



Human Futures

Insight for the Futurati

April 2020



LETTER FROM THE PRESIDENT

Dear Members, colleagues and friends,

According to Postnormal Theory we live in a world marked by high complexity, increased uncertainties and where the lack of normality is the new normal. The contemporary corona pandemic is just one of many signs that the scholars behind Postnormal Times Theory and Futures approaches in many ways were right in their thinking. We don't know where these will end and we don't know what we will be facing around the next corner. Paradoxically these postnormal times underline the need for futures reasoning in new and creative ways, in ways that addresses the uncertainties instead of undercommunicating them.

On this background, I am happy to launch the first issue of Human Futures Magazine in 2020. In this issue you will find a long range of contributions, not only features articles, but also our standard topics, "FutureScope", "Conversations" and "Review Room". Our Director, Victor Motti, discusses some possible consequences of efforts like "Industrial 4.0", which is a metaphor for an ongoing change in industrial structures both within and between countries. One of these is a possible mass-unemployment. More mental health problems because of lifelong unemployment will provide the condition for the growth of drug abuse, addiction,

and even suicide. To discuss how to deal with such challenges we need thorough futures reasoning. Further, you will meet Luke van der Laan discussing how Futures Studies may contribute to facing the great civilizational challenges. Tom Lombardo comments on Herland's "A classic Utopia from a Woman's point of View. We have a presentation of the "Work/Technology 2050: Scenarios and Actions" by Jerome C. Glenn and The Millennium Project Team. Leopold Mureithi also dive into this report in his contribution. David Lindsay-Wright (PhD) has written a review of a Futures Films for us, "2040 A futurementary", by Damon Gameau. We also have note by the second member of WFSF-Junior, Andrés Castellanos, who several of us met in Mexico City last September. Elissa Farrow presents her reflections from three conferences in three weeks last autumn. In addition, we have a couple of Book announcements and we now launches our Human Futures Calendar.

As you see, there are many interesting and exciting topics discussed in this issue. I wish everyone a happy time with this issue of Human Futures Magazine!

Sincerely Yours
Erik



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FUTURE MATTERS

MARCH 2020
by Claire Nelson, PhD

The year 2020 got off to a quick start and we were sprinting down to the first turn of the track when we got hit by a black elephant. Yes... Covid-19 hereinafter known as The Big-C is an elephant not a black swan... What is a black elephant? Environmentalists have combined blackswan with white elephant to form the term black elephant, meaning “something likely to happen that will have a detrimental impact” or in other words a rare but significant risk that everyone knows

about, but no one wants to discuss, such as the herd of environmental black elephants gathering out there — global warming, deforestation, ocean acidification, mass extinction and massive freshwater pollution. Thankfully, while most of us have avoided thinking about pandemics for fear they could happen like it did in films like ‘Contagion’ the experts at World Health Organization and the Global Preparedness Monitoring Board have been aware for some time that the 100 year run of luck

we have had since the Spanish Flu in 1918 was about nearing its end. Indeed, in September 2019, the Global Preparedness Monitoring Board issued a warning that went for the most part unheeded.

But wait, this is Women's History Month and I must not let The Big-C create social distancing that causes me to forget other things that matter now and in the coming days in this global inflection point. I write this missive on March 8th, known as International Women's Day. The day celebrates the social, economic, cultural and political achievements of women, and marks a call to action for accelerating women's equality. International Women's Day (IWD) has occurred for well over a century, with the first IWD gathering in 1911 supported by over a million people. This year the theme is #EachForEqual. What does that really mean for the almost 3.8 billion females across our planet? We have come a long way since the UN Beijing Conference on Women in 1995. For it is a truth that for many women in the world, many conditions have been much improved. Yet there is much to be done, and in some ways, the task is still daunting. Sustainable Development Goal 5 (SDG 5) calls for us to achieve gender equality and empower all women and girls.

While 2019 reports on progress on some of the targets on Sustainable Development Goal 5 (SDG5) reveal, that some indicators of gender equality are progressing, such as a significant decline in the prevalence of female genital mutilation and early marriage, the overall numbers on these statistics continue to be high. Moreover, the UN notes insufficient progress on structural issues at the root of gender inequality, such as legal discrimination, unfair social norms and attitudes, decision-making on sexual and reproductive issues and low levels of political participation, are undermining the ability to achieve SDG5. There is considerable concern around the issues of economic inequality. Women continue to be underrepresented at all levels of political leadership, but when legislated gender quotas are adopted, significantly higher

proportions of women are elected at both national and local levels.

