Leadership and the information revolution* , “World Academy of Art and Science” publications, 1997, page 16. Harlan Cleveland has been Vice Secretary of State of President John F K Kennedy. [↑](#footnote-ref-43)
44. Peter DRUCKER:” *Post capitalistic society*” Harper Business, New York, 1993. Page 44. This book was a best seller, but it is rarely cited. Is it still too advanced? [↑](#footnote-ref-44)
45. The name of the project is NESKEY: see [www.neskey.com](http://www.neskey.com/) [↑](#footnote-ref-45)
46. We refer here to the work of the French sociologist Marcel MAUSS who wrote important books on the economy of gift and exchange. These studies, as we shall see, become again exceptionally of present interest today in the knowledge society. See, for instance http://fr.wikipedia.org/wiki/Marcel\_Mauss [↑](#footnote-ref-46)
47. See <http://www.obsarm.org/obsnuc/traites-et-conventions/francais/traite-fce.htm> see article XIV and next. [↑](#footnote-ref-47)
48. Adam M. BRANDENBURGER & Barry J.NALEBUFF: *Co-Petition, a revolutionary* *mindset that combines competition and cooperation*. Currency, Doubleday, US, 1996. [↑](#footnote-ref-48)
49. Elisabeth SATHOURIS: *Earth dance* 1999, editor: “iUniverse.com”, 432 pages. [↑](#footnote-ref-49)
50. Verna ALLEE: *The future of knowledge: increasing prosperity through value networks* Butterworth-Heinemann, Elsevier Science USA, 2003, page 237. [↑](#footnote-ref-50)
51. Ikujiro NONAKA and Hirotaka TAKEUCHI: *The knowledge-creating company: How Japanese companies create the dynamics of innovation”* Oxford University Press, New York, Oxford, 1995. [↑](#footnote-ref-51)
52. RES, see *www.res.be/* [↑](#footnote-ref-52)
53. More information is available at <http://menswearhouse.com/aboutus/our> community/giving back.jsp [↑](#footnote-ref-53)
54. Peter DRUCKER: Post capitalist society, Harper Business, 1993, page 198. [↑](#footnote-ref-54)
55. Ray C. ANDERSON: Mid-course correction: toward a sustainable enterprise: the Interface model. 1998, Chelsea Green publishing company. [www.chelseagreen.com](http://www.chelseagreen.com/) [↑](#footnote-ref-55)
56. The nanotechnologies are technologies which work at the level of the cell size or the nanometre ( one millionth of a millimetre or one meter divided by 1000 millions). One is attending at a new change of scientific paradigm, because, at the level of the cell, it is difficult to distinguish what relates to physics, biology or chemistry. This is another world where the classic distinctions between the modern sciences are relative. [↑](#footnote-ref-56)
57. See http://www.vivantinfo.com/index.php?id=121 [↑](#footnote-ref-57)
58. “*Converging Technologies for improving Human performance :* National Science Foundation, Arlington 2002, National Board of Commerce, USA. http://www.technology.gov/reports/2002/NBIC/Part1.pdf [↑](#footnote-ref-58)
59. See “US report” p. 40: “Motivation and outlook: Theme Summary of Panel by US representative of Governmental agencies.” [↑](#footnote-ref-59)
60. Jeremy RIFKIN : *« The European Dream : when Europe’s vision of the future is quietly eclipsing the American dream.* Tarcher Penguin 2004. See the brilliant chapter 15:”A second enlightenment”: Pages 315-357. [↑](#footnote-ref-60)
61. Bill JOY: See his original article in “Wired” <http://www.wired.com/wired/archive/8.04/joy.html#1>. He quotes here a passage from Kurzweil who quotes from Kaczynski's Unabomber Manifesto… [↑](#footnote-ref-61)
62. Extract from the book of Hans MORAVEC: *Robot: Mere machines to transcend the human mind* Cited by Bill Joy. [↑](#footnote-ref-62)
63. *Converging Technologies for Improving Human performance.* June 2002. Arlington USA: <http://www.technology.gov/reports/2002/NBIC/Part1.pdf> See p. 95. [↑](#footnote-ref-63)
64. Sir Martin REES:” *Our final century”* Random House 2003,UK, published in US with the title: *“Our Final Hour*”, by Basic Books 2003 [↑](#footnote-ref-64)
