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The Ignorance Society and other essays



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The Ignorance Society

and other essays

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Prologue by Eudald Carbonell

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The essays by Antoni Brey, Daniel Innerarity and Gonçal Mayos compiled in this volume are a lucid synthesis of our social behaviour as a species. The exponential evolution of our processes of energy regulation, the technical application of these processes and demographic growth are triggering a situation of uncertainty as to our future on the planet.

The hyperconnectivity resulting from the spread of the scientific-technical revolution has led to an increase in the complexity of our species' social interaction processes like never before.

The resulting complexity is an evolutionary product and cannot be reined in, counter to what some human specimens believe. The only thing we as *Homo sapiens* can do to cope with the future is try to manage this uncertainty by positing hypothetical scenarios and applying models, which in any event must be empirically tested.

Technology and its spread through society generates tensions and divisions in our ethological and cultural structures. Knowledge has not been spread effectively, and this prevents us from progressing towards the society of thought, as we should do.

Therefore, the historical dichotomies continue their march forward, and neither experts nor scholars, nor even learned people have the capacity to integrate all the information we have available to us. Individualism must give way to individuality; that is, we people must act not as discrete specimens but as builders of society, critically contributing our knowledge to the organisation of the species. For the time being, this is not occurring despite the spread of culture and education. Instead, right now, as Antoni Brey says in his article, we are being invaded by the Ignorance Society. Yet I am optimistic and hold out the hope that everything is a consequence of the transitional period in which we are immersed, like a fleeting leg on our journey towards the ecological and cultural betterment of our species.

However, in order for us to actually reach this point, we need to work on the perspective of generating a new critical awareness in the species. Only with responsible evolution built through conscious progress can we turn knowledge into thought, thereby lifting ourselves out of the Ignorance Society.

Eudald Carbonell Roura

Introduction

On the singularity of our days, which
correspond to the dawning of The
Second Modern Times

Antoni Brey

Peter Watson, the author of several books on the history of thought, has often expressed his qualms at the importance we tend to attach to our times within the context of a sweeping historical perspective:

"The year 2005 can't begin to compete with 1905 in terms of important innovations. Last week's announcement that British and Korean scientists have successfully cloned human embryos only reinforces the point. [...] We flatter ourselves that we live in interesting times but isn't this just one more example of that particular blindness our solipsistic age has about itself, a more severe form of the disease whereby Princess Diana can be rated the most important (or was it second-most important) Briton ever?"¹

When I had the chance to discover it, Watson's argumentation triggered a healthy unease in me because it was like a torpedo aimed right at the waterline of a certainty that is obvious to many people today, the certainty that emerges when we raise our sights, look around us and notice the existence of what is apparently a profound transformation. We are witnesses to a process of change in which an infinity of interactions and causal relationships are indissolubly mixed and which is drastically affecting everything from individuals' convictions to the essence of productive systems and the structure of state politics.

Yet what is the true depth of this transformation? Stances like Watson's require us to admit that, given the risk of overestimating its importance, it is worth trying to specify whether it is simply another coat of varnish in the process of building History or, to the contrary, whether we are in a singular juncture that is radically and irreversibly modifying this historical process.

Certainly, individuals from any period in time have always displayed a tendency to point to their own day and age as exceptional, no doubt conditioned by the importance that proximity attaches to events one has lived through, by an inevitable sense of marvel at one's own experience and by the perception of the experience itself as a remarkable event. However, this perception ignores the essentially monotonous and homogeneous nature of this constant succession of existences that we call Humanity.

Therefore, to clear up the doubt we need to lay down a clear criterion that enables us to discern what kind of event constitutes a singularity in the evolution of our species and what kind does not. To do this, it is useful to start from a materialistic concept of human beings: we are essentially primates with marked social instincts endowed with highly developed and well-adapted brains that provide us with certain competitive advantages

over other animals through an intelligence that is expressed in two fundamental faculties: the ability to manipulate our environment and the capacity to communicate symbolically. Nothing more, nothing less.

From this standpoint, singularity would be defined by the existence of some substantial change in either of these two faculties. In other words, the events that we often interpret as landmarks in history, such as battles, revolutions, regime changes, rises and falls of empires and deeds by the most prominent personalities, should not be regarded as anything other than the ups and downs inherent in the course of history, or at most as reverberations from more deep-seated transformations.

Contrariwise, the qualitative leaps in skills at manipulating the environment, that is, in the human capacity to master nature, such as learning to control fire, the invention of agriculture, the discovery of metals, the Industrial Revolution and the emergence to today's information technologies, have meant a sea change in our social organisation and the way we interpret reality.

Changes in the other faculty, the ability to communicate, appear even less frequently and are even more important, as communication is the cornerstone of culture in its broadest sense and therefore serves as the basis of everything specifically human that reaches beyond our animal biology. Cultural learning takes place primarily by imitation or by directly teaching a fellow human being. Without the existence of sophisticated forms of communication, this process of conveying information would be extremely difficult. Any innovation in the ability to communicate must necessarily have a greater impact on the culture and, by extension, the essence that differentiates our species.

However, this capacity to communicate has been transformed on only a handful of occasions and in giant leaps whose influence is such that they have signalled the main changes in the course of our history. Indeed, much of the success of the human genus, the triumph that made it possible for humans to populate the entire Earth, is the result of the first of these leaps: the advent of language. The vast human expansion in the Palaeolithic, a process that got underway thousands of centuries ago and took our species from the African savannahs to the entire surface of the planet, had a great deal to do with the emergence of spoken languages resembling the ones we speak today. Subsequently, the advent of writing, the next giant leap in human communication, by definition marked the dawning of history, and yet another step, the invention of the printing press, heralded the dawning of the Modern Age. More recently, the rising power of the masses since the

French Revolution, a distinctive feature which gives the Contemporary Age a personality of its own, has evolved parallel to the existence of the media as we know them today.

Following this line of argumentation, we must now ask ourselves whether we are at a comparable juncture today. Apparently it is an indisputable fact that in just a few years we humans have furnished ourselves with a new form of communication. New? It is clear that for many years we have had a host of media available for exchanging information beyond simply oral language: the television, the telephone and of course the postal service are just a few examples. However, the technological perspective is actually not the most suitable one for grasping the essential differences among the different forms of communication. It is better to resort to a sort of topological analysis that enables us to classify them according to how the information flows in the societies where they exist.

Until quite recently, this classification only included two basic categories. The first, one-to-one communication, corresponded to a linear topology which would also include oral communication, the telephone, the telegraph and the postal service. The second category, made up of a tree-shaped topology in which a single emitter makes their message reach the widest audience possible, would include the written press, books, radio and the television.

The advent of a new range of technologies aimed at handling and transmitting information has engendered an entirely different scene. On the one hand, for all intents and purposes today there is a single network made up of hundreds of millions of permanent high-speed connections and a multitude of devices suitable for providing mobility, which means a system that is endowed with unique potentialities and a richness that is incomparably superior to everything that existed before it. Likewise, a process of technological convergence is taking place that is making the underlying complexity of the system increasingly invisible to its users, who tend to integrate a wide range of services into all the realms of our lives, from the professional and public to the most private. Individuals have ceased being simple passive receivers and have instead become active players in a structure within which they interact without being affected by many of the restrictions that the physical existence of space and time have dictated until quite recently. We humans have incorporated the new capacities as an extension of our nature to such an extent that they have become necessary for survival in today's world.

A new category has appeared in the topological classification of human communication, everyone-to-everyone, which is associated with a complex

kind of network. This constitutes a true revolution comparable to the advent of speech, writing or the printing press, and it is truly transforming the world around us. Physically, the labyrinthine and turbulent magnitude of our changing world is ultimately sustained on a new way of managing complexity, which is only possible thanks to the existence of machines endowed with the ability to process information, and especially with the ability to automatically exchange it with humans and among humans. All of this shapes the functional skeleton of the financial structure of the world, of the logistics that make globalisation possible and of the new procedures for disseminating ideas and interactions among people.

...

The claim of the existence of this huge leap therefore authorises us to contradict Watson and declare the striking singularity of our times. We are the main players in an exceptional moment in time, a pivotal point in our pathway as a species that leads us, despite our inevitable lack of perspective, to posit the idea that we are at the dawning of a new period in history which we shall simply call the Second Modern Times. The purpose of the essays that follow is to attempt to glimpse some of the features of its personality.

The Ignorance Society

A reflection on the individual's
relationship with knowledge in the
hyperconnected world

Antoni Brey

When the Library was proclaimed to hold all books, the first impression was one of outrageous happiness. All men felt like the lords of a intact secret treasure.

Jorge Luís Borges, **La Biblioteca de Babel (The Library of Babel)**

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During the first quarter of academic year 1998-99, I had the chance to audit a course on General Relativity, an elective subject in the Master's in Physical Sciences degree taught every year by the Autonomous University of Barcelona. It is a complex discipline which to be properly assimilated requires students to have considerable prior training in mathematics, and which furthermore has very limited utility in practice. However, if Aristotle was right when he claimed that "all men by nature desire to know",² then the effort was wholly justified: Einstein's General Theory of Relativity is a rational construction of unsurpassed beauty and elegance, and it is one of the fundamental theories for understanding, as far as human understanding has been capable of reaching, the workings of the universe in which we live.

The faculties of physics at the Autonomous University of Barcelona and the University of Barcelona must tend to the intellectual yearnings on this subject of a population of more than seven million people. Yet during the four months that the course lasted, there were never more than five people in the classroom, including the instructor. Sometimes it was whittled down to two. I should clarify here that the professors, Antoni Grífols and Eduard Massó, always attended class and explained the material masterfully, apparently oblivious to the discouragement that, to my mind, might be prompted by the sight of such a small audience. In the intervening years, the scene has barely changed. The number of young adults who feel the urge to study and understand the Theory of General Relativity can be counted on the fingers of one hand.

Bad times for theoretical physics, no doubt, but why should be we concerned? Why should anyone be interested in studying theoretical physics? The situation could be interpreted as normal, reasonable, understandable and totally in line with what is often demanded of the education system today, namely that it produce what companies and the productive sector of a country need in order to contribute to collective progress. It is natural that no one aspires to studying theoretical physics if it will not help them earn a good living, and it is undeniable that students' efforts are unlikely to be rewarded with a well-paying job in their field.

In reality, young people's choices are nothing other than a reflection of society's priorities. They are a reliable indicator because they reveal general trends that in some cases have not yet been postulated in the guise of more explicit discourses. Therefore, the lack of interest in studying theoretical physics or other abstract, complex subjects with little currency in the workplace ultimately spotlights a growing collective inclination towards the pragmatic, and a lack of interest in knowledge as an end in itself. And in this particular case, we might also think that there is nothing worrisome here were it not for the fact that there is a clear contradiction between the reality of the world in which we live and one of the few core discourses in this day and age when core discourses do not exactly abound: the one that places us on the road towards a new utopia called the Knowledge Society. Or does this contradiction not really exist at all?