Despite ongoing challenges, thankfully, technology is providing us with tools to tackle gender inequality and empower women on all fronts – from access to the vote, to access to health to access to work. In the case of work e.g. the emerging of the 'contingent workforce' i.e. remote workforce enabled by ICTs is providing a much-needed solution to access to work by breaking down physical, geographic, and social barriers within the workforce. Remote work platforms allow millions of women to work from anywhere in the world for anyone in the world. Critics see this outsourcing and offshoring of low-end work as a race to the bottom and point to the ever-present skills gap in terms of women and girls in STEM. It is heartening to see an increasing emergence of organizations that are addressing the challenge of the gender in science, engineering and technology divide. Platforms like Girls Who Code offer girls in K-12 the opportunity to learn how to code while receiving mentorship from female leaders in technology, while organizations like Black Women in Science and Engineering (BWSE) and Innovation Women aim to solve the problem of keeping women employed in these sectors.

Indeed, achieving gender equality and women's empowerment is integral to each of the other 16 goals of the 2030 Agenda. Whether addressing issues pertaining to energy or water or the ocean or food or health, adopting a #EachForEqual stance is a necessary and sufficient condition if we want to get to a world that works for most if not all, and to co-create a SMART future. Individually, we're all responsible for our own thoughts and action and we can actively choose to challenge stereotypes, fight bias, broaden perceptions, and improve situations. Collectively, each one of us can help create a #EachForEqual world. 'Collective Individualism' recognizes that we are all parts of a whole and that collectively, we can make change happen.

For some of us, the role of the futurist is that of observer and reporter. Our remit is to study and teach and record the changes we see happening in the landscape. For others of us, the role of the futurist is that of activist, alchemist and changemaker. (I readily admit I fall into the latter tribe.) In this tribe, we know that our planet in this the age of the Anthropocene is yearning to birth something new. And we know ourselves to be midwives. We observe the future being seeded by young women and girls like Malala and Greta and Vanessa and we are grateful for their example of what is possible when you know that you know. These changemakers remind us of what some of us might have forgotten... that we chose to study the future so that we could help birth an #EachforEqual world in all its permutations -- social, technological, environmental, economic and political. We are in a time of bewildering change or chaos depending on your point of view. Here comes a Corona that is neither a beer nor a crown of light, but rather a genus of a species come to remind us that the best laid plans of mice and men with space forces equipped to hurl us into nuclear Armageddon can be laid low by a microscopic molecule. What a Cosmic Joke!

Yes! We know that this too shall pass. Be now we can CRISPR the genome at the speed of light, and soon and very soon the Gods and Goddesses of Fortune will smile on us, and a vaccine will ride in to save the day. Thus, humanity will live to have the opportunity to choose whether to self-destruct or not.

This global inflection point I call the 'Siege of 2020' puts us all squarely in the midst of truly radical change, the kind that happens only once a century. We are at the crossroads of breakdown or breakthrough. We are well on the road to becoming Homo Deus at least technologically, because we have the power of creation and destruction at our fingertips. But will we be able, in this moment in our history, to evolve our emotional and spiritual intelligence into greater maturity? Will this

moment be a turning point in our shared story, one that propels us to make the shift to planetary consciousness and global citizen? Shift happens! But will it happen now? Will it happen in time?

Who must we each become to be #EachForEqual? How might we 'be' or 'birth' the change we want to see? How can we go forth, go forward or go further when we can't see around the corners? How can we better prepare for the future? COVID-19 comes less than six months after a warning issued in September 2019, by the Global Preparedness Monitoring Board (GPMB), an independent panel of experts convened by the World Bank and the World Health Organization "to provide the most frank assessments and recommendations possible". They let it be known that the risk of a global pandemic was growing. Their report stated that there was a very real threat of a rapidly moving, highly lethal pandemic of a respiratory pathogen killing 50 to 80 million people. They correctly noted that while we have new vaccines and drugs that previous generations did not have access to, we also have new developments working against us -- like disease-causing microorganisms to be engineered or recreated in labs, and a global transportation infrastructure makes it easy for travelers to pick up a disease in one country, fly across an ocean, and spread the disease to another country within hours, and increased urbanization and population growth, which also exacerbate the spread of disease. The GPMB correctly noted that pandemics pose risks not only to our health but also to our economies. They estimated that a global influenza pandemic along the scale and virulence of the 1918 Spanish flu that killed around 50 million people, would cost our modern economy an estimated \$3 trillion; and could result in the death of 50-80 million people. The report warned that the convergence of trends predicated our susceptibility to what they call "global catastrophic biological risks", and that we were not prepared to handle them. And the report advised us that the need for decisive action was hampered by the lack of political will.

