

GENERAL INTRODUCTION

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PRESENTATION

The Aim of the Report: An Anthropological Foresight Study of Western Societies to 2040/2050

Western societies are facing deep transformations of their life environments, their 'imaginaries', the collective rules by which they are organized, and the conditions of existence of the individuals within them. These changes are particularly visible in the degree of virulence of certain political and social clashes: over euthanasia, surrogacy, animal welfare, artificial intelligence and forms of action to combat climate change...

This report proposes to study, from a foresight angle, the basic transformations that are changing what it means 'to be human', or that might change it in Western societies over the next 30 years. Seven areas of transformation are considered: life and living matter (1), life territories (2), birth and death (3), human-machine interactions (4), gender (5), knowledge (6) and time/timescales (7).

In each of these areas, the *Vigie Report 2023* proposes an anthropological foresight approach and hence an overall, cross-disciplinary, future-oriented interpretation of developments that are often analysed by the social sciences in a more segmented or retrospective way.

Being Human in the West: Towards a New Definition?

The transformations we have studied in each of the chapters seem to us to be of such structural significance that even now they pose questions for our societies regarding their specific particularities — and will increasingly do so in the future. What is it that characterizes our contemporaries? And in what ways do they differ from their ancestors or from other alien cultures? Are there human invariants in our relations to the world, to living matter, to others, to ourselves? Conversely, what pres-

ures, what technological developments, what new aspirations could lead to our rethinking the very definition of what it means to be human in the West, with regard to our imaginaries, our values, our skills or our behaviour? How will these societies distinguish a *homo sapiens* from an animal or a machine, and will these distinctions still have meaning in the decades to come? More generally, to what extent will these developments impact political and social organizations, ways of working, the definition of value (and hence economic systems) and, lastly, relations with ecosystems and others, both human and non-human?

We can identify a major structural tension today that seems to be at the heart of the transformations currently convulsing our societies and drastically changing individuals themselves. This is the tension that ranges the historic (and very Western) aspiration to explore and attempt to redefine every kind of limit — territorial and physical limits, but also the limits of life (medicine, genetic engineering etc.) and death (transhumanism) — in a highly rationalistic and techno-solutionist approach for the human species and its interactions with humans and non-humans, against the need — if not indeed the absolute necessity — to reconnect with those social and individual fundamentals studied by anthropology that are rites and rituals.

In this context, how far will Western societies regard it as acceptable to continue to meet the needs they consider fundamental (basic nourishment, of course, but also satisfying the desire to have children, surviving, pushing back death etc.) with ever more sophisticated techniques that are often unequalitarian and, at times, harmful to humans and their environment? In the face of the climate and environmental issues, will the power of our civilization come mainly from its ability to push back ever further the limits of life or, rather, from its humility and its acceptance of those limits and their implications? What impact will the answers to these questions have on the very definition of what it means to be human or of human beings in the West?

This study is an attempt to answer these major questions field by field.

ACKNOWLEDGEMENTS

This report would not have seen the light of day without the valuable contributions from our experts and members, for which we thank them warmly.

It is the product of a year of work by the Futuribles team, work that has proceeded in several stages. The team drew initially on a literature analysis and on its network of experts to identify the seven chosen themes. For each of these, a working document was drawn up in a similar format (see adjacent text). It was then presented for discussion at a workshop and this was complemented by bilateral exchanges with two lead experts and representatives of member organizations of Futuribles International. A final version of each chapter was drafted on this basis. ■

Anthropology and Foresight: Work Process and Methodological Approach

It is the aim of anthropology, among other things, to identify the particular characteristics of a given human society and the individuals that constitute it. It presupposes taking as its object of study political and social groups of sufficient homogeneity that we can grasp their specific features. We have focused our analyses in this report on the so-called Western countries — that is to say, on the countries of the European Union, the United States and, for some subjects, Japan. Although the term ‘Western’ reflects a geographical perspective — the countries of the ‘global North’ — we also understand it to refer to a geopolitical and cultural entity, defined by ways of life, a form of social and economic organization and similar individual trajectories in the different countries under observation. We have been able to identify developments and logics that are common to these countries and to draw a certain number of lessons from them for the future. There are, however, two major limitations to this approach. On the one hand, both across and within these countries there is inevitably a great heterogeneity of situations, values and realities where the subjects dealt with in the report are concerned. On the other, outside these countries, equally stimulating developments are to be seen

in respect of the chosen themes. Consequently, the analyses proposed are complemented as much as possible by text boxes showing the diversity of situations within and beyond the so-called Western countries, though no claim to exhaustiveness is made in that regard.

Anthropology is, moreover, a discipline in which the human, biological and social sciences meet, its aim being to study the representations, beliefs and institutions of a human group and the bonds the individuals of that group maintain with one another and their environment. Drawing on that approach, we have therefore applied three levels of analysis to each of our seven chosen fields of study:

Level 1. The Evolution of the Sociocultural Representations and Imaginaries associated with the theme under consideration. This refers, among other things, to the evolution of the values, beliefs and discourses of influential actors, and of the artistic and cultural productions that reveal the overall perception a society has of a topic. These imaginaries and representations are at once the product of the cultures, collective myths and histories of our societies, but also of the power politics and power relations that cannot be ignored if we are to understand the past, present and future evolution of a given theme within a society.