II

Naturally, the answer to this question will depend on what we mean when we say the Knowledge Society. So, let us go back to the beginning. The term was coined in 1969 by Peter Drucker to designate a specific, perfectly well-delimited idea. Drucker, a business management guru, devoted a chapter in his book *The Age of Discontinuity*³ to "The Knowledge Society", in which he developed an idea that had previously been posited by Fritz Machlup⁴ in 1962: the Information Society. Drucker inverted the maxim that "the most useful things, like knowledge, have no exchange value"⁵ and declared the relevancy of learning as a prime economic factor; that is, he introduced knowledge into the economic equation and mercantilised it. He also made it clear that what is relevant from the economic standpoint was not its quantity or quality but its ability to generate wealth, its productivity. This was unquestionably a restricted use of the term 'knowledge', although it was totally appropriate within the specialised context of economic theory, where the concepts of Knowledge Society and Information Society both emerged.

Today, almost 40 years later, the term has spread beyond the specialised circle of economics experts to become commonplace. Politicians insert it in their speeches to tinge them with optimism, stakeholders in the world of economics recite it like a mantra to exorcise the evil spirits of globalisation, and your average person on the street interprets it as the desirable future to which the new information and communication technologies are leading us. The Knowledge Society has become a new utopia, a beacon of hope for desperate times, almost the only collective expectation that enables us to look towards the future with some modicum of optimism.

It is clear that the immediate origin of the utopian potential of the idea of a Knowledge Society lies in its ability to furnish us with credible responses to the prime uncertainty that the dynamics of today's world poses: the effects on the economy, or in other words, the effects on our material well-being. From a well-ensconced position like ours, it is not easy to avoid feeling a certain disquiet in the face of the offshoring of companies, the invasion of products from emerging economies, the concentration of activity in the hands of the large corporations, the asphyxiating power of the financial markets and the obsolescence of many activities that for years and years were the engines generating the resources that ensured our prosperity. The combination of global explanations and such local effects that affect us down to our everyday lives makes us feel like we are being pulled along by an uncontrollable tide. Even though macroeconomic indicators are showing steep upswings worldwide, no one is consoled: the prosperity derived from liberalising processes is a reality, but so is the fact that this prosperity has not been evenly distributed. Quite the contrary: some have paid dearly for this liberalisation.

In order to elude the menacing clouds looming over the future, we have shown ourselves to be willing to embrace the idea that the ability to properly generate, administer, spread and apply such an intangible factor as knowledge may well become the cornerstone of productive processes and of an entire range of new services yet to be discovered, with enough efficacy to guarantee us growth above all. The prediction of the new model is optimistic and hopeful, even when counterweights should be applied in order to avoid unleashing new fears: the massive use of technology and a substantial increase in productive efficiency might leave many people outside the wealth-generating circuits.

It is an undeniable fact that much of what Drucker posited is a reality today. Technology has fostered the emergence of an Information Society, organised topologically as a Network Society as described by Manuel Castells,⁶ in which the accumulation of knowledge has become a crucial element for keeping oneself afloat among the maelstroms triggered by a dynamic of rampant growth. We could close this brief analysis by stating that, as it is posited today, the Knowledge Society is nothing more than a new stage in the free-market capitalist system that aspires to being able to sustain growth by adding a fourth production factor, knowledge, to the classic trio of land, labour and capital. From the vantage point of the democratic liberalism in which we are immersed, we cannot manage to glimpse credible alternatives to the Knowledge Society.

III

Yet let us now abandon the overview, the macro analysis, and home in on the main subject of this essay, namely the implications of the new milieu on the basic unit of social structure: the individual. Today's discourse takes for granted that the new tools for manipulating and accessing information are going to turn us into better informed people with more opinions of our own, more independent people better able to understand the world around us. This assumption spotlights the utopian connotations of the concept of the Knowledge Society, behind which there lies a subliminal message that links individual and knowledge, an imprecise yet extremely provocative link by the fact mere that it invokes the almost fetishistic word 'knowledge'. Indeed, the term 'knowledge' has an enormous symbolic load that we should analyse in detail before continuing on with our discussion, and to do so we must first clarify the following question: What exactly do we mean by 'knowledge'?

Despite the fact that this is one of the core questions in philosophy, for the purposes of our discussion the following statement shall suffice: knowing means that a subject has a representation of an object. Knowledge is the result of this process of mental representation, and it encompasses everything from the apprehension of a simple entity or a simple, practical process to comprehending the most profound mechanisms of how reality functions.

Knowledge, then, can be immediate, trivial and derived from simple observation, or it can require a considerable effort if the object to be apprehended is not evident at first glance. In any event, knowledge is a product; it is the result of internally processing the information we get from our senses, mixing it with previous knowledge and developing structures that enable us to understand, interpret and, ultimately, gain awareness of everything surrounding us and of ourselves. That is, knowledge resides in our brain and is the outcome of human mental processes. What comes from the outside is simply information.

More questions: Does knowledge exist as something independent or only human minds where this knowledge resides? Or, from another angle: Does a library full of books contain knowledge? Or: Is it necessary for readers and scholars to exist for the contents of books to become knowledge? It is clear that the information from which a subject can construct knowledge exists in a multitude of textures. Naturally, a list of telephone numbers does not contain the same kind of information as, shall we say, a copy of *On the Origin of the Species*. Darwin's book is the result of capturing the fruit of his experiences and reflections, his knowledge, while the former

contains information that is much less processed by the human mind (in this case, I shall omit the effort invested in creating a complex system like the telephone). Both the list and Darwin's book contain information, but we shall call the latter kind learning, when behind it lies an effort at elaboration by a thinking mind, and it is therefore a product of human knowledge. Thus, we can answer that the library amasses learning, a transcription of the knowledge of certain individuals, which once again becomes knowledge when it is studied and grasped.

IV

There is no doubt that the Bible, for example, contains a great deal of learning. Some people claim that we can get all the knowledge needed to interpret the world around us from the Bible. Others hold that tradition, a more or less extensive set of myths or certain truths provided by ancestral institutions, can fulfil the same purpose.

Yet it is also possible to claim that we can access knowledge through an innate human mental faculty, reason, based on a certain dose of sensitive experience, the amount of which varies according to the proportion of empiricism and rationalism we choose. This is the approach of the Western mindset, and in fact the biunivocal correspondence between knowledge and rationality is one of its most defining features: we can only access knowledge through reason, and knowledge of all reality is only achievable through reason. This postulate is shared by both philosophy and science, two branches of the same tree that solely differ in their methods. A singular attitude is derived from it which, though it has almost been imperceptible at many junctures, inclines us to believe that any idea should be questioned from a rational standpoint.

Throughout history, this attitude has coexisted within the Western soul with many other doctrines and creeds in a complex and even contradictory fashion. Christianity, for example, a belief system with Eastern roots, entered into conflict with this idea by holding that some fundamental, unquestionable knowledge must come from revelation or an act of faith. Many of the great mediaeval thinkers, from Saint Augustine to Saint Thomas Aquinas, devoted much of their life's work to attempting to resolve this conflict. They strived to demonstrate that the truths of faith and those of reason are actually one and the same, and the Scholastics even claimed to have found, thanks to Saint Anselm, proof of the existence of God backed by reason.

Finally, with the arrival of the Renaissance and the emergence of scientific thinking, the bond between knowledge and rationality was permanently

sealed, relegating faith to a different sphere. However, apparently the constant appeal to reason always ends up leading to fatigue, and since the Renaissance there have been periodic episodes of reaction that range from revised rationality to romanticism and all kinds of anti-rationalist traditionalisms, and even outbreaks of unreason camouflaged as rationality, which is what underlay all the 20th century totalitarianisms.

With regard to the present, we unquestionably live in an age dominated by rationality, although it is a kind of rationality that is nuanced by a less idealised view of human nature. We accept that powerful irrational forces shape both our individual behaviour and the evolution of society as a whole, but at the same time we unreservedly admit that knowledge is reached through reason, at least the kind of knowledge that provides both our material well-being and profound, fascinating explanations as to the structure of reality in the technical-scientific age. Twenty-five centuries after Plato devised with the myth of the cave, we still interpret the inclination to acquire knowledge as a desirable attitude. Reading is a habit that society encourages among children and adults alike, and even though we would be pressed to say why, we believe it is edifying to watch documentaries and go to the theatre, as both viewed are as activities that require us to reflect, to use reason.

In short, then, we can claim that the tight bond between knowledge and reason is part of our most deep-seated cultural baggage. To knowledge we attribute much of the civilising success of the West, which has been capable of furnishing the greatest thinkers, scientists and artists, and which has managed to fully master the forces of nature. This pride, at times tinged with arrogance, is the essential ingredient that ultimately shapes the symbolic load of the word 'knowledge'.

V

Now that we have managed to define what we mean by 'knowledge' and stressed the importance of the concept in the entire set of postulates that make up our cultural tradition, we can now return to the core reflection of this essay. It is now clear that the name that would best describe our reality today is a Society of Productive Learning. The distribution and degree to which the members have assimilated this knowledge will determine to what extent it is also a Knowledge Society.

Unquestionably, a certain kind of knowledge with a low reflective content steadily rises in all of us when we spend countless hours inundating our

brains with information from the TV or Internet. And highly specialised knowledge, or what is needed to perform technologically complex activities, is also on the upswing in some people. But the kind of knowledge that subliminally underpins the utopia of a Knowledge Society, the kind of knowledge through reason that is supposed to provide us with a better and more comprehensive understanding of reality, is on the wane. Thanks to technology, we live in an Information Society, which has also ended up being a Society of Learning, yet we are heading not towards a Knowledge Society but in the opposite direction. The very technologies that articulate our world today and enable us to accumulate learning are turning us into increasingly ignorant individuals. Sooner or later, today's mirage will vanish and we will discover that in reality, we are heading towards a Ignorance Society.

VI

I am aware that the word 'ignorance', the polar opposite of 'knowledge', is laden with negative connotations, and that the mere suggestion that it might be in the title of our immediate future clashes head-on with our faith in progress, the fundamental postulate of modernity that the post-modern controversy has not been able to tear down. If the Knowledge Society deserves to be called a utopia, the Ignorance Society sounds like a dystopian discourse at first.

Perhaps it is, but in reality this kind of judgement is unwarranted. There is no room for reproaches, admonitions or sermons when the situation is not the outcome of a conscious choice based on the exercise of free will. The Ignorance Society is the inevitable corollary of the world that we have built, or more accurately, that has gradually taken shape around us, because even though it is the result of our actions, it is not the result of our will. It is emerging as a logical consequence of our evolution and is nothing more than the multiple faces of the reality in which we live, as in a world that is hyperconnected through the new technological tools our ability to access knowledge is inexorably conditioned upon the factors we shall analyse below: the exponential accumulation of information and the properties of the medium as a tool for accessing knowledge.