Here we are. A live black elephant has landed. What might we learn in the coming days, weeks, months to ensure we are better prepared for the next one? Can advancing futures literacy among our leaders help to create an #EachforEqual mindset that can transmute political blockages and engage political will? The GPMB made several recommendations—including: 1) Need for investments in preparedness as an integral part of national and global security; 2) improve national capacity to develop a system to immediately share genome sequences of any new pathogens; and 3) enable public health programs that build trust with local populations so that they will be likelier to follow instructions in the event of an outbreak; 4) involve women in planning and decision-making, particularly because the majority of caregivers are women and their engagement ensures that policies and interventions are accepted. These surely are being tested now as we live through this moment of future shock. Soon will come the aftershock and hindsight quarterbacking. How might we improve our insight? And foresight?

Now that the black elephant has landed what is the prognosis for our shared future? To the above four recommendations, I would add the need to develop a means of combating the ability of social media to rapidly spread false information, for this has been a source of contention. Further, I think it likely that memes such as 'social distancing' will remain in pop culture long past the 'use by' date, though I prefer the term 'virtual sociality'; that remote work and telework and online convening of workshops, conferences and summits will take on new adherents and acolytes; and that health security checks to stave off pandemics will become a new norm, the way we do weapons security; and as venture capitalist Azeem Azhar notes a shift from fragile global supply chains to "networked, decentralized and resilient" models.

But beyond The Big-C Challenge we might find hope. For elephants are traditionally considered a symbol of good luck, wisdom, fertility, and

protection, so we might seek out the potential collateral benefits from pandemic planning and preparation and management that can be realized. And we can ask how might we better prepare ourselves for the next black elephant of any kind? For in a world of uncertainty, only one thing is certain: shocks, disruptions, and other unsettling events will occur, and they will be novel and surprising. Marina Gorbis, Institute for The Future, argues in her essay "The Future as a Way of Life," that the only way to effectively deal with blackswan events is through a "massively public endeavor" to envision and make the future. Now more than ever, we note the need for futures literacy among our decision makers, for it is imperative that they are able to imagine how things might be different in order to make better choices. It is imperative if we are to move from future shock to future sense now. Our task as futurists is to have ears that truly hear and eyes that truly see and to help to birth an #EachforEqual world. It is imperative to secure our very human futures.

Unraveling & Reweaving the Tapestry of Life in the Anthropocene

David N. Bengston, Environmental Futurist, Northern Research Station USDA Forest Service, St. Paul, MN, USA david.bengston@usda.gov

The Anthropocene got off to a rough start. Looking back on the 2020s and 2030s, it felt as if the tapestry of ecological and social life was beginning to unravel, slowly at first but then picking up speed. Most of the “unravelling” was driven by climate disruption. World leaders had failed to act decisively -- or at all -- to curb greenhouse gas emissions and make the transition to sustainability earlier in the 21st century. As a result, atmospheric concentrations of greenhouse gases continued to climb and Earth’s average surface temperature edged steadily towards two degrees C (3.6 degrees F) above pre-industrial levels. The initial slowness of climate change, with its effects emerging gradually over decades, lulled many into complacency. Our collective failure to exercise foresight intelligence came at a high ecological and human price.

The ecological price was a cascade of effects on Earth’s natural systems. These intensifying impacts had long been evident to environmental scientists, but by 2030 they were becoming clear to even the most ardent skeptics and the warning signs could no longer be ignored. Something was going terribly wrong with the life-support systems of the planet. Weather extremes had become “the new abnormal”:

“500-year” and “1,000-year” rainstorms and widespread flooding had become commonplace;

Even as flooding inundated some areas, chronic drought and water shortages plagued others;

An onslaught of hurricanes combined with rising sea levels resulted in coastlines being eaten away by record storm surges and coastal communities in retreat;

Frequent and intense ice storms disrupted lives and damaged infrastructure and trees.

The world's forests -- which used to be called the "lungs of the planet" and the "cradle of biodiversity" -- were particularly hard hit. Tropical deforestation continued to ravage the most biologically rich places on Earth. The vast Boreal forests of Canada, Scandinavia, and Siberia were in decline due to temperatures rising more rapidly in the north and growing insect and disease problems. Forests everywhere suffered a barrage of "mega-disturbances" -- multiple, interacting ecological disruptions like hotter droughts and more frequent and severe wildfires interacting with other stressors. Mega-disturbances grew in scale and pushed many forests beyond thresholds of sustainability. The least healthy and resilient forests began converting into non-forest ecosystems such as weedy shrublands and grasslands, full of non-native invasive species. Vital ecological services provided by forests, such as flood control, carbon storage, and provision of wildlife habitat, severely declined. By 2030, mega-fires had turned the world's beleaguered forests from being a carbon sink to a source, releasing more CO₂ into the atmosphere than they absorbed, despite scattered efforts at reforestation around the world.

On top of mounting environmental damage, a related set of human challenges was posed by population growth and high levels of consumption. Despite a slower pace of growth, world population grew from around 7 billion early in the 21st century to 8.5 billion in 2030 and almost 10 billion by 2050 -- a multitude of