Level 2. Rules and Statutes on a Collective Scale. This second level is concerned with the regulations and norms established within societies as a framework for individual and collective behaviour. These rules, whether implicit or explicit (laws, social norms, decrees), shape the relations between private, public and individual actors within each society (e.g. restrictions on the exploitation of natural resources or relaxation of the conditions of experimentation on human embryos at the international level) and play a part in how individual freedoms evolve (e.g. permitting medical assistance for surrogacy for all French citizens etc.), as well as in redefining the notion of social progress. More generally, these rules and norms reveal in part the state of relations between a human society and the matter they regulate. Studying long-term change in such rules and norms and examining where that change is leading is thus a good indicator of the anthropological developments of interest to us here.

Level 3. Lived Individual Realities. Every individual operates within the context defined by the first two levels. Indeed, none can free themselves

totally from the culture, imaginaries and legal and normative contexts that frame their lives. Individuals do, nonetheless, possess scope for manoeuvre that has to be taken into account and studied. And they may, conversely, play a part in transforming those imaginaries and collective rules. To pay attention to this level of analysis is also to attempt to take account of the great plurality of individual lived realities within the more general transformations we have identified. The way individuals relate to living organisms, territories, technologies, knowledge or medicine may actually vary greatly depending on their age or social category, on where they live and the community they belong to, on their personal histories etc.

A BRIEF LOOK AT THE REPORT

Overall Context: Trend Phenomena with Mixed Effects

The transformations observed in the seven chosen fields fit into an overall context characterized by major phenomena that are unlikely to reverse themselves in the coming decades and have to be taken into account in the thinking on each of the themes selected in this report. These phenomena are of three kinds:

1. Population Growth and Increased Consumption Currently Incompatible with the Availability of Natural Resources

Population growth and increased human activity have inflicted irreversible damage on ecosystems, damage that has been widely studied and which need not recap here. Let us note, however, that according to the most pessimistic scenario envisaged by the Intergovernmental Panel on Climate Change (IPCC), global greenhouse gas emissions might further double by 2050 and even triple by 2100 if global demography and

CONSTRUCTION AND INTERPRETIVE GRID

For each of the three levels studied in our seven themes, we offer a rigorous foresight analysis, aiming to rank the observed and forecast phenomena using a number of categories, each identified by a specific colour:

- **Major trends** running through Western societies today with such constancy that they have been observable for several decades (if not longer) and, on the face of it, should therefore persist until 2040-2050. From an anthropological standpoint, some of these trends may be regarded as invariants — that is to say, as phenomena that seem characteristic of human beings and, more broadly, of human communities in all periods and cultures. This is the case, for example, with the conceptual opposition habitually drawn between the two antagonistic events that are birth and death, or again, in some respects, with the wish to have children. In this sense, these trends play a profound role on our three levels of analysis: representations and imaginaries; collective laws, rules and norms; and individual lived realities (see adjacent text).

- **Emerging trends** — that is to say, currently minority phenomena, which are often more recent but which we judge likely to develop over the next 20 years. From an anthropological point of view, these emerging trends may be compared with the transformation defined by Claude Lévi-Strauss as the transition from one collective phenomenon (such as a narrative, a rite or a representation of the world) to another, around — and by way of — the invariant that is the social structure. For example, starting out from the invariant that is the existence of death-related myths and rites, anthropologists observe a transformation of the popular rite of the ‘feast of the dead’ in Europe, historically focused on departed ancestors, into the modern — secularized, child-centred — celebration that is Halloween.

- **Major questions or uncertainties up to the year 2050** regarding the future development of the problems studied. There is, for example, great uncertainty about how attitudes to death will change in ageing societies that are more vulnerable to environmental and health risks.

- **Foresight hypotheses to 2040-2050**, which draw on developments currently under way and are likely, if they continue or intensify, to bring about significant change in respect of the theme of the analysis. They are formulated, in particular, in response to some major uncertainties that have a significantly structuring role for the theme in question. Hypothetical discontinuities, **covered under the title ‘What if?’**, are also proposed throughout the text. These correspond to situations conceivable over the next 20 to 30 years, which, though improbable on the face of it, could, if they occurred, have major impacts on the field under examination. ■

consumption levels continue on their current path. This would lead, by the end of the century, to a rise in average global temperatures of 5.7°C above pre-industrial levels.¹ Even in the best-case scenario, global warming would exceed the 1.5°C threshold specified in the Paris Accords of 2015. This planetary heating is already showing itself in an increasing number of exceptional climate events: natural catastrophes, droughts, heatwaves and forest fires, which are responsible for unprecedented levels of material and human damage.

At the same time, according to the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBS), the average number of local species in most of the major terrestrial habitats has diminished by at least 20% since 1900. More than 40% of amphibian species, almost 33% of coral reefs, more than one third of all marine mammals and 10% of insect species are facing extinction.