VII

There is no doubt that one of the most characteristic and representative aspects our of day and age is speed. We have entered a new age of unbridled dynamics, of accelerated growth, of the immediate obsolescence of

anything new, of outsized proportions and formats, which Gilles Lipovetsky calls “Hypermodern Times”:⁷ hypercapitalism, hyperclass, hyperpower, hyperterrorism, hyperindividualism, hypermarket, hypertext. It is not merely a question of labels or prefixes. As the authors of the study *Limits to Growth*⁸ periodically take it upon themselves to remind us, the evolution of many magnitudes in our world, from the tonnes of soy produced each year to the concentration of carbon dioxide in the air or the population of less developed zones living in urban areas, fit perfectly along an increasingly steep growth curve that often appears in nature: the exponential function. Everything whose speed of change depends on its instantaneous value adjusts to this. The larger the magnitude, the quicker it grows, like an unstoppable snowball. Thus is our world today, at least until we reach the limits that the planet’s physics imposes. Hypermodern times can also be called exponential times.

And where this behaviour is the most accentuated is unquestionably in the volume of data we produce, process, send and store. Information on any subject is being accumulated around us at an exponential pace thanks to the contributions of millions of individuals who tirelessly upload everything from simple digital photographs to profound reflections on any field of knowledge. A universe of electronic screens enables us to access all of this instantaneously in such a way that as individuals we are witnessing a constant enlargement in the parcel of reality that each of us can span. We are surrounded, inundated with all kinds of information: we can find out whether it is raining in the remotest corner of the planet, find the lyrics of our favourite song in a matter of seconds or get the technical specifications of any device. When we meet someone, we search for references on them in Internet. We can take a look at the state of the ice in Antarctica, page through all the books from the ancient world, listen to the most reputed opinions or sift through the most alternative, counter-cultural opinions. It is all there, within reach of the keyboard and mouse.

Yet paradoxically, instead of allowing us to compose an increasingly comprehensive, accurate view of the world in which we live, this situation often shows the world to us in a more chaotic, disconcerting fashion than ever. One step away from agoraphobia, the expansion of the horizon of our sights has shown us a complex, ever-changing reality that we are incapable of grasping. In practice, the information available and the cumulative learning have become utterly inapprehensible for a human mind that is, after all, still constrained by our original biological limitations.

The impossibility of apprehending the knowledge available is obviously nothing new in itself. The Renaissance ideal of the *homo universalis* was overthrown as soon as it was coined, as after the invention of the printing

press any library contained many more books, much more knowledge, than what a person could aspire to read in his entire lifetime. Yet the structure of the library at least retained a certain stability. The processes associated with today's dynamic of exponential accumulation are different. Today we find ourselves in a new library where new rooms devoted to new disciplines are constantly being added on, which quickly fill with volumes and which we barely have a chance to visit. It what is gathered in them important? How is it related to everything that the others hold?

To a certain extent the situation is paradoxical, precisely when the new communication tools had managed to make us believe for an instant that they would empower us to overcome some of our endemic limitations. Everything seemed to point to the fact that the barriers of space and time that used to cause *disconnection*, the inaccessibility of certain zones of human knowledge that had triggered the irreversible loss of a good number of classical works, a multitude of reduplicated parallel efforts and the burial in years of oblivion of certain relevant discoveries like those of Mendel, were going to disappear.

Currently, this disconnection still plagues us, but its nature has shifted. We are disconnected from certain fields of knowledge in such a way that by the time we find out about their existence they may have already evolved. We do not know whether the crucial deed is happening now, and it is becoming increasingly difficult for us to identify the mainstream amidst all the deafening hubbub. All of this is reinforced by what some authors have called *infoxication*,⁹ a kind of intoxication brought on by too much information which translates into increasing difficulty discriminating between what is important and what is superfluous, and choosing reliable sources of information.

Therefore, in view of the exponential accumulation of information, we are gradually being engulfed by the certainty that it is more and more difficult to get a balanced picture of the whole, even just in low resolution. In response, an attitude is emerging which renounces knowledge due to demotivation, to surrender, and there is a tendency to tacitly accept the comfort provided by prefabricated, clichéd visions. In the end, this is a lack of critical capacity, nothing other than our surging ignorance.

VIII

Counter to what our initial intuition might lead us to believe, the second factor in the hyperconnected world that is pushing us towards the

Ignorance Society lies in the very properties of the new forms of network communication. As theoreticians like Marshall McLuhan and Neil Postman took it upon themselves to demonstrate, each medium of communication has specific properties as tools for accessing knowledge. Both authors specifically focused on analysing the attributes of the audiovisual media, especially television, and in highlighting their differences with the printed formats that had been used to disseminate knowledge since the 15th century. Basically, they posited the suitability of the former to deliver entertainment in the broadest sense of the term, yet they also pointed to its difficulties, compared to the latter, when trying to sustain rational arguments and intellectual reflections of any depth. In other words, the majority of people can spend a few hours in front of the television if a good film is being shown, but they will barely be able to sit through a 40-minute lecture.

Today we can amply corroborate their conclusions. Despite the prophecies of certain well-intentioned visionaries about the potentialities of television as a tool for educating or spreading culture, we all know that it has mainly become a machine for evasion and passive entertainment. The vision of the television society that Postman put forth in *Amusing Ourselves to Death*¹⁰ still remains fully valid, or, if possible, even more so.

However, well into the 21st century, the age of television is a thing of the past. Even though the average number of hours in front of the screen has not changed significantly in recent years, it has fallen steeply among the younger age brackets. The new generations are spending more and more time using new forms of network communication that enable them to cease being passive spectators and instead become active nodes, simultaneously broadcasters and receivers, consumers but also producers of all kinds of contents. There is unquestionably a world of inexhaustible possibilities, but for the discussion we are concerned with here we must ask ourselves whether this medium is ultimately suitable for fostering the development of knowledge in people's minds.

According to the discourse of what we interpret as the extended version of the Knowledge Society, it is. Perhaps the response is influenced by the fact that our judgement is still conditioned by the fascination we feel with our own technological accomplishments. It is clear that the technology on which the specificity of the world we live in is sustained, which is profoundly different to the world a few decades back, is far more complex and abstract than its counterpart in the industrial age. So are its outcomes: harnessing force, movement and energy meant overcoming the limitations imposed on us by the part of our nature which we share with animals. In contrast, the extension of our cognitive and communicative faculties,

acquired thanks to the new universe of microprocessors, silicon memories and network connections that surrounds us, is directly incumbent upon our human singularity.

Proof that we are in a state of a dearth of critical capacity is the ease with which concepts like the Einstein generation¹¹ proliferate, and the complacency with which we accept them. The purported Einstein generation is made up of children who are wholly familiar with the use of technological tools. Another example is theories on the business virtues of Gamers;¹² youngsters accustomed to competing, cooperating and adapting to an ever-changing environment thanks to the fact that they have played intensively with video consoles.

But if we agree to look at the flip side of the coin, we just might discover that in addition to child prodigies or efficient executives, around us there is also a proliferation of individuals who are incapable of concentrating on a text more than four pages long, people who can only assimilate pre-digested concepts in multimedia formats, students who confuse learning with gathering, cutting and pasting fragments of information found on Internet, and a rising number of functional illiterates. Although it is true that the new medium puts all the knowledge available within our reach, this does not necessarily mean that we are capable of doing anything with it.

It is inevitable that in the professional world the daily use of powerful personal computers connected to a global network as a working tool is changing the pace and sequence of our mental processes. Today it is common practice to manipulate several documents at the same time while sourcing information on Internet, dispatching an email or holding simultaneous conversations via instant messaging. From a productive standpoint, we are certainly more efficient, but the complexity of the majority of processes has also risen considerably, and the immense flux of information we receive and are required to deal with threatens to unleash new kinds of anxiety. It is difficult to focus and concentrate, and this need to constantly change the focal point of our attention ends up shaping our way of reasoning until it situates us in a state of dispersion that is conceptually incompatible with the concentration required for any somewhat substantial reflection. It is the same kind of dispersion that is also affecting the school-aged population's ability to concentrate, as university faculty often bemoan.

However, the implications go beyond the professional realm. Just as television was a medium particularly suitable for providing passive entertainment, ongoing network communication does not just reinforce the aforementioned trend towards dispersion, rather it is also showing itself to

be an outstanding way of encouraging all kinds of interactive activities. Our innate inclination to keep up social ties with other members of our species now takes place in an artificial environment that decontextualises it and distorts the natural mechanisms of inhibition to such an extent that it can generate addictions and compulsive practices. The fact that we can be in constant contact with other people via email, instant messaging and mobile phones is depriving us of the serenity that comes with oases of solitude, and it is turning us into purely interactive beings that are spending more and more time in parallel universes, disconnected from reality.

This is because instead of opening us up to the broader knowledge of the world, it turns out that the new medium is driving us to reside in other worlds that are custom-made for our needs and fears. The digital realm created by computers and telecommunication networks appear before us as an attractive, sensitive experience where we are spending more and more time. In combination with the new kinds of interpersonal relationships through remote means, they are shaping an environment that has the power to seduce many individuals, especially youngsters, who in the wake of the dismantlement of the mechanisms and protocols of traditional interaction choose to move to this new world where they find the emotions that reality, far more mediocre, does not provide them. An increasingly large part of our identity lies in the virtual world: we create specific profiles in the sites we visit regularly, we build spaces where we upload and share our photographs or tell about our individual life experiences, and in short, we gradually weave a web in which feelings and affective ties that are as real as the ones we experience in “normal” reality are also interwoven.

The process has just barely started. In the near future, we will have machines that surpass our senses' thresholds of discrimination until both worlds become indistinguishable. In view of virtuality, the maximum expression of this artificiality, the question immediately arises of whether the virtual world will be harmful or beneficial. This question will doubtless lead to a debate that will resemble the ones about novels in the 19th century or rock 'n' roll in the 20th century. Yet it is a sterile debate because it will in no way change the course of events and instead only prompt frustrating technophobia in some people. What is indisputable is that virtuality will have a major influence on people, just as other new cultural additions did. Film, novels and music have not merely been a form of entertainment: they can also educate or disturb minds, but in any case they have been added to our collective imagination, they are part of our referents and they have shaped our interpretation of reality. As we abandon traditional television and spend more and more hours in front of the computer and video games, interact with other people and have increasingly intense

immersive experiences, the footprint they leave will necessarily be deeper. We cannot discard the possibility that confusion might arise when trying to distinguish between reality and virtuality, or that more and more people might take permanent refuge in this interconnected, artificial world and ultimately decide to ignore everything that remains outside it.