65. Sir Martin REES: ibidem. P.132. [↑](#footnote-ref-65)
66. Andrew KIMBRELL: “*Technotopia”* In “*YES, a journal of positive futures”* N°19, Fall 2001, p.14. Mr Kimbrell is President of ICTA : “International Centre for Technology Assessment”, 666, Pennsylvania Avenue, S.E. Suite 302, Washington D.C. 20003. Phone: 202/ 547-9359. [www.icta.org](http://www.icta.org/) [↑](#footnote-ref-66)
67. “Nano-Bio-Cogno-Socio-Anthro-Philo. High Level European Group Foresighting the New Technology Wave: Converging Technologies – Shaping the Future European Societies. Brussels, European Commission 2004. <http://www.ntu.no/2020/final>. [↑](#footnote-ref-67)
68. See  the *European Report* Page 4: [↑](#footnote-ref-68)
69. Ilya PRIGOGINE and Isabelle STENGERS *: ”Order out of Chaos: Men’s new dialogue with nature.*” Fonatana books, 1985. [↑](#footnote-ref-69)
70. Voir Par exemple <http://fr.wikiedia.org/wiki/Jean-Pierre_Dupuy> [↑](#footnote-ref-70)
71. Jeremy RIFKIN:’ The European Dream: when Europe ‘s vision of the future is quietly eclipsing the American dream” Tarcher Penguin 2004, page 356-7. [↑](#footnote-ref-71)
72. Carl Philip Gottfried (or Gottlieb ) von CLAUSEWITZ is born on June 1, 1780 in Magdeburg and died on November 16, 1831 in Breslau. He was a Prussian officer and is recognized today as President Bush military theorist. One of his most celebrated sentences is that “ War is only the extension of politics through other means. [↑](#footnote-ref-72)
73. See the “service for the equality between men and women” at the European Commission :*http://cc.europa.eu/employment social/gender insttute/index\_fr.htlm1* [↑](#footnote-ref-73)
74. Willis HARMAN: *Global Mind Change , the promise of the last years of the twentieth Century.* Institute of Noetic Sciences( Sausalito, Ca. www.noetic.org) . A second edition of this book is published by Berret and Koehler, San Francisco, 1998. Second edition, Page 84 [↑](#footnote-ref-74)
75. One has to know that Willis has redefined science and thus for him “scientific evidence” includes other approaches than purely rationalistic. [↑](#footnote-ref-75)
76. Marlo MORGAN: ***Mutant Message Down Under.* Kindle edition, 1994, Paperback 2004.** I am very conscious of all the critics against this book, who appears no to be approved by aboriginal community at all. Nevertheless, the book in itself contains a very challenging message, which is what interests me here. [↑](#footnote-ref-76)
77. Jacques GRANDMAISON: ”Le défi des générations: enjeux sociaux et religieux du Québec d’aujourd’hui. Fides, Québec, 1995, pp 313-314. [↑](#footnote-ref-77)
78. Jeremy RIFKIN:’ The European Dream: when Europe ‘s vision of the future is quietly eclipsing the American dream” Tarcher Penguin 2004, page 5. [↑](#footnote-ref-78)
79. Ilya PRIGOGINE and Isabelle STENGERS *: ”Order out of Chaos: Men’s new dialogue with nature.*” Fonatana books, 1985. [↑](#footnote-ref-79)
80. There is a whole literature on the “energy of the vacuum”. There even are engine prototypes already functioning with cosmic energy. But, were that technology really develop, it would be the collapse of a solid part of our energetic empires. Mankind does not seem ready for such a type of energetic revolution

<http://findarticles.com/p/articles/mi_m1134/is> 1 112/ai 97174292 [↑](#footnote-ref-80)
81. Willis HARMAN: *Global Mind Change , the promise of the last years of the twentieth Century.* Institute of Noetic Sciences ( Sausalito, Ca. www.noetic.org) . A second edition of this book is published by Berret-Koehler, San Francisco, 1998. [↑](#footnote-ref-81)
82. Rupert SHELDRAKE: “Seven Experiments That Could Change the World: A Do-It-Yourself Guide to Revolutionary Science” Park Street Press UK, 2002. [↑](#footnote-ref-82)