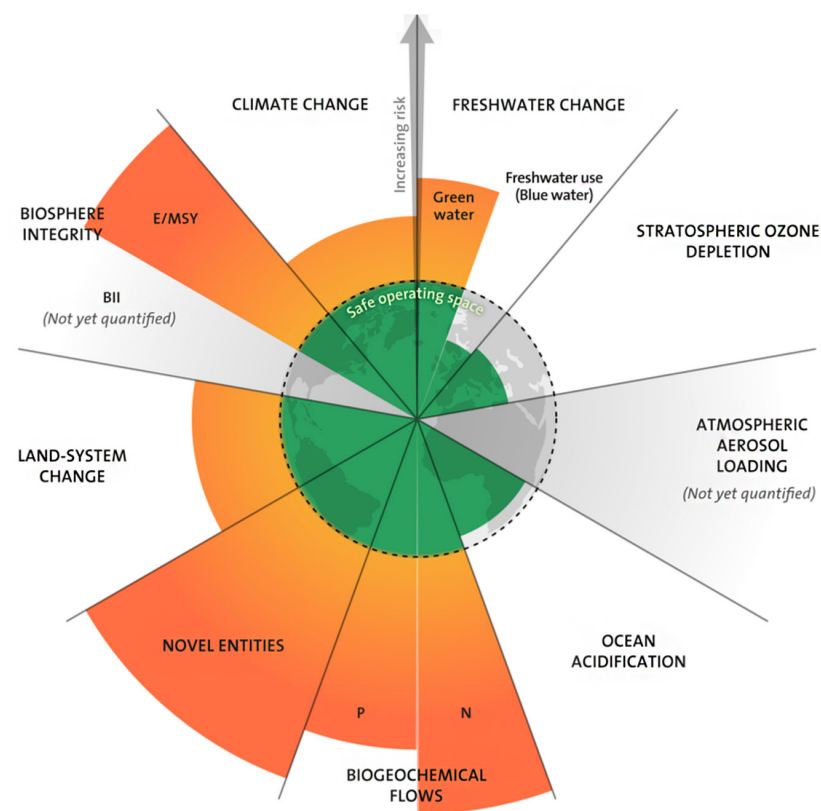
More broadly, research scientists at the Potsdam Institute and the Stockholm Resilience Centre are warning that 'planetary boundaries' are being reached. Of the nine planetary boundaries identified, six have evidently already been crossed, which means that the planet is no longer able to absorb and cope with the impacts of human activities, and hence that we are seeing a general degradation of the environmental and geophysical characteristics of the Earth. The fact is that this accumulated damage is in danger of leading to totally unprecedented situations for life on the planet and, ultimately, for human societies in terms of habitability, access to essential resources, and exposure to environmental and health crises.²

These phenomena are already having an impact on our societies' relations with living creatures, technology, living spaces, death etc. — and will probably do so increasingly in the future.

1. See, for example, MAGNES Arthur, "Scénarios climatiques extrêmes: pour quoi faire?", *Note de veille*, 3 January 2023, Futuribles International. URL: <https://www.futuribles.com/scenarios-climatiques-extrêmes-pour-quoi-faire/>. Accessed 25 January 2023.

2. *Ibid.*

FIGURE 1. The Sixth Planetary Boundary has been passed



The planetary boundary relating to freshwater has been crossed. It joins the five other boundaries already passed, the last of which was officially breached in January 2022.

Source : "Planetary boundaries Update: Freshwater Boundary Exceeds Safe Limits", Potsdam Institute and the Stockholm Resilience Centre, 26 April 2022. URL: <https://www.pik-potsdam.de/en/news/latest-news/planetary-boundaries-update-freshwater-boundary-exceeds-safe-limits>. Accessed 16 October 2023; based on WANG-ERLANDSSON Lan et al., "A Planetary Boundary for Green Water", *Nature Reviews Earth & Environment*, vol. 3, 2022, pp. 380-392.

2. Societies Stressed by a Twofold Pressure from Individualization and the Demand for Protection

Individualization, made possible by secularization and rising education levels among other things, is characterized by individual choice taking

precedence over collective prescriptions and options. This process of the individualization of values and behaviour has given rise to a fundamental ambivalence in Western societies.

It provides the basis for the individual's freedom to choose his/her values, religion, gender, sexual orientation, way of life and consumption etc. Individuals have never before been as tolerant of the choices of others, nor as insistent that their rights be granted and their sovereignty recognized by society. More prosaically, individualization is also encouraged by economic actors, since it undergirds an economy based on hyper-personalization, personal engagement on social media and, more generally, social distinction. The corollary of individualization is, however, a logic in which individuals accept an extreme degree of responsibility, being seen as masters of their own fate and hence responsible for their own psychological, physical and material difficulties and also now, by way of their behaviour, for climate and environmental damage.

Western citizens seem to be caught currently in a bind between historically unprecedented freedoms and increasing constraints. On the one hand, they have never known such freedom to travel, discover new places, consume what they want, inform and educate themselves, control their fertility, choose their end-of-life conditions etc., while, on the other, individuals are also becoming aware of the irreversible damage to their environment and growing inequalities in access to natural and financial resources or to control of technologies. As a consequence, there are increasing tensions between the general desire to continue to enjoy freedoms and rights, and the constraints that may be imposed both by governments (in order to maintain societal cohesion and deal with global issues) — and also by the climatic, environmental or geopolitical framework, if not indeed by new social norms.

On the other hand, as crises and risks mount, we see increasing demands for protection and security. A tension may therefore arise between the priority accorded to individual freedoms and the need to maintain — or even strengthen — collective rules of justice and fairness.

3. Omnipresent Technologies Producing Both Resilience and Fragility

To deal with the existential threats they come up against, humans have always compensated for their physical vulnerability with tools, artefacts

and technologies. The latter remain the favoured levers today for pushing back the boundaries that Western societies are encountering:

- Physical boundaries, by conquering new territory either on the planet or in space and by exploiting resources that are increasingly difficult to access;
- Human boundaries, in combatting the three historic enemies of humanity that are famine, plague and war, to borrow Yuval Noah Harari's phrase.³ New battles have now been added that involve pushing back biological boundaries in terms of both life expectancy and procreative possibilities, improving (physical and intellectual) skills and developing new ones, and also defining one's gender identity etc.