IX

The combination of both factors described above, the exponential accumulation of information and the specific properties of the new forms of communication as a means to access knowledge, shapes our relationship with the existent knowledge today, and ultimately our individual capacity to overcome our state of ignorance.

Specifically, the former obligates us to initially accept the impossibility that there exist, if there ever existed, learned people, people with extensive, profound knowledge of reality that enables them to understand it or interpret it as an integrated, comprehensive system. There is no question that today any cultured person has a much broader vision than any learned person from the ancient world, especially from the scientific standpoint, yet the realms that remain outside their grasp are equally vast. Even those who have spent the most time and effort to gain perspective acknowledge that they have vast gaps in their knowledge which limits their scope and vision of the whole. Refusing to accept the limitations of their new condition has led some to failures and leaps into the void, like the ones recounted by Alan Sokal and Jean Bricmont¹³ in *Intellectual Impostures*.

One materialisation of this fact is today's absence of philosophers who try to undertake the task of setting forth comprehensive systems for interpreting reality. After Kant, Hegel and even Marx, and dovetailing with the dawning of the 20th century, philosophical thinking abandoned this endeavour, embarked on a lengthy process of introspection and subjectivisation and permanently retreated from the realms invaded by the natural sciences, until it remained imprisoned in a few specialised fields, like the philosophy of science and the interpretation of past authors.

However, although learned people no longer exist, experts naturally do. Acquiring profound knowledge of a specific field, and even temporarily reaching the outlying boundaries of human knowledge, is still within our reach. The sum of knowledge held by experts is the extensive learning of our day, although it is true that these experts are increasingly specialised. Hyperspecialised.

There is no question that we live in a society of experts. We are all experts in something, or at least we should be. The job of experts is the key part in the engine that feeds our society's economic growth, a dynamic of progress that today inevitably includes researching, developing and transferring the new discovery to the productive realm as quickly as possible. RDI. Innovating is the philosopher's stone our exponential times, an imperative which is underpinned by a certain anxiety brought about by the fear of being permanently left behind.

Therefore, the expert is the materialisation of the knowledge society as heralded by Drucker, and in its current guise it is the result of a long process, described by Russell Jacoby in his book *The Last Intellectuals*,¹⁴ which took place during the second half of last century. The producers of learning were gradually hired and put on the payroll of universities and research structures, either public or private, to shape the machinery of productive knowledge we know today. Generating learning has ceased to be an individual pursuit, becoming instead a collective enterprise within a fully organised system that has its own bureaucracy, rules, goals, structures, constraints and mechanisms for reward and punishment. There are huge infrastructures, padded budgets and well-defined careers that stipulate competing with other specialists, publishing articles or registering patents, in which anyone who tries to invade fields that other experts regard as their own is penalised by being discredited. The category of expert is indissolubly linked to professionalisation, which in our day is often tinged with proletarianisation. The huge mass of public and private technicians, specialists, teachers and researchers do not spend their time pursuing their intellectual queries, rather they do what they are paid to do: acquire specialised and, if possible, productive knowledge. There is still the possibility that someone may want to strike on their own, but doubt may always be cast as to their right to do what they please when their salary is financed by a company that demands results or by a society that ultimately also expects something in return for their salary. In the end, they are workers, skilled labourers, and any attitude from within the system that is excessively critical is condemned to trigger doubts as to their honesty.

One direct consequence of the mercantilisation of knowledge and the professionalisation of the expert is the breakdown of knowledge into areas that are increasingly unconnected to each other and especially to the rest of society. Producing learning is a job, an occupation that does not aim to mobilise or transform society. Its purpose is totally different. It should take place in the closed environment of those who share a language, jargon and specific way of tackling certain problems. The hyperconnected society fosters and encourages this behaviour, creating a new shattering force we

could call *autistic communitarianism*. Today it is easier than ever to remain in ongoing remote contact with people with whom we share interests and jobs, and move into particular worlds independent from the rest of society, closed communities where it is possible to reinforce a distinct identity and find the stable framework of reference that we all need.

Experts are fertile terrain for a high degree of autistic communitarianism, as the majority of their sources of recognition or punishment come from the community itself. Publishing studies, for example, a key yardstick of academic success, depends exclusively on the verdict of referees who are also members of the same collective. In short, there is no real need to communicate with the rest of society, and doing so might even be counterproductive. All the forces at play, then, are clearly centripetal.

This is the modern version of the old idea of the ivory tower. Today, instead of a single tower there is a host of tiny towers where scholars can take refuge, and each expert is imprisoned in one of them because of the productive imperative befalling the engineer or technologist, because of the scientist's passionately hyperspecialised zeal or even because of the impossibility of freeing oneself from the endogamic dynamic of the knowledge-generating structures. Perhaps we should expect that in a Knowledge Society the experts' learning, beyond its productive and commercial results, would flow towards the rest of society, but today not only does this not happen, no one is even trying to make it happen.

In short, then, by logic the experts, the great specialists in an increasingly narrow range of learning, are increasingly ignorant of the learning from other fields. Plus, their knowledge only makes sense within the economic system that generated it. It is productive and functional, instrumental learning that in both form and content fit better into the Greek notion of *techné*, the learning of the productive slaves, than *logos*, which shows us the essence of things. In the nature of the expert, there is not necessarily a trend to become a learned person, and in fact all the mechanisms operating around experts today push them in the opposite direction. When experts close the door of their office and go home, they are just another person. Outside their speciality, they are part of the next category: the masses.

X

Here I must clarify that the learned person, the expert and the masses are all ideal archetypes that do not exist in their pure state in the real world, where what we find are individuals that combine aspects of all three. We

are all a dynamic, ever-changing mixture of learned person, expert and mass. Perhaps at some point we have aspired to becoming learned people, we are probably experts in something and part of the time we act as such, but when we leave our specialisation we necessarily become one of the masses. And whether we like it or not, that is the largest slice of the pie.

By definition, one of the essential features of the masses is ignorance, as the mass is what results after removing the learned person and expert from the mix. Indisputably, this consubstantial ignorance today is not as absolute as it was in the past. The cultural level of the population has risen thanks to the enormous effort of widespread education; illiteracy is minimal and the vast majority of people have the basic skills needed to effectively take part in our literate societies. However, once we reach a certain level of functionality, all evidence points to the fact that in recent years there have been no major changes in the cultural level of the masses despite the exponential accumulation of information and the potentialities of the new technological tools that were supposed to propel us into the new Knowledge Society. The average number of years in school has stabilised at around 17 in the most advanced countries, and in the majority of cases other indicators like the percentage of secondary school graduates or drop-out rates have followed the same trends. Meanwhile, the life expectancy keeps rising, and therefore the relative weight of the early school years is losing ground.

One controversial factor that the statistical indicators cannot capture is how demanding syllabi are or how difficult curricula are. This is an ongoing debate (let us recall, for example, Allan Bloom's controversial book, *The Closing of the American Mind*¹⁵) which I will not get into here. The discussion on whether students should read the Greek classics is irrelevant when the majority of them take for granted that education is part of the aforementioned machinery of productive learning and that it should therefore necessarily be aimed at yielding up the much-needed experts who are capable of spearheading economic progress. Many of the tensions surrounding education are expressions of the contradictions in society's values and priorities, and they are part of the price we have to pay for living in an opulent environment which we are, in fact, not willing to give up. It is not possible to call for a culture of student effort if the reality in which students live places a premium on the value of free-time activities and entertainment, which in turn we cannot do without because they are an indissociable part of our well-being. We cannot call for more authority in the world of education when in other spheres any hint of authority is taken as authoritarianism. Everything is interlinked, and breaking these ties would only be possible with an amendment of the whole, a revolution.

Trying to eliminate ignorance through the educational system of the Ignorance Society is an unsolvable paradox.

In the best case scenario, assuming that the contents and level of education have remained steady and that today's drop-out rates are approximately the same as 15 or 20 years ago, we can state that in absolute terms, from the educational standpoint we are approximately at the same point we were one decade ago. Therefore, as a direct consequence of the first factor generating the Ignorance Society, the exponential rise in the complexity of the world in which we live, this level is actually far lower. The masses are more ignorant, at least when they finish their compulsory education.

Of course, not everything finishes when students graduate from secondary school or university. For the rest of their lives, which are increasingly long, people can keep accumulating knowledge, and we all know how: reading, attending classes, teaching themselves, observing, reflecting and learning from everyday experience. Essentially, the same as always. For the time being, we do not have brain implants capable of enhancing our knowledge, as there were in *The Matrix*,¹⁶ and therefore mental processes remain the same; we should not forget this. However, we do have the best tools available to accumulate knowledge.

Lifelong education is clearly a reality today, but it is inseparably linked to the mercantilisation of knowledge, and in the vast majority of cases it takes place in the workplace. If the economic and productive environment evolves, this activity becomes indispensable. Today, learning how to be more productive is yet another part of our job, and the only other alternative is a swift obsolescence. In fact, because of the need to adapt to constant change, we are obligated to devote any intellectual effort to trying to avoid being left behind: for many people learning English or computers has become almost unachievable goals that leave no time for anything else. As the popular saying goes, doing what is urgent leaves you no time to do what is important.

Beyond the educational needs imposed by an environment in constant flux, based on an everyday observation of the customs, interests and ways of life that are emerging around us as a result of the availability of mass access to a wide range of communication channels, it would be hard to draw the conclusion that we are moving towards a Knowledge Society. Anyone could draw up an extensive list of new habits, from paying an outrageous amount of attention to all kinds of sporting events to looking for a partner via Internet, which unquestionably show the overwhelming importance of entertainment and interactive activities, as well as a rising

interest in completely primary contents. Reality shows, sporting events, sentimental pornography, banal entertainment and the glorification of fame make up the bulk of today's TV programming; the mechanisms of viewer interaction have not budged this trend. In any event, although it is true that the campaign to distribute the available alternatives has broadened enormously, the resulting average is increasingly distant from what one might expect in a Knowledge Society.

XI

However, the major change that definitely entrenches the Ignorance Society is not that it is fostered by the new forms of communication rather that it has been accepted, taken for granted and ultimately nudged into the category of normality. Ignorance has gradually lost its negative connotations to such an extent that it has come to gain some prestige. The embarrassment of revealing one's ignorance in public has dissipated, and it is even displayed often with pride as yet another addition in a personality that is poised to enjoy the hedonism and immediacy provided by unbridled consumerism to the max. Being ignorant is not incompatible with having money or glamour by any stretch of the imagination. Quite the opposite, it can provide us with a high sheen of likeability in others' eyes.