83. One should find interesting to read the collective work edited by Basarab NICOLESCU:”*Le sacré aujourd’hui”* Editions du Rocher, Paris 2003. This high level reflection includes believers and unbelievers. From a working group linked to UNESCO. They witness the new directions of the sacred in he 21st century. [↑](#footnote-ref-83)
84. Samuel HUNTINGTON : *« The clash of civilizations »* in Foreign Affairs, summer 1993. [↑](#footnote-ref-84)
85. Ilya PRIGOGINE and Isabelle STENGERS *: ”Order out of Chaos: Men’s new dialogue with nature.*” Fonatana books, 1985. Last page. [↑](#footnote-ref-85)
86. Here is the link to the documents of this excellent meeting of the DG Science of the European Commission, on the future of science and technology.

<http://cordis.europa.eu/foresight/conference2005.htm> [↑](#footnote-ref-86)
87. Frederico MAYOR: *La nouvelle page* Editons du Rocher, Unesco, 1994. [↑](#footnote-ref-87)
88. Secularisation means total separation of religion and politics. It is not any more possible for religion to be manifested publicly. Religion of spiritual aspiration are considered as purely private. Some say that this “private habit” will disappear one day. [↑](#footnote-ref-88)
89. See , for instance, the work of Michel De KEMMETER: UHDR http://www.uhdr.org/fr/index.htm [↑](#footnote-ref-89)
90. Gospel According to Mark 2:22 [↑](#footnote-ref-90)
91. Rupert SHELDRAKE & Mathew FOX:” *The Physics of the Angels: Exploring* *the Realm Where Science and Spirit Meet*, Harper, San Francisco, Paperback, 1996. See also:

 Rupert SHELDRAKE:” The Sense of Being Stared at: And Other Aspects of the Extended Mind, 2005. [↑](#footnote-ref-91)
92. The *“State of the World Forum “* was created by Jim Garrison, and patronized by Mikhail Gorbatchev. In a large hotel of ‘Nob Hill “(the hill of the smart) in San Francisco, Jim had the genius to bring together one thousand people from the Unites States, but also from 45 other countries. All these people were interested in the ongoing cultural changes, or in the paradigm change. There I understood that I was not an isolated eccentric, but a member of a world community of reflection about the profound change and paradigm shift we are in. Unfortunately, this experience lasted only five years between 1996 and 2001 [↑](#footnote-ref-92)
93. Paul H. RAY: “*The integral Culture Survey: A study of subcultures and the use of alternative Health care in America.* A report to the Fetzer Institute (Kalamazoo, Michigan ) and the Institute if Noetic Sciences (San Francisco, Sausalito), 1995. [www.noetic.org](http://www.noetic.org/)

 See also Paul H. RAY& Sherry ANDERSON: *The cultural creatives: How 50 million people are changing the world.* Harmony Books, New York, 2000. [↑](#footnote-ref-93)
94. See beginning of Chapter 3, where I describe the four stages of paradigm acceptance according to Kuhn. [↑](#footnote-ref-94)
95. It was a difficult fight because the sociologists were not convinced. I then understood the dilemma of the sociologists. They are condemned to only find what they already know, since their questions always are oriented toward what they want to find. There are no “objective” questions. And, thus, the commission sociologists who were rather classic and did not consider as interesting this hypothesis of the existence of “cultural creatives” in Europe. Finally the “Forward Studies Unit” of the European Commission entrusted the inquiry analysis to an outside consultant so as not to hurt anybody’s feelings. [↑](#footnote-ref-95)
96. Jean-François TCHERNIA, *Les styles de valeurs des Européens,* Research International, 13 av. de la Porte d’Italie, F-75640 Paris, Tél. : (33-1)44066565. E-mail : rifrance@research-int.com, october 1997. [↑](#footnote-ref-96)
97. Association pour la biodiversité culturelle*:” Les Créatifs Culturels en France*”, éditions Yves Michel 2007. Foreword by Jean-Pierre Worms. [↑](#footnote-ref-97)