Despite this historical trend towards technological 'fixes', we are seeing two tensions crystallizing around these issues in a context of accelerated environmental degradation.

The first is the tension that has always existed between fascination with technology and fear of its consequences. For example, the taming of electricity was associated for many years with the manipulation of 'heaven's lightning bolts', before giving way to the notion of electricity as a 'magical fluid' and then to an intense debate around the health impact of exposure to electric light.⁴ Similar debates are found today on the subject of nuclear technology and genetic engineering. The same is true of the development of Artificial Intelligence and the prospect, desirable for some and deeply troubling for others, of the coming of the 'Singularity' — that is to say, of a technological 'super-intelligence' that will crush the human race.

The second tension is the one that reveals the paradox between the sense of invincibility that these technologies may bring and the rediscovery of humanity's vulnerability to a degraded and unpredictable environment (and also to viruses, as was shown by the Covid-19 pandemic). The West has, indeed, to face up to its growing dependence on technologies that may turn out to be defective or inflict devastating consequences

3. HARARI Yuval Noah, *Homo Deus: A Brief History of Tomorrow*, London: Harvill Secker, 2016.

4. See BELTRAN Alain and CARRÉ Patrice, *La Vie électrique. Histoire et imaginaire (XVIII^e-XXI^e siècle)*, Paris: Belin (Histoire), 2016.

on people, the environment and ecosystems (as is seen in the scale of the effects of some power outages or IT breakdowns). However, the response to such things is often — somewhat paradoxically at times — the introduction of other technologies, either to push back geophysical boundaries, for example (with geo-engineering), or the limits of life itself (thanks to genetic engineering techniques). Techno-solutionism seems,

then, more divisive than ever in Western societies, pitting those who regard it as the only possible response to humanity's ills against those who warn of the dangers to ecosystems (rebound effects, consumption of resources etc.) and to human beings themselves (de-skilling, unequal access to technology etc.).

Summary of the Seven Chapters of the Report

1. Life and Living Organisms: from Domination to Reconciliation?



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Western societies developed largely thanks to practices and imaginaries founded on their control of their environment. Overcoming natural threats (to health or from animals and the climate) and mastering spaces and other species were what enabled populations and economies to grow. Nevertheless, that expansion is now coming up against planetary boundaries and the impacts of human industrial activity on the ecosystem.

Humanity's imprint on the Earth has, in fact, become so great that many geologists and scientists see the planet as having entered a new epoch, the Anthropocene, in which the human race has become the main force for change on Earth, surpassing geophysical forces in that regard.⁵

Nevertheless, the Anthropocene appears so unsustainable in its impact on geophysical equilibria that it now seems necessarily transitory. Some inevitable tipping points appear likely to be reached in the next few decades, which could put at risk the habitability of some parts of the globe, even by human beings — if not, indeed, the habitability of the planet as

a whole. The putative responses to this damage reveal difficulties in rethinking the place of a humanity that has become super-predatory on a planet that is both more vulnerable and more hostile. For example, technological responses continue to be favoured generally, including when they produce extensive negative environmental externalities... At the same time, responses based on logics of self-restraint and cooperation with the natural world find it hard to win the support of those concerned or to be incorporated into societies' functioning (how, for example, is a right to existence for every living entity to be concretely enforced?).

Individuals' relations with living beings are also changing. On the one hand, they are attempting to reconnect with life more generally, showing themselves to be sensitive to other living creatures on a pattern of concentric circles: first, pets; then farm animals; then wild animals; but also, more recently, certain plants and machines. The right of every living organism — if not of every animate object — to existence and the satisfaction of its needs is thus being gradually acknowledged in Western societies. On the other hand, the harm done to life on the planet is a source of 'eco-anxiety' for a growing number of individuals, particularly among the young, who increasingly regard the future as frightening.

More fundamentally, this unprecedented crisis of life on the planet is forcing humanity — or, at the very least, Western societies — to question its place and destiny as a species: is it unique, which would justify it in ensuring its survival even to the detriment of other species, or is humanity actually a species doomed to dwindle and even disappear completely, by its inability to adapt to the new environment it has itself generated? Worse, will it be 'eliminated' by the planet itself?

5. GEMENNE François and DENIS Marine, "Qu'est-ce que l'Anthropocène?", *Vie publique / Parole d'expert*, 8 October 2019. URL: <https://www.vie-publique.fr/parole-dexpert/271086-terre-climat-quest-ce-que-lanthropocene-ere-geologique>. Accessed 25 January 2023.

2. Life Territories: Live Here, Dream of Elsewhere?

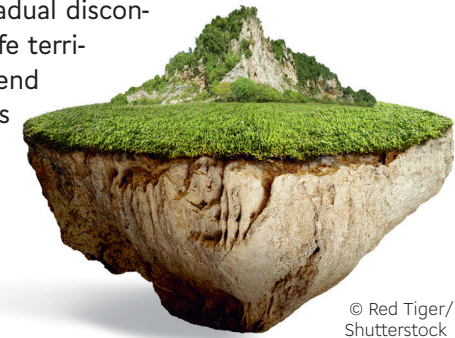
The increase in the scope for individual and collective mobility from the beginning of the 20th century onwards, brought about by major technical innovations, the democratization of infrastructures and mass public transport provision, caused movement and mobility to become highly valued in the imaginaries of Western societies. This helped to reduce the correlation between people's place of origin, the place they live in and the place they dream of.