Today's situation entails the most advanced phase in an unstoppable process noted by many authors, which has come hand-in-hand with the masses taking the reins of society. In *Revolt of the Masses*, Ortega y Gasset stressed in the late 1920s that "the characteristic of the time is that the vulgar soul, knowing it is vulgar, has the guts to claim the right to vulgarity and impose it wherever he goes".¹⁷ This encroachment of the culture of the masses after World War II, especially since the advent of the television, led Giovanni Sartori to write that "a world concentrated solely on the act of seeing is a stupid world. *Homo sapiens*, a being that is characterised by reflection due to his capacity to generate abstractions, is becoming *Homo videns*, a creature that looks but does not think, that sees but does not understand".¹⁸

Today, indeed, we are witnesses to the culmination of the process. Ignorance is fully normalised and unhesitatingly accepted into the models of social success, and access to the highest positions of public authority by people who are clearly ignorant is even regarded as proof positive of the virtues of the democratic system. Anyone, regardless of their education, and even brandishing clear proof of their lack of education and lack of desire to remedy it, can reach the pinnacle in our social structure. And today,

any public comment on this state of affairs would be decried as politically incorrect. Ignorance is bold and easygoing, and just like everyone in this society is constantly demanding, its rights must also be respected. The process is further fed by the increasingly key role of the media in our society, referring to social success and as a window onto the collective imagination, which they also largely create. “If you don’t appear on TV, you’re nobody”, or more recently, “if you don’t appear on Internet, you don’t exist”. The ingredients for achieving this visibility fit in perfectly with the structure of the Ignorance Society.

In parallel, just as ignorance has become normalised and gained prestige, non-productive knowledge has been discredited; it has lost any hint of being a social referent and has been heaped with negative connotations. As mentioned above, we still consider knowledge good in itself when we refer to it abstractly: on surveys, we all respond that we love to read, go to the theatre and watch documentaries. However in practice, outside of the productive learning generated by experts, any intellectual effort is virtually impossible for a society comfortably tucked into the ease of pre-digested entertainment and vacuous spectacle to understand. Today no one would dare call themselves an intellectual for fear of being labelled with all the connotations of this term today: pretentious, unproductive, boring.

The most surprising aspect of this situation is that we seem to perceive the duality between the utopian discourse and everyday reality. There persists an erroneous logic that leads us to believe that the use of ever more sophisticated tools necessarily entails more knowledge, and we confuse skill at using a complex computer programme that enables us to write with the act of writing something interesting, or even knowing how to write. We have convinced ourselves that having a network that enables us to see what TV stations on the other side of the world are broadcasting means that we are more learned, when the only thing we are doing is whiling away our time or, in the best of cases, acquiring trivial knowledge. And we love to hear “Knowledge Society”, when oftentimes on an individual level it just means spending hours and hours chatting with our friends or trying to pick someone up on Internet.

XII

Let us recapitulate: the expectation of a Knowledge Society emerging from the post-modern chaos thanks to the power of technology has ended up in practice being a Ignorance Society made up of impotent learned people, productive experts imprisoned in their ivory towers and masses that

are fascinated and plunged into the compulsive immediacy of alienating consumerism. The new forms of communication enable us to be more efficient in our mastery of nature, but as individuals they are turning us into increasingly ignorant beings who are more closed off in the tiny realms that emerge as a result of new pigeonholing forces that are affecting society as a whole. In the end, the Ignorance Society is the most advanced state in a capitalist system in which society's stability is grounded on progress, meaning basically economic growth,¹⁹ but that once the basic needs are met it is only possible to maintain through the existence of satiated, fascinated and essentially ignorant masses.

It is true that this scenario may seem gloomy to many, but before venturing any assessment we should take an important point into consideration: the Ignorance Society only takes on its full meaning in the context of the new generations that will inhabit it. We will only interpret it accurately if we project it onto them. Many of the inhabitants of the present were shaped in the preceding world, and just like always, we will often judge the personality of a time that will no longer be ours with mistrust or incomprehension. Our discomfort with the prospect of abandoning the old Athenian idea that knowledge is good in itself might be nothing more than a prejudice similar to the difficulty many people in the past had with accepting the possibility of a full life experience in an environment that lacks religion or schemes inherited from tradition. Young people can easily adopt the new ideas if they are internally consistent, because in reality to them they are all equally original.

However, even if we accept the futility of issuing subjective value judgements, it becomes possible and indeed advisable to analyse the consequences of the situation created. If we do so, we immediately notice that there are several potential risks.

The first is the social risk. When the possibility of a real Information Society appeared on the horizon, the theory was swiftly formulated that this environment would be a great chance to rise beyond some of the prevailing forms of social inequality. Massive, easy access to all kinds of information was supposed to enable the most disfavoured members of society to even out some of the differences that separated them from the rest of society. Today we can now see that this forecast erred on the side of optimism. In the Ignorance Society, we are witnessing the birth of new sources of inequality and frontiers being erected that did not exist before and that affect those who are incapable of jumping on the bandwagon of technological complexity and incessant dynamism, either because they have a low level of education or because they lack natural talent. An open world

will also be a world of opportunities, good opportunities, but only for the few, the best poised or those who have enough leeway to manoeuvre. For the rest, it will become an increasingly hostile environment. A significant swath of the population may be left behind to muck about in a swamp of unmet life expectations simply because they will be dispensable. The favoured ones will not need the others in order to sustain themselves: technology, productive knowledge and the possibility of seeking everything they need at the best price in a globalised market will be enough. A new social breach will be sustained on knowledge and talent, even more gaping than the former economic contrasts, more essential, more intrinsic to each person. It will neutralise the possibility of any egalitarian discourse and foster the emergence of new feelings of social injustice. Therefore, there is a risk of ending up irremediably divided into two castes, a group comfortably ensconced in its ignorance, fascinated by technology and increasingly alienated, and another made up of the experts in productive learning and the ins and outs of an unsustainable economic model.

The second risk springs from the danger of being ignorant at a time when we must face crucial challenges whose resolution depends on our actions. And this is precisely the situation in which we find ourselves today. The Ignorance Society, as mentioned above, is yet another of the many faces of the exponential times in which we are fated to live, which is also characterised by a proliferation of cataclysmic risks that we can only grapple with through conscientiously sensible action. At the onset of the Atomic Age, we were forced to accept the need to limit our capacity for action, a capacity that today has multiplied on all sides and has left us facing new unknowns, some of which we might not even be aware of. In biology, we are treading the fine line dividing use from abuse. The risk of nuclear energy, which lies not so much in its infinite destructive power as in its proliferation, has been averted so far thanks to a tense balance that is increasingly tottery. We are unable to fully grasp the challenge of climate change as we continue to passively witness the extinction of much of the planet's biodiversity. The experts, imprisoned in their ivory towers, barely manage to glimpse the consequences of their collective actions, and should they manage to, they would not have the capacity to exert an influence on political leaders, and even less on the masses. The consubstantial ignorance of exponential times leads us to a widespread blindness with unforeseen consequences that prevents us from identifying and accepting the share of responsibility that befalls each of us.

Finally, the third risk implicit in the Ignorance Society stems from the questions it poses as to the place that the individual will occupy in it, and even as to the very conception of the individual. The claim to the individual's

autonomy and centrality over the collective is an indissociable part of that symbolic load that the word 'knowledge' occupies in our cultural baggage. After the first democratic experiments in the *polis*, Greek rationality withdrew inward and all sights were set instead on the individual; since then the West has never abandoned the pathway of subjectivisation, a course that permanently gained ground with Descartes' thinking man and the humanistic interpretation of the world.

This conception of the individual has led us to reflect time and time again on its role within the social structure. For centuries, there has been tension between liberal individualism, which viewed society as a set of restricting institutions that limit the nature of the individual, and a more restrictive conception of the nature of the individual, which justifies the existence of loftier collective structures to foster the individual and even save it from itself.

However, this type of debate is largely mitigated today. After the fall of real socialism, liberal individualism has gained ground as the uncontroversial alternative in today's world. Our society is the outcome of a long process of individualisation that has gradually shifted the realm of decision-making on what is good and bad, appropriate or inappropriate, desirable or undesirable, from the group to the person: many aspects of our life have gone from being guided by shared, unquestionable values to becoming affairs of each individual conscience in a scenario lacking priorities and increasingly detached from any tradition. Personal autonomy and the availability of a private realm for developing one's own personality have become a supreme, absolute good, an indisputable and undisputed right that has penetrated so deeply into the mind of each individual that it has become the backbone of their scale of values. We could not imagine that this would cease to be so in the future, and, in fact, much of the appeal of the utopian Knowledge Society lies precisely in its ability to reinforce individualistic endeavours.

In effect, the advent of the current transformation entails a qualitative leap in this process, as it places a set of powerful new tools that enable the desire for individuality to extend towards unimaginable limits into the hands of a profoundly individualised society. Today, massive access to information, non-stop communication with other people and even the opening of new channels of expression with the theoretical potential to amplify any message, regardless of how individual it may be, to a planetary scale are all within the reach of any individual. Apparently, individualism has managed to accomplish its apotheosis of the individual.

However, as we have tried to demonstrate throughout this entire article, these approaches clash head-on with the new and unbridgeable limitations

that plague us in the Ignorance Society. The potentialities that technology offers us as a tool for furthering individual liberty will be limited in practice by the ignorance that stalks us and restricts the realm of what we can truly accomplish as individuals. Is freedom of thought possible based on ignorance? What remains of individual freedom when we are unable to grasp the complexity of the world around us? Should we definitively accept individual reason's inability to access knowledge and the wisdom of taking refuge in discourses created by higher entities?

While individuals are grappling with their smallness in an open and increasingly complex world that they never manage to fully comprehend, the evolution of this world continues apace. The centre of gravity in the mercantilised Knowledge Society is gradually shifting from the individual to collective structures. Productive learning no longer belongs to the masses or the isolated expert and is instead distributed in vast systems in which the individual is just one dispensable piece. There is more and more knowledge in organisations, yet less knowledge in individuals; more information in silicon memories and less in human brains. The individual is gradually being plucked from its central position, becoming diluted, and on the periphery is revealed to be weaker and more dispensable than ever.

Perhaps we should take a moment to consider whether as we persist in thinking that we are moving along the pathway of humanism towards a Knowledge Society, we are actually being led towards a Ignorance Society that ultimately posits the dissolution of the individual and the end of the most singular part of the Western dream.

The Ignorance Society

The new way of dealing
with non-knowledge

Daniel Innerarity

The Knowledge Society has effected a radical transformation in the idea of knowledge, to such an extent that it should properly be called the Ignorance Society. That is, it is a society which is increasingly aware of its lack of knowledge, and which more than bolstering its knowledge is moving forward by learning how to deal with non-knowledge in its manifold manifestations: insecurity, likelihood, risk and uncertainty. There is uncertainty as to the risks and consequences of our decisions, yet also uncertainty as to rules and legitimacy. Diverse new forms of uncertainty are appearing that have to do with not only what we do not yet know but also what cannot be known. It is not true that we are poised to generate the knowledge needed for every problem that arises. Oftentimes the knowledge available is minimally supported on sure facts and maximally on hypotheses, presentiments or indications.