98. Special thank to professor Enrico Celi, in particular, who was kind enough to communicate to me the preliminary results which are not yet published [↑](#footnote-ref-98)
99. Marc LUYCKX:” *Religions confronted with Science and Technology*” European Commission 1991. This report is accessible on my blog: [http://vision2020.canalblog.com](http://vision2020.canalblog.com/), go to” Religions and science” [↑](#footnote-ref-99)
100. Takeshi UMEHARA:” *The civilization of the forest”* Published in “NPQ” Summer 1990 PP.22-31 [↑](#footnote-ref-100)
101. If intellectuals are 5% of the population, one may estimate that 10% of that group represents… 5 million intellectuals who would be in these new values. [↑](#footnote-ref-101)
102. See Marc LUYCKX:” *The transmodern hypothesis*” in “Futures “ November/December 1999. You can access this text through my blog: http://vision 2020.canalblog.com: go to “Religions and civilizations” [↑](#footnote-ref-102)
103. see http://[www.beyond-gdp.eu](http://www.beyond-gdp.org/) [↑](#footnote-ref-103)
104. Susan MEHRTENS : *« Learning designs and the Third Wave* » in *Perspectives on Business and Global change,* a publication of the World Business Academy, Volume 13, number 4, December 1999, p. 59, Sales : Berret and Koehler Publishers, Email bkpub@bkpub.com

 Mrs Mehrtens is know in USA through her excellent book on tomorrow’s business, with MAYNARD Herman Bryant Jr: *The Fourth wave: Business in the XXIst century* Berret & Koelher, San Francisco 1996. [↑](#footnote-ref-104)
105. Susan MEHRTENS : *« Learning designs and the Third Wave* » in *Perspectives on Business and Global change,* a publication of the World Business Academy, Volume 13, number 4, December 1999, p. 59, Sales : Berret and Koehler Publishers, Email bkpub@bkpub.com

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106. Verna ALLEE : *« New tools for the new economy »* in *Perspectives on Business and Global change,* a publication of the World Business Academy, Volume 13, number 4, December 1999, p. 59. Sales : Berret and Koehler Publishers, email: bkpub@bkpub.com. See also her excellent book: *The future of Knowledge: Increasing Prosperity through Value networks"* Butterwoth Heinemann, Elsevier Science, USA, 2003. Verna is also working in Europe as an expert for some EU research projects. [↑](#footnote-ref-106)
107. This concept of implicit knowledge will be developped much more by Ikujiro NONAKA & Hirotaka TAKEUCHI "*The knowledge creating company"* Oxford University Press, 1995. [↑](#footnote-ref-107)
108. Verna ALLEE: The future of knowledge..." Page 158. [↑](#footnote-ref-108)
109. Baruch LEV: “*Intangibles: Management, measurement, and reporting”*. Brooking Institution Press, Washington D.C. 2001. Pp. 150. Quote is from pages 6 - 7. [↑](#footnote-ref-109)
110. Thomas A. STEWART : *The wealth of knowledge : Intellectual capital and the twenty first century organiszation* Nicholas Bradley, London, 2002. page 268-278. See also his first book : “Intellectual Capital” of 1997. [↑](#footnote-ref-110)
111. See Thomas STEWART: *The wealth of knowledge* page 304. [↑](#footnote-ref-111)
112. See http//:www.saratogainstitute.com. they call this index the *"Watson-Hyatt capital index"* [↑](#footnote-ref-112)
113. One of the advanced in this new field of research is Verna ALLEE. See [www.vernaallee.com](http://www.vernaallee.com/) [↑](#footnote-ref-113)
114. A recent report by the Work Foundation in UK quoting Eurostat is explaining that:" In 2005**, just over 40%** of the European workforce was empoyed by the knowledge-based industries. The Nordics and the UK (48%) has the biggest shares of employment in the knowledge eoconomy. Sweden has 54% followed by Denmark (49,1%) and Finland (47,3%). Page 6. See "The Knowledge economy in Europe" prepared for the Council of Ministers of the European Union of spring 2007.