These discourses were strongly reinforced by the promises of digital technologies: the abolition of physical distance by telecommunications; the importance accorded to the rapidity (if not, indeed, immediacy) of exchanges and interactions; and even the promise of ubiquity. Digital tools redefine our relation to space and time, promising as they do to replace the logic of physical proximity by logics of accessibility and affinity.

Across the whole of the West, this general spread of physical and digital mobility has fostered the idea of a more accessible — and, hence, better known — planet. What does it matter that emblematic places such as major capital cities or religious centres are decontextualized or cultural characteristics simplified to an extreme degree? That does not prevent us from forming an impression that we have a greater familiarity with the world. Above and beyond the mere regard for speed as a positive value, that familiarity is fostered by a number of elements, such as the possibility of receiving news in real time from many parts of the world, the ability to communicate with a host of people despite their geographical distance or the democratization of access to consumer or cultural products from different countries and continents.

This unprecedented circulation of information has major consequences for the way Westerners conceive of the regions of the planet. To begin with, it prompts a growing sense among some fringes of the population of belonging to a single planet and, hence, the idea of a common destiny, both of which are exacerbated by a growing awareness of the great global issues: climate change, environmental damage, health risks etc. It also encourages the rise of international movements aimed precisely at defending certain causes that appear to be global in nature: environmental protection, defence of migrants' rights, anti-discrimination activism etc.

At the same time, however, a gradual disconnect has come about between life territories and the spaces these depend on to function: modern life-styles and their associated needs (in terms of food, material goods, energy etc.) are, for example, increasingly dependent on other geographical spaces than Western countries properly so-called, as a result of the internationalization of trade and value-chains.



Moreover, climate and environmental damage is upending individual and collective relations to life-territories: both directly, by making increasing tracts of land more hostile — if not already uninhabitable — for certain animal and plant species, and indirectly by throwing into question the highly positive imaginaries of human beings' conquest of their environment. In the future, will Western societies still favour technological and expansionist responses to these issues, such as the continuing conquest and privatization of new territories or the pursuit of alternatives to 'thermal' mobility without any challenge to the idea of travel itself? Or will they, by contrast, give priority to refocusing space and reducing the pace of life, both in actual travel and in the imaginary dimension: for example, challenging the practice of international tourism, adopting a logic of 'de-mobility' and valuing the proximate and the local?

3. Birth and Death: Biology under Control?

Being born and dying — these two events, which are often opposed to each other in our imaginaries, have always had an ambiguous place in human societies. Long viewed in a merely fatalistic way, they have also always been subject to attempts to master them, even as their random character conferred on them a mystical or religious dimension.

However, as our societies have secularized, and as medicine and the life sciences more generally have advanced, birth — and also death — have come to seem increasingly under control. Never in the history of humanity have individuals theoretically enjoyed so much scope to decide on

the conditions of procreation and childbirth and even, in some ways, of death.

At the same time, whereas the life expectancy of Western individuals is increasing significantly, those individuals now appear to be confronted simultaneously with the prospect of longer and more varied lives — including a golden age of youth which they can prolong (for example, by women pushing back the age of childbearing) — and a protracted old age in which there is a risk of contracting one or more chronic diseases, not to mention the more general prospect of living through unprecedented ecological upheavals. These three prospective developments are in conflict with one another and generate aspirations or behaviour that are apparently contradictory with regard to childbirth, which is at times desired and at others radically rejected, and in respect of death, with its concrete reality and the questions raised by it often being denied, as is seen in controversies over the legalization of euthanasia that too often omit any fundamental thinking on the question of the responsibility of the living toward the dying. These behaviours seem, then, to betray the persistence of a natural, biological life-instinct within societies that are, conversely, faced with ever greater levels of death-anxiety and no longer have any collective symbolic referents or frameworks for processing birth and death — or at least have fewer of them.

In this context, we find some growing tensions, such as:

- The persistence of, or even a growth in, the desire within Western populations to have children, as is attested, for example, by calls for everyone to be able to have children, including individuals biologically incapable of procreating; versus new controversies crystallizing around the need to control demographic growth to cope with climate issues (the 'No Child' movement) or to prioritize public policies for looking after the aged in need of care.
- An unprecedented artificialization of human biology and an apparent hyper-rationalization of birth and death; versus expectations of the re-humanization of these two events in correlation with the persistence — or even resurgence — of rituals that are seen as irrational, and mystical or religious movements that are at times radical in their form and practices.



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These tensions pose questions about the future course of the relations our societies will chart with these two events of birth and death: will the move towards greater artificiality in human biology continue unfettered in the coming decades? Who will have access to procreative technologies, but also who will be able to schedule their own death or relieve their suffering? And within what ethical and legal frameworks? Shall we, in fact, see new religious approaches emerge to cope with the mysteries of death or shall we, rather, experience an unprecedented transhumanist break with the past?

4. Technologies: *Machines that are Human, All-Too-Human?*

Humanity has always made use of artefacts and tools: they are part of its signature in its environment — in a sense, part of its nature. Since the 19th century, Western societies have been characterized by the proliferation, technologization and automation of objects. That process became sharply pronounced in the 20th century as an effect of the advances, spread and commodification of science that gave rise to a multiplicity of technological applications. In recent decades, digitization, a faster rate of innovation and the increasing democratization of technological objects have led to machines becoming ubiquitous in daily life. Even more recently, with developments in artificial intelligence, machines have become more autonomous and interactive; they are now able to support individuals and interact with them, if not indeed replace them.