This return of insecurity does not mean that contemporary societies depend any less on science, rather the opposite: this dependence is even greater. What has changed is science and knowledge in general. For some time now, we have been focusing our attention more on a series of factors that might be viewed as the “weakness of science”: insecurity, contextuality, interpretive flexibility, non-knowledge. At the same time, the problems have changed and therefore the kind of knowledge needed has, too. In many realms – such as market regulation or ecological problems – we have to resort to theories that manage probable models but offer no accurate long-term predictions. In the most serious matters affecting nature or the destiny of mankind, we are confronted with risks for which science can provide no sure-fire formula for resolution. What science does is transform ignorance into uncertainty and insecurity (Heidenreich 2003, 44). Science is not ready to free politics from the responsibility of having to make decisions under conditions of insecurity.

Despite the fact that the sciences have contributed enormously to the amount of reliable knowledge we have, when dealing with highly complex systems, such as the climate, human behaviour, the economy or the environment, it is increasingly difficult to get causal explanations or accurate predictions, as our cumulative knowledge simultaneously sheds light on the limitless universe of non-knowledge. What is most likely behind the erosion of states’ authority and the crisis in politics is the fact that knowledge is becoming ever more fragile and plural, and we will not manage to recover its capacity to shape society if we do not manage to once again articulate power with the new forms of knowledge. A society of risk demands a culture of risk.

For many years, modern society has trusted the powers-that-be to adopt political and economic decisions grounded on rational, socially legitimate

(scientific) knowledge. However, the persistent disputes as to risk, uncertainty and non-knowledge, as well as the constant infighting among experts, have increasingly and irreversibly torn down this trust. Instead, what we know is that science is quite often not reliable or consistent enough to take objectively indisputable decisions that can be socially legitimised. Just think about the case of health or environmental risks, which generally can only be identified with little certainty. Hence the decisions for this kind of issue should rely not so much on knowledge as on a justified, rational and legitimate handling of ignorance.

The model of knowledge that we have dealt with up to now was ingenuously cumulative; it was assumed that new knowledge was added to prior knowledge without casting doubt on the latter, thus gradually pushing back the boundaries of the unknown and increasing the calculability of the world. But this is no longer true. Society's dynamic principle is no longer a constant rise in knowledge and a corresponding encroachment on the unknown. There is an entire non-knowledge that is produced by science itself, a "*science-based ignorance*" (Ravetz 1990, 26), so this non-knowledge is a problem not of a temporary lack of information, rather of the advancement of knowledge, and precisely because of this progress, the amount of non-knowledge (about the consequences, scope, limits and reality of knowledge) is increasing proportionally (Luhmann 1997, 1106). While in other ages, the predominant methods for combating ignorance consisted of expunging it, today's approaches assume that there is an irreducible dimension of ignorance, meaning that we must understand it, tolerate it and even make use of it and consider it a resource (Smithson 1989; Wehling 2006). One example of this is that in the Knowledge Society the risk posed by "the trust in other's knowledge" has become a key issue (Krohn 2003, 99). The Knowledge Society can be characterised precisely as a society that has to learn how to deal with this non-knowledge.

The boundaries between knowledge and non-knowledge are neither unquestionable, nor obvious, nor stable. In many cases, how much we can still know, what can no longer be known or what will never be known are open-ended questions. This is not the typical Kantian discourse on humility that confesses how little we know and how limited human knowledge is. Instead, it is something even more imprecise than this "specified ignorance" that Merton talks about, meaning weak forms of ignorance, such as the ignorance that is assumed or feared, or the ignorance of exactly *what* we do not know and *to what extent* we do not know. Oftentimes, we know neither what might happen nor even "*the area of possible outcomes*" (Faber / Proops, 1993, 114).

The appeal to the “unknown unknowns” that are beyond the hypotheses of scientifically established risks have become a powerful, controversial argument in the societal controversies about the new research and technologies. Of course it is still important to expand the horizons of expectation and relevance so that the areas of non-knowledge that we have not seen until now are divisible, to proceed to the discovery of the “non-knowledge that we are unaware of”. Yet this aspiration should not lead us to fall into the illusion of believing that the problem of unknown unknowns can be resolved traditionally, that is, by eradicating it completely through more and better knowledge. Even where the relevance of the unknown unknowns has been explicitly acknowledged, we still do not know *what* we do not know and *whether* there is something crucial that we do not know. Knowledge societies have to accept the idea that they are going to have to always deal with the question of unknown unknowns, that they will never be capable of knowing whether and to what extent the unknown unknowns which they must necessarily grapple with are relevant.

As Ulrich Beck cautions, what characterises this *age of secondary consequences* is not knowledge but non-knowledge (1996, 298). This is the true terrain of the social battle: who knows and who does not, how knowledge and non-knowledge are recognised or impugned. If we look carefully, the most important political clashes are in fact different appraisals of the unknown or the insecurity of knowledge. Different appraisals of fear, hope, illusion, expectations, trust and crisis compete with each other, none of them with an indisputable objective correlate. As an effect of this controversy, the focus is placed on the dimensions of non-knowledge that accompany the development of science: about its unknown consequences, the questions it leaves unsolved, the limitations of its scope of validity. The purpose of the controversies tends to be not so much the knowledge itself as the non-knowledge that inevitably accompanies it. Whoever disputes the contrary or dominant knowledge is doing precisely this: “*drawing attention to ignorance*” (Stocking 1998), spotlighting precisely what we do not know.

This “politicisation of ignorance” (Wehling 2006) became clear, for example, in the controversies about technology policy starting in the 1970s. It was not just that there was increasing awareness of this relevance of the unknown, rather that this perception and its corresponding appraisal were increasingly disparate. What some viewed fundamentally as a source of fear aroused promising expectations in others. While some spoke about a fleeting cognitive deficit, others understood that there was something that could never be known. This took place at a time when we were all aware that science produced not just knowledge but also uncertainty, “blind spots” and non-knowledge. The fears and unease present in much of public

opinion are not wholly unfounded, as the upholders of zero-risk technology tend to assume. In the wake of society's rejection of certain technical options, there is often a perception of certain ignorance or uncertainties that science and technology must acknowledge. In this and other similar conflicts, what are at odds are divergent and even clashing perceptions of non-knowledge.

From now on, our major decisions are going to revolve around "decision-making under ignorance" (Collingridge 1980). Decision-making under ignorance requires new forms of justification, legitimisation and observation of the consequences. How can we protect ourselves from threats about which by definition we do not know what to do? And how can we do justice to the plurality of perceptions about non-knowledge if we do not know the scope and relevance of what we do not know? How much non-knowledge can we allow ourselves without unleashing uncontrollable threats? What ignorance should we consider relevant and how much can we ignore as inoffensive? What balance between control and randomness is tolerable from the standpoint of responsibility? Is the unknown *carte blanche* for acting, or to the contrary a warning that we should take the utmost precautions?

Societies handle non-knowledge in different ways: from the social standpoint societies react with disagreement; from the temporal standpoint with tentative understanding; from the objective standpoint with imperatives that try to protect against the worst (Japp, 1997, 307). Let us recall the case of the "principle of precaution" which is now part of European Union treaties and international agreements, like the Rio Declaration on climate change. According to the principle of precaution, the adoption of efficient measures to prevent serious and irreversible damage like climate change should not be delayed just because there is not watertight scientific evidence. The principle of precaution is, however, still a controversial norm which has highly divergent interpretations. In any event, this kind of approach is interesting inasmuch as it explores the consequences of some decisions, the likelihood that certain damages might occur, the criteria under which these negative consequences might be acceptable and the quest for possible alternatives.

Here there arises the paradox that the Knowledge Society has put an end to the authority of knowledge. Knowledge is becoming pluralised and decentralised; it is more fragile and disputable. But this necessarily affects power, as according to Bacon's principle we were used to knowledge strengthening power, while now it does precisely the opposite: knowledge weakens power. What has taken place is a rising pluralisation and dispersion of knowledge which strips it of its monopoly and exposes it to dispute. Along with the traditional form of scientific production at universities,

new forms of knowledge are appearing from a plurality of agents in society, such as the knowledge of NGOs, citizens' professional qualifications, the knowledge of diverse social sub-systems, the accessibility of information, the multiplication of expert knowledge... As the production of knowledge diversifies, the possibility of controlling these processes wanes. The Knowledge Society is characterised by the fact that a rising number of stakeholders also has a growing pool of diverse knowledge, meaning that these informed stakeholders are poised to use their own knowledge when faced with governments' intentions. Instead of more certainty, what we have is a plurality of voices that cacophonously argue their pretensions of knowledge and their definitions of non-knowledge.

Jasanoff has given the name "technologies of humility" (2005, 373) to a institutionalised way of viewing the outskirts of human knowledge – the unknown, the uncertain, the ambiguous and the uncontrollable – acknowledging the limitations of prediction and control. A similar approach drives us to take into account the possibility of unforeseen consequences, to make explicit the regulatory factors that are concealed in technical decisions, to recognise the need for plural points of view and collective learning.

In this context, instead of the traditional image of a science that produces "hard", objective facts which encroaches upon the terrain of ignorance and tells politics what it should do, we need a kind of science that cooperates with politics in dealing with uncertainty (Ravetz 1987, 82). For this reason, it is necessary to develop a reflexive culture of insecurity which does not perceive non-knowledge as the realm beyond what has already been studied (Wehling 2004, 101) but as part and parcel of knowledge and science. What is not known, insecure knowledge, the merely likely, the non-scientific forms of knowledge and ignorance should not be regarded as imperfect phenomena but as resources in themselves (Bonss 2003, 49). There are matters in which, as there is no sure-fire knowledge and without risk, cognitive strategies should be developed for acting under uncertainty. One of the most important forms of knowledge is risk assessment, management and communication. We must learn to operate in a setting in which there are no longer clear relationships between cause and effect, rather blurry and chaotic ones.

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The Benighted Society

The hidden side of the
Knowledge Society?

Gonçal Mayos

Two Theses

Two basic theses reveal a “Benighted Society” that – quite paradoxically – exists parallel to and threatens the Knowledge Society. Somehow, it is even the Knowledge Society’s necessary consequence unheralded until today, the “shadow” that projects its light, its contrasts and its contradictions.