<http://www.theworkfoundation.com/Assets/PDFs/KE_Europe.pdf> [↑](#footnote-ref-114)
115. See: http//:www.neskey.com [↑](#footnote-ref-115)
116. I am putting “scientific” between brackets, to underline that this definition of science is modern and would not be accepted anymore by Prigogine and others new thinkers of transmodern science. [↑](#footnote-ref-116)
117. By the way, this model forms the basis of the political architecture of the European Union as conceived by Jean Monnet in 1950. All countries sitting around the table are strictly equal. [↑](#footnote-ref-117)
118. I owe here gratitude to Dr Ricardo PETRELLA, who proposed me this contract in 1989. Here is the title of this report: Marc LUYCKX: *“Religions confronted with science and technology: Churches and ethics after Prometheus”* Translation: Donal Gordon and Timothy Cooper. European Commission, Brussels 1992. [↑](#footnote-ref-118)
119. Charles BIRCH: *On purpose: a new way of thinking for a new millennium. ”*New South Wales University Pres, Kensington, NSW; Australia, 1990. p.xvi. [↑](#footnote-ref-119)
120. Samuel HUNTINGTON: “*The clash of civilizations”* Foreign Affairs; Summer 1993. [↑](#footnote-ref-120)
121. Ilya PRIGOGINE & Isabelle STENGERS : *Order out of Chaos: Men’s new dialogue with nature..* Fontana books, 1985. [↑](#footnote-ref-121)
122. Karl POPPER: *Objective knowledge,* Clarendon Press, Oxford, 1972. [↑](#footnote-ref-122)
123. I will come back later on this new concept of science now emerging. [↑](#footnote-ref-123)
124. Thanks to Steven A. ROSELL, President of the Meridian Institute, San Francisco. CA. [↑](#footnote-ref-124)
125. Joseph JAROWSKI:*”Synchronicity: the inner path of leadership”*, Introduction by Peter SENGE, Berret & Koelher, San Francisco, 1996. [↑](#footnote-ref-125)
126. Sherry Ruth ANDERSON & Patricia HOPKINS : *The feminine face of God: the unfolding of sacred in women.*, Bantam Books, New York, Toronto, London, Sydney, Auckland. 1992. [↑](#footnote-ref-126)
127. Riane EISLER: *The Chalice and the Blade* (1988), & *Sacred Pleasure* (1995) & *The Partnershipway* (1990) Harper San Francisco. [↑](#footnote-ref-127)
128. Françoise GANGE: *Les dieux menteurs.* Editor : La Renaissance du Livre, Tournai, Belgium, 2002. ISBN 2-8046-0594-9. and *Jésus et les femmes* Editor : La Renaissance du Livre, 2001. [↑](#footnote-ref-128)
129. HENDERSON Hazel: *Ethical Markets: Growing the Green Economy*. Chelsea Green, Vermont, 2006. See more book in the Quoted Books at the end. [↑](#footnote-ref-129)