Algorithms and artificial intelligence are transforming how politics works by becoming decision-making aids for public and private actors. A major tension has ensued between their promise of facilitating and optimizing the management of social affairs and the risk of making societies dependent on algorithmic systems. As they use these algorithms, decision-makers are becoming aware of their biases and of the fact that a machine is never neutral, since its decision will be the di-

rect product of, among other things, the way it is programmed, the characteristics of its designers and the type of data input it has received.

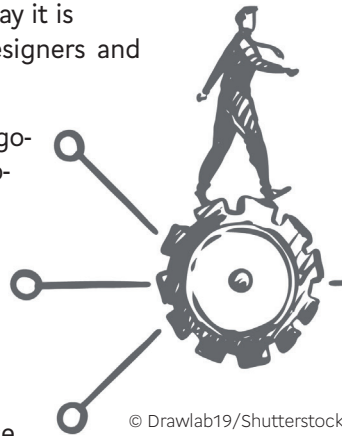
The governance of lives and societies by algorithms also involves a certain number of social, political and ethical risks: the infantilizing of users or a reduction of their sense of responsibility; surveillance; the capture of data through connected objects, etc.

For their part, individuals are increasingly interacting with machines, both at work and in the domestic sphere. The promise that is held out is one of facilitating (through delegation or the augmenting of capabilities), supporting (by making them entertaining or through social connections) or even contracting out certain tasks, while offering interactive and personalized experiences. In each case, such delegation is supposed to save individuals time. On the other hand, many commercial strategies are aimed at capturing the time saved, to direct it towards other activities. Machines are a key driver of the 'attention economy' — and also of the leisure sector.

In the future, we may well see an anthropological tension between:

- the possibility of individuals building on the contributions of machines to push back their biological boundaries (physical and intellectual abilities, life-expectancy etc.);
- and the risk of major dependency, on the part of individuals, on machines, to which they would entrust ever more crucial skills (capacity for analysis, calculation, synthesis, memorization, orientation in space etc.) — skills which might gradually be lost over the generations.

Will individuals feel enhanced or diminished by machines? Will the existence of increasingly sophisticated devices — particularly when they are designed on anthropomorphic lines — lead to individuals broadening their approach to life and to the world of the senses? Or will those machines prompt them, rather, to value the specific features they regard as truly human?



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5. Gender and Sex: From Assignment to Fluidity?

The deep nature or essence of the masculine and the feminine have been central questions for human collectives over millennia. In our Western societies today, we see social norms that structure gender identities being contested on an unprecedented scale. In recent decades, condemnation of the assignment of specific roles to men and women and of the violence suffered by minoritized populations, aspirations to move beyond the binarism of biological sex — and, more generally, calls for free self-determination — have been voiced with increasing force in an increasingly intersectional approach to struggles.

These movements are already having tangible effects on how public opinion is moving — and also on behaviour, social spaces, legal frameworks etc. However, they also meet with strong resistance, which reveals the persistence of some historical collective mental schemas and indirectly brings to light the anxieties around identity which these new claims are generating.

More generally, gender questions cast particular light on the patterns of domination that fundamentally structure Western societies. Thus, though the struggles of minorities do not necessarily pose a challenge to that power politics, they do contribute to its displacement and re-formation. What, then, will the power relations be between individuals (masculine, feminine, non-binary etc.) tomorrow? What place could gender questions assume in collective debates and what consequences might that have on institutions, on working arrangements, but also on interpersonal relations?



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6. Knowledge and Institutions: Who to Believe? What to Believe?

Western democracies have always had an ambivalent relationship with knowledge, truth and institutions. Democratic regimes are founded on common or consensual values, such as access to education, freedom of expression and the free circulation of information. These values are necessary preliminaries to debate and deliberation, enabling collective

decisions to be arrived at which have majority support and minority acceptance.

There is, however, no monopoly of truth or knowledge in a democracy: in their essence, these things may be claimed and shared by a wide range of actors, even if procedures for — and warrants of — validation may be established.⁶ The recognition of a truth or a dominant discourse is, then, always temporary and the result of discussion — or even negotiation — between knowledge-producers (researchers, experts etc.), politicians and citizens — and also businesses and voluntary associations that participate in these discourses. This diverse range of actors and viewpoints actually leads less often to consensus than to the persistence of compromises, controversies and even conflicts. In consequence, Western societies' relation to knowledge and truth has traditionally been regulated by institutions, which stand surety for their production, transmission and quality (schools, research institutes, ministries etc.).

Over the last century, however, individuals have gradually tried to free themselves from these institutions and from imposed knowledge. The coming of mass education and the rise in educational levels have gone hand in hand with a deep crisis of lack of trust in these institutions and the figures who front them. In 2022 in the European Union, for example, only 4 out of 10 people were found to have trust in their government, the police, and mainstream or social media.

In response, individuals have increasingly diversified their channels and modalities of access to knowledge. But the exponential increase in the flows of available information and the deregulation of the knowledge market have led to a concentration of actors and content and to a situation in which it is difficult for individuals to rank and sift information.