First of all, with regard to knowledge in the early 21st century, we are immersed in a vast Malthusian process: with the increasing number of interactions generated by globalisation and Internet, the hyperbolic growth in the information available is far higher than individuals’ ability to process this information. Despite our online, bibliographic and documentary tools, the human condition has certain biological and neuronal limits that prevent us from keeping up with this geometric progression of knowledge in the long term. Therefore, given the rising lopsidedness between the collective capacity to create learning and the individual capacity to digest it and integrate it into our lives, the advent of a “Ignorance Society” (Brey), a “Lack-of-Knowledge Society” (Innerarity) or a “Benighted Society” (Mayos) seems justified and perhaps even inevitable.

Secondly, beyond other similar perspectives, the name “Benighted Society” seems to better describe the paradoxes and contradictions that are emanating behind the Knowledge Society today. The process of rising specialisation among experts will continue, so in the middle term there are no forecasts for the collapse of expert knowledge or specialised experts. With the exception of specific aspects pointed out by Innerarity, the scientific-technological Knowledge Society will be able to determine what shall be deemed “certain”, “proven by science” and “most technologically appropriate” in each case.

However, we can cast doubt as to whether the majority of people are capable of having knowledge, culture or a “learned” general comprehension of the global state of human knowledge and its issues. That is, specialised and expert knowledge will continue, but outside their own field of specialisation, people will find it more difficult to be generally “cultured” or capable of reflectively considering human problems as a whole. This is not incidental, because if the majority of people cannot internalise this general knowledge, their political decisions through voting and democratic participation are extremely problematic.

We must therefore ask ourselves whether humanity – especially a democratically organised humanity – can do without this kind of general culture in its citizens? Can a “Benighted Society” remain democratic and/

or cope with its increasingly complex problems? Can today's construction of the Knowledge Society continue without a parallel "Benighted Society" also being forged?

Malthusian process

Globalisation and the powerful interactions driven by today's information and communication technologies (ICT) are generating a clear Malthusian process in knowledge. The hyperbolic growth in the amount of information generated collectively is far higher than the merely arithmetical rise in individuals' possibilities for processing this information.

The lucidly pessimistic British economist and demographer Robert Malthus²⁰ formulated a similar thesis called "Malthus's Law". It said that food production tends to grow in the long term following an arithmetical progression (as in 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22..., or $2x$), while the total human population tends to grow geometrically in the long term (as in 1, 2, 4, 9, 16, 25, 36, 49, 64, 81, 100, 121..., or x^2). In the long term, beyond temporary favourable or unfavourable circumstances for both food production and the population, Malthus claims that this difference in their respective growth rates means that all the increases in the amount of food will inevitably be consumed by the demographic growth in such a way that the majority of humanity will tend to always live on the verge of impoverishment if drastic demographic moderation policies are not taken.

A law that is similar to Malthus's concerns advanced societies, knowledge societies and their democratic cultures.²¹ The learning produced collectively thanks to ICTs and Internet threatens to surpass individuals' cognitive capacities. Today's "network society", as dubbed by Manuel Castells, generates a geometric progression of links, information and knowledge. Its swift circulation around the nodes makes high degrees of interactivity, productivity and creativity possible, allowing new ideas or information to spread exponentially and become increasingly more collectively developed until they come to form part of the patrimony of both everyone and no one at the same time.²² The enormity of the relevant learning produced threatens to surpass the common person's capacities not so much as experts in some specialised field but as everyday citizens who have to democratically make informed decisions on increasingly complex processes.

Certainly, at least in the middle term, this looming cognitive obsolescence in individuals will not take place in their professional, specialised field where they are experts, rather it will be felt in the general knowledge they need as citizens with a right to vote to democratically make informed decisions on

the increasingly complex processes that are shaping human life today. There is no question that citizens' professionalisation and workplace specialisation will receive enough support of all kinds to ensure that the high productive standards of the Knowledge Society are achieved in the middle term. Nor is it necessary to once again state how the gulf between people and countries that have managed to welcome the new technologies and adapt to the recent cognitive demands and those that have not has widened.

It is, however, the time to cast the objectively justifiable doubt as to whether similar efforts are being made to prepare and train individuals as citizens so that they can cope responsibly with the demands of taking political decisions and voting on extremely complex issues that are important for everyone. The usual confinement to the merely productive in the short term (unquestionably one of the worst vices of our society) tends to more and more frequently leave long-term political, ethical and social questions that affect everyone to the mercy of individual benevolence and responsibility. As if it were something with no importance and even less interest, everything is relegated not just to individual responsibility but also to the realm of "free time" and "leisure", in a totally imbalanced competition with the allures, temptations, diversions and proposals of boundless consumption that the "Society of Consumption" and the "Society of the Spectacle" offer.

In the long term, improvements in literacy, documentation, access to information and even the noteworthy and inexorable technological advances can do little to fend off citizens' rising cognitive obsolescence (citizens being the *sine qua non* condition of democracy), because ultimately, average citizens and their specific neuronal or physiological endowments must be the ones that take charge of the information generated collectively and in constant exponential growth. In the end, average citizens must also necessarily be the ones who democratically take decisions based on their sound personal understanding of the most complex human questions.

Benightedness as a danger to democracy

There is a fairly widespread consensus among analysts that today many citizens' increasing inability to rigorously exercise their democratic right to vote and stewardship is proven. Much of the citizenry wants no part of the communal public sphere and withdraws to the private sphere, either in a kind of leisure activity banally reduced to mere diversion, or as a professional in a super-specialised, fragmentary job.

The evolution of modern society has tended to magnify private life at the expense of public life, collective policy and the sound health of democracy.

It may seem like a paradox, but this very modernity that built democracy is banalising it or weakening its health as citizens' efforts and interests are being deflected towards the private sphere. First, "private" professional life is concentrating and demanding more of the population's ongoing efforts. Plus, another extremely broad swath of the remaining time and availability is spent on an even more "private" life of entertainment, consumption and fun.

Modern citizens undoubtedly feel strong pressure to maintain and bolster their productive, professional and specialised skills. They no doubt also feel a very similar pressure to consume the most varied products and satisfactorily fill their free time and downtime. There is nothing objectionable about all this, as they are clearly the key dimensions of today's advanced society: knowledge and high technological productivity, but also consumption and spectacle. Nonetheless, oftentimes the price paid for this, the underlying cost of relegating "public" political life to the sidelines, is ignored. For this reason, the demand on citizens to collectively and democratically cope with the increasingly complex global difficulties of today's society is languishing and weakening.

Obviously, we should not forget that for some decades now, the possibilities of democratic representation have minimised citizens' rising interest in and cognitive obsolescence with regard to complex public problems. Many issues in the citizen debate are considered and tend to be displaced, to our minds excessively so, leaving the decisions (or at least the mediation) to "expert committees", "technical reports" or "professional" political forums inside and outside the parties. Citizens' scant preparation or availability to take the reins of all the complex ins and outs of the public and the political is the current cause of political benightedness and democratic feebleness. However, this is a reason that tends to be frequently brandished yet rarely analysed in depth, and even less so with a steadfast will to remedy it.

The outcome is clear: ever more important issues that concern everyone and affect the common good are decided in para-democratic channels far removed from the citizenry and from the most direct exercise of democracy, and limited to experts and professional politicians. It should come as no surprise, however, that much of democratic politics (sometimes simply "demoscopics") has come to revolve around the struggle to emotionally influence the electorate through the major media.

Today's domain of superficial propaganda targeted at the mass passions, virtually bereft of reliable arguments or data and primarily seeking demoscopic mobilisation or manipulation, heightens the rising cognitive obsolescence of the average citizen. The reason is simple: the average person not only has to

expend efforts to develop a well-founded opinion on collective problems and their political solution, but they must also expend major additional efforts to try to handle democratic problems with a minimum of equanimity. Despite the fact that we are keenly aware and critical of the current propagandistic drift of democracy, which unquestionably heightens the Malthusian process in knowledge, we shall not delve further into this issue and instead continue pursuing the thread of our argument.

Today, the basic economic and political issues are so complex that they cannot but surpass average citizens, given that they even surpass the specialists! Suffice it to recall the unanimous surprise in 1989, not predicted in the short term by any analysts, at such important events as the fall of the Berlin Wall, the “Iron Curtain” and the USSR; and how stock market aces were taken off-guard by the dot-coms, then mortgages and – finally – the deep economic crisis that we are suffering from today. Sociologist Ulrich Beck²³ warned about the steep rise of risk in advanced societies simply because of their increasingly complexity, global integration and the speed at which everything circulates.²⁴

On other matters, the possibilities of bioengineering, genetics, transplants or simply scientifically intervening in the management of life today have triggered an understandable and sometimes virulent citizen debate, which often comes with prejudices and emotional positions with very weak foundations. This should not be surprising because any citizen who wants to develop a well-founded opinion on the major bioethical debates of today is clearly overwhelmed by the rising complexity and its manifold implications.

In the aforementioned examples, we can see that expert, specialised knowledge certainly remains in fairly good health (bearing in mind the limits pointed out by Innerarity), but that the same does not hold true for the average citizen’s preparedness to rationally and democratically grapple with humanity’s problems today. For this reason, Antoni Brey is right when he darkly heralds the advent of an “Ignorance Society”, although we prefer to talk about a “Benighted Society” inasmuch as it primarily threatens general learning and knowledge, without which the individual is defenceless, bewildered and incapable of any kind of reflection or political decision that goes beyond “guessing at” problems and “emotionally reacting” to them.

Post-modern alienation?

The “post-modern condition” has turned into a clinging cliché with the huge surge in cynical, bewildered, anxiety-ridden, nihilistic, complacent,

escapist attitudes. This is obviously related to a profound crisis in values, but we suggest noting that it surely has to do as well with the perception – held by many people – that convictions, certainties and truths are not as viable today as they were in the past.

Despite the fact that no one casts doubt on the steep rise in the amount of knowledge collectively available for humanity, individuals perceive that their own convictions, certainties, truths and deep-seated “personal” values have waned in number, solidity and security. Unconsciously, people sense that a Malthusian process in learning is “corroding” the certainties, values and ideals that they had, as they are left with less and less of the culture and overall perspectives needed to adopt and rationally defend them. Society, values and learning have lost their former solidity and are shown today to be fluid, liquid (as Zygmunt Bauman has theorised²⁵).

In the modern age and for centuries, people’s identities tended to be closely tied to their job or profession (Weber spoke about “vocation”), which, it was assumed, was for their entire lives – at least if they were successful. Sociologist Richard Sennett condemned the “corrosion of character” which he believed advanced capitalism triggers, because “how can long-term objectives be sought in a short-term society? How can lasting social relationships be sustained? How can a human being develop a story about their identity and life history in a society made up of episodes and fragments? (...) short-term capitalism threatens to corrode the character, especially those aspects of character that join human beings to one another and afford each of them the sense of a sustainable self.”²⁶

Everything above points to what we could call “post-modern alienation”. In the midst of the Knowledge Society, a threatening “post-modern alienation” is looming – paradoxically – over the human society with the highest cognitive growth rate and circulation of information, prompting a parallel and to-date unnoticed “Benighted Society”. In a surprising and paradoxical dialectic (although not so surprising and paradoxical as one might think), the collective human capacity to exponentially multiply cognitive links and learning plays a part – as long as there is no corrective element mediating – in the rising cultural obsolescence of the majority of the population. Simply put, in isolation and outside their professional specialisation, individuals are manifestly incapable of keeping up with the exponential pace of the collective, global and specialised cognitive output in the long term.

Talking about simplicity, the Knowledge Society, which is ultra-specialised and comes on the flanks of ICTs, threatens its citizens with obsolescence in all

the fields in which they are not expert professionals. Briefly: the Knowledge Society does not just overlap with the Benighted Society, rather it creates it or – at least – exposes it. Expertise and ultra-specialisation (at least the way they are in our advanced societies) bring with them a rising benightedness within which we – as average citizens – are forced to personally take responsibility for the global and common to the human genus.

It is often believed, and by now is a cliché, that the Knowledge Society finally and strikingly reveals that the specialisation of professional experts has “triumphed” over the old contemplative “learned men” and “cultured men” of the Renaissance. Apparently, this is the definitive victory of scientists, engineers and technologists over humanists and philosophers. It is hardly worth arguing that science is increasingly subjugated to technological application and that scientists are increasingly becoming mere technology managers. Nor does arguing that scientists are feeling more and more like mere instruments in a productive process that they neither control nor at times are aware of in its entirety deflate this cliché. As occurred back with the famous Manhattan Project that yielded the atomic bomb, scientists lose control and autonomous agency of their research within the macro-structures that they are part of today. Sometimes it is said that this is for the sake of “security”, while other times it is claimed to prevent “industrial espionage”, but oftentimes it is simply the result of ultra-specialisation and institutional hierarchisation.

Today there is a widespread consensus that it is also impossible for scientists to get an overall grasp of the multiple advances in all the scientific theories, fields and disciplines. This is a clear effect of the Malthusian process in learning that affects today’s Knowledge Society, but we repeat that in this respect we do not predict collapse or radical cognitive obsolescence in the middle term. The “post-modern alienation” that seems to be the unexpected consequence of this process tends more to manifest itself in benightedness and cognitive obsolescence than to threaten to render us incapable of responsibly exercising democratic citizenship.

Plus, as mentioned above, the only attempts to offset the rising gulf between the citizenry and democratic institutions involve resorting to “professional politicians”, “experts” and “technical committees”. We forget that given their ultra-specialisation and their logical dependence on the internal rules of their “guild”, they are heading towards what the classical Greeks called “idiocy”,²⁷ or at least a greater “blindness” with regard to the world as a whole, the human and global needs of today. Once again, specialisation in one aspect leads to blindness to or unawareness of what is common, shared and human in general.

Post-modernism has shed light on the importance of the Knowledge Society, communication and information technologies (including Jean-François Lyotard or Gianni Vattimo), but also on other aspects of contemporary society that are closely linked to what we call the “Benighted Society”. They would include, for example, the “Society of the Spectacle” theorised by Guy Debord and the Situationists, the culture of “simulacra” condemned by Jean Baudrillard and the “Age of Emptiness” analysed by Gilles Lipovetsky²⁸. In a very similar fashion yet far earlier, in “The Library of Babel”²⁹ Jorge Luis Borges masterfully anticipated the distressing and paradoxical sensation triggered by the Malthusian process in knowledge: “The unbridled hope was, naturally, followed by excessive depression. The certainty that some shelf in some hexagon held precious books and that these precious books were inaccessible seemed almost intolerable. {...} The certainty that everything was written nullifies us or conceits us. {...} Perhaps age and fear trick me, but I suspect that the human species – the only one – is about to become extinct and that the Library will last: illuminated, solitary, infinite, perfectly immobile, filled with precious volumes, useless, incorruptible, secret.”

The post-modern Knowledge Society and ICTs have created the means for the collective creation of learning to be expanded exponentially and subsist without the need for the conscience, memory or reflection of any specific human individual. The Knowledge Society makes it possible for learning to exist on Internet nodes, independent of any of us. For this reason, today it does not matter if anyone ever manages to take an interest in certain concrete aspects, and of course it is impossible for any one individual to grasp the entirety of the knowledge created collectively, nor can any one individual take charge of the structure of the whole. That is what Antoni Brey called the “Ignorance Society”, Daniel Innerarity called the “Lack-of-Knowledge Society” and I call the “Benighted Society” (or by virtue of the age when it came to light, “post-modern alienation”).

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19. This model is being subjected to criticism from several different angles and diverse authors. From the standpoint of sustainability, by the previously cited *Limits to Growth*. As a model to make human beings happy, for example in Clive Hamilton's *Growth Fetish*, and even questioning the very idea of progress in several works by John Gray.
20. Robert Malthus (1766-1834) was educated according to Rousseau's pedagogical principles. He gave up being ordained as an Anglican priest by getting married and served as a professor of Economics at a new university institution where overseas civil servants of the British Empire were educated. In 1798, influenced by Adam Smith and David Hume, he anonymously published his celebrated *Essay on the Principle of Population as it Affects the Future Improvement of Society*, which unleashed an enormous controversy. In 1804, an edition signed by its author was released, extended and corrected with the studies from Malthus's trips around much of Europe. He also published *Observations on the Effects of Corn Laws, An Inquiry into the Nature and Progress of Rent* and *Principles of Political Economy*.
21. See my lecture [L'alienació postmoderna](#) (Post-modern Alienation) at [UPEC \(Universitat Progressista d'Estiu de Catalunya\)](#), delivered in July 2008.
22. See the books by Manuel Castells: (2006) *La Sociedad red. Una visión global* (*The Rise of the Network Society*), Madrid: Alianza; and (2004) *Sociedad del conocimiento* (*The Knowledge Society*), Barcelona: UOC.
23. Basically see the books by Ulrich Beck: (2002) *La sociedad del riesgo global* (*World Risk Society*) (Madrid: Siglo XXI); (2006) *La sociedad del riesgo. Hacia una nueva modernidad* (*Risk Society: Towards*

a New Modernity) (Barcelona: Paidós); and (2008) *La sociedad del riesgo mundial: en busca de la seguridad perdida* (World Risk Society: On the Search for Lost Security) (Barcelona: Paidós). .

24. German sociologist Ulrich Beck defines our world today as a “risk society” precisely because the upswing in global interaction brings with it and heightens many dangers. One very clear example is the swift propagation of AIDS around the world, which had its forerunner in the famous “black plague” in the mid-14th century. Recall that the black plague travelled in boats that linked the Far East (where the disease broke out) to the wealthier and more populous Mediterranean ports by sea. Obviously, today the much greater possibilities of a rapid-fire, massive circulation of goods and people only accentuates these risks.
25. We should highlight the following books by Zygmunt Bauman: (2003) *Modernidad líquida* (Liquid Modernity), Mexico: FCE; (2003) *Comunidad. En busca de seguridad en un mundo hostil* (Community: Seeking Safety in an Insecure World), Madrid: S.XXI; (2007) *Miedo líquido. La sociedad contemporánea y sus temores* (Liquid Fear: The Contemporary Society and its Fears), Barcelona: Paidós; and (2007) *Tiempos líquidos. Vivir en una época de incertidumbre* (Liquid Times: Living in an Age of Uncertainty), Barcelona: Tusquets.
26. Richard Sennett (2000: 25) *La Corrosión del carácter. Las consecuencias personales del trabajo en el nuevo capitalismo* (The Corrosion of Character: The Personal Consequences of Work in the New Capitalism), Barcelona: Anagrama.
27. To name this phenomenon Alfons Cornella has created the neologism “infoxication”.
28. In the Greek etymological sense of incapability because one is totally isolated or separated from something very important. Politically, this was applied to those who only tended to their private interests and were incapable of valuing or tending to the common good.
29. Complemented by his works *El crepúsculo del deber* (The Dusk of Duty) and *La sociedad de la decepción* (The Society of Disappointment).
30. I am citing from *Obras completas 1923-1972* (Complete Works 1923-1972), Buenos Aires: Emecé, pp. 468 and 470s. Emphasis added.

Other
published books

- 1 **Hacia la empresa en red**
Alfons Cornella
- 2 **De la idea a la empresa**
Marcel Planellas
- 3 **Capital intelectual**
Carlos Obeso
- 4 **Visualización de la información: una visita guiada**
Juan Carlos Dürsteler
- 5 **Gestión del conocimiento**
Agustí Canals
- 6 **Sanidad en un mundo digital**
Albert Oriol
- 7 **Servicios financieros: la era del cliente**
Salvador Mas
- 8 **E-learning, corporate learning**
Íñigo Babot
- 9 **Días de 25 horas**
Ramon Bori, Laura Miñano
- 10 **KNewton: buscando un orden en la información**
Alfons Cornella
- 11 **Más días de 25 horas**
Ramon Bori, Laura Miñano, Epi Amiguet
- 12 **El fenómeno Wi-Fi**
Antoni Brey
- 13 **Software libre: técnicamente viable,
económicamente sostenible y socialmente justo**
Jordi Mas
- 14 **Infonario: hacia un diccionario de la infonomía**
Laura Rosas

- 15 **Penélope y Ulises: tramas y exploraciones en la red**
Fabio Tropea
- 16 **Manresa innov@**
Epi Amigué, Fernando L. Mompó
- 17 **Administracions digitals innovadores a Catalunya: experiències innovadores en l'ús de les tecnologies digitals a les administracions públiques**
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Epi Amigué
- 19 **La alquimia de la innovación: 10 palabras para innovar**
Alfons Cornella, Antoni Flores
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Fernando L. Mompó
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Jordi Mas i Hernández
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Josep Maria Lozano
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El binomio Educación y nuevas tecnologías**
Miguel Angel Prats
- 32 **Innova't. 19 experiències innovadores de Terrassa
i comarca**
Lluís Cugota
- 33 **Anemames 2006. Reconeixements a la trajectòria
empresarial 1a edició. Sant Cugat del Vallès**
Epi Amigué, Fernando L. Mompó
- 34 **25 empresas de futuro**
Valeria Lafita, Fernando L. Mompó, María Sanz
- 35 **TicSalut, la revolució digital al servei de les persones
Exemples d'innovació al sistema català de salut**
Lluís Cugota y otros autores
- 36 **Sabadell Innova II**
Sílvia Llobart i Beatriz Silva
- 37 **Manual de uso del blog en la empresa**
Alberto Ortiz de Zárate Tercero
- 38 **Más allá de Google**
Jorge Juan Fernández García