As a consequence, some analysts see the current period as marking our entry into the post-truth era, a period characterized by personal opinion, ideology, emotion and belief winning out over factual reality.



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This post-truth era represents a challenge for democracies, since it generates a permanent tension between the free expression of a plurality of views and the emergence of a permanent relativism that regards all ideas and opinions as being of equal worth, even when unsupported by evidence. This period has also seen the return of alternative discourses on knowledge and truth: conspiracy theories, pseudo-science, religious movements etc.

Is this permanent relativism the inevitable pendant to the de-institutionalization of knowledge? Will Western societies be able in the future to maintain a sufficiently shared baseline of values around the very notion of knowledge to safeguard their cohesion? What impacts might the development of relativism and post-truth have on political regimes?

7. Crises and Timescales: From Acceleration to Eco-Anxiety?

Since the Industrial Revolution of the 19th century, Western societies have attempted to extricate themselves from the temporal patterns imposed by nature, the seasons or religions and to seize control of the clocks. But that quest seems to have run up systematically against forces beyond their command, forces that have enslaved them once again to time. In this way, these societies have seen their relation to time upended successively by the spread of capitalism, by globalization and by the digital.

Among other things, a world-time emerged from the 1980s onwards, both facilitating awareness of global issues and ushering in the era of instantaneity, an era incompatible with the approach required to deal with those issues. Coupled with the demands for profitability and competitive performance, that world-time has led to a narrowing of the strategic and political horizons of organizations, both private and public. Captive to this permanent acceleration, Western societies have generally stopped thinking long-term and adapted all their collective operating processes to this vacuous sense of urgency. For individuals this acceleration seems strangely out of kilter with longer life-spans and the enjoyment of greater amounts of free time than ever before.

6. See, for example: ROSENFELD Sophia, *Democracy and Truth: A Short History*, Philadelphia: University of Pennsylvania Press, 2018.

More recently, the climate and environmental crisis has given rise to two major tensions:

- between a renewed interest in (if not indeed a renewed need for) long-term thinking and the urgent need to act in the short-term to address that crisis;
- and between the radical nature of the changes required by societies and economies and the (real or perceived) timescales needed for those transitions.

It is entirely as though Western societies were interested again in the future, though mainly in order to escape a present that has become unstable, unpredictable, uncontrollable and too alarming. More than ever, ours is becoming an age of uncertainties that are 'radical', unlike the measurable, calculable risks that are factored in by our organizations. As nature takes back control



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of societies' and individuals' clocks, some people have been overtaken by eco-anxiety, coming to regard the future simply as frightening. Temporal finitude has itself become a new horizon, expressed in new imaginaries (e.g. of civilizational collapse), new values (such as 'No Child' movements) and new practices aimed, conversely, at escaping this sense of inevitable fate (new spiritualities and rites enabling people to pass beyond human timescales). Will Western societies succeed in the future in reinventing their relation to time to reconcile the management of emergencies, socio-economic dynamism and long-term imaginaries? To what extent might what are minority patterns of thinking today (such as the various 'slow' movements or the reconciliation with the cycles of life) inspire relations to time that are more at ease and compatible with the climate and environmental issues we face? ■

Vestiges of the Future

Immersion in the *Vigie Report* thanks to Design Fiction

Dear Readers,

What if we possessed a sort of inter-dimensional fishing rod for visiting different futures and bringing back items of evidence or, rather, talking points from them? We could retrieve mysterious vestiges, traces of various possible futures among those envisaged within the scope of this *Vigie Report*. Well, that is exactly what we have done!

Each chapter ending contains an item recovered from a given future and a descriptive file containing our hypotheses about that item regarding the dating, operation and use of the object, as well as its conditions of existence.

Be a part of the enquiry! Each of these vestiges of the future is potentially up for discussion, for you to draw your own conclusions from the report or to elucidate the meaning of these elements and to get a glimpse of the possible future from which it seems to be taken. At the end of the work, the poster placing each of these visuals alongside each other enables you to explore combinations between these vestiges and the futures from which they are taken. That poster, like a 'cabinet of curiosities', will remind you instantly of what was in the report and instantly re-immerses you in it.

Why these Illustrations?

The chapter-end illustrations and the final poster that brings them all together offer a different reading experience from previous editions of the *Vigie Report*. Based on 'design fiction', these are not mere visual illustrations of an argument. They convey a possible world and narrative from which these images might have been taken (hence their technical name: 'diegetic objects', the term diegesis meaning narrative or story). They are not so much images as artefacts — artificial creations (made by human societies) of the order of objects, posters, sets of instructions,

DESIGN FICTION: A DEFINITION

Design fiction is one of the fields of design (alongside graphic or product design) specializing in change. It interrogates our world by showing how that world may evolve. The idea is to imagine and represent another world (a social fiction) and the practices to be found within it, in order to bring the future home to the reader. The aim may be to question how we see the present, to explore other futures, or to debate and collectively decide upon the course to be taken. Design fiction, complementary in this respect to foresight studies, facilitates access to complex thinking on social and technical systems. ■

sounds, video, architecture etc. These design productions belong to a complex, coherent socio-technical ensemble, evoking both practices involving those objects and the users of them; rather than mere science fiction, they convey a fully formed 'society fiction'.

Our intention in employing design alongside foresight study is threefold:

- Each visual embodies a future. Its existence makes possible a form of simulation, a tangible experience of a hypothetical future. The visual medium of design is instantaneous and gives access to the wealth of material in the foresight report, functioning as a stepping stone to complexity or a key to unlock it, opening it up in that way to a wider audience.
- Each design fiction item encourages us to imagine a whole world outside our usual frame of reference. Rooted in an analysis of existing trends, it playfully enables the public to decode these trends more easily. In this way, it stimulates critical thinking, helps people to 'think outside the box' and may constitute an extension of the report or a critique of it, and even reveal blind spots etc.
- Like a 'conversation piece', design fiction can encapsulate and reveal controversies. It is a catalyst for dissent, for the expression of disagreement with itself and (very often) with the future it describes; in this way, it enables interpersonal debate to take place, and provides tools for deliberation and decision-making. ■

Max Mollon

Specific Credits for the Design Fiction pages

The design fiction feature at the end of each chapter of this report was devised and realized by Futuribles International (**Marie Ségur, Cécile Désaunay, Pierre-Antoine Marti, Quentin Bisalli**) in collaboration with the Design Fiction Club (**Max Mollon**) and Dear Futures (**Noémie Nicolas**).

The methodology was overseen by Max Mollon (Ph.D.), designer, researcher and teacher of design fiction at Sciences Po (Designfictionclub.com, Laboratoire des déviations écologiques).

The graphics were by Noémie Nicolas, designer, illustrator and explorer of all things invisible (DearFutures.com).

The texts accompanying the illustrations were written by Marie Ségur, with the assistance of Max Mollon.

Additional photo credits

Chapter 2 Artifact

("Life Territories: Live Here, Dream of Elsewhere?")

Logo of the City of Quimper

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"Backpacking Incan Trail - Machu Picchu Peru" by Fortherock, licensed under CC BY-SA 2.0

Chapter 4 Artifact

("Technologies: Machines that are Human, All-Too-Human?")

Creations made with Midjourney

Chapter 5 Artifact

("Gender and Sex: From Assignment to Fluidity?")

Creations made with Midjourney

Photo of the job interview on the flyer: Andrey_Popov/Shutterstock

Couple photo on the flyer: Nuva Frames/Shutterstock

Chapter 6 Artifact

("Knowledge and Institutions: Who to Believe? What to Believe?")

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Science Fiction and Imaginaries in the Service of Foresight Exploration

Science fiction and, more generally, what are called ‘imaginaries’ make a significant contribution to building up the visions of the future that work their way through society. They also tell us much about the fears, dreams or simply the imagination of our contemporaries when they project themselves into future times. Whether desirable, repugnant or original, these visions that run through — or even emerge in — (science) fiction act in a certain way on the present. They play a part in defining what is possible and also impossible, and doubtless influence decisions and collective action. From *Nineteen Eighty-Four*¹ to *Black Mirror*² and *Avatar*,³ narratives have an effect on what we wish to build — or avoid — for tomorrow. Organizations are increasingly incorporating storytelling and ‘imaginaries’ into their strategies for their inspirational and rallying power.

For the third consecutive edition, Futuribles International’s *Vigie Report* highlights these imaginaries generated within science fiction and other fields of fiction and the arts, in order to vary and enhance the vantage points of foresight exploration. Each of the seven themes in this report is illustrated, then, by a specific text. These texts look at how the subject is treated in fiction and the arts: in literature, the cinema, TV series, graphic novels, but also in the fine arts and live performance. All forms of expression are called on to provide a complementary and inspiring angle on that inexhaustible material that is the future.

Gérard Klein, a figure in French science fiction who wears many hats (author, publisher, critic, theorist and, indeed, futurologist), has spoken of foresight studies and science fiction as cousins: the one a child of method, the other a child of the imagination.⁴ But the difference is not so clear-cut. On the one hand, artistic creators could not produce their works without a minimum of method, while the art of narration is increasingly being industrialized (in video games and studios, among other places). Moreover, even the most methodical of foresight analysts cannot deny the importance of the imagination in projection exercises. The boundaries between foresight and science fiction seem increasingly flimsy, as is attested by the recent emergence of ‘design fiction’ (an approach also foregrounded for the first time in this report). The growing instability and unpredictability of history, a multiplicity of discontinuities of all kinds (environmental, geopolitical etc.) and the pace of innovation mean that, more than ever, an original, off-beat view of the future is required.

A knowledge of the production of fiction is beneficial when it comes to better thinking through and predicting the future. It is our pleasure, then, to set before you seven texts devoted to the themes broached in the report, five of which were written by our partner Daniel Kaplan of the Réseau Université de la Pluralité [University of Plurality Network] and two by Pierre-Antoine Marti, a Senior Research Analyst at Futuribles. They make reference, in no particular order to the place of humanity in space, cyborgs, post-apocalyptic societies, distorted temporality and reinvented gender identities, among other things. Mere science fiction? It is for you to judge. ■

1. ORWELL George, 1984, London: Secker and Warburg, 1949.

2. A British television series created by Charlie Brooker. The first series was launched on Channel 4 in 2011 and then subsequently broadcast on Netflix.

3. A film directed by James Cameron and released in 2009 (the sequel *Avatar 2* came out in late 2022).

4. See, in this connection, his preface to John Brunner, *Tous à Zanzibar* (Paris: Livre de poche, 1996), the French translation of *Stand on Zanzibar* (New York: Doubleday, 1968), and also his article “L’invention de l’avenir : prospective et science-fiction” in *Futuribles*, 413, July-August 2016, pp. 29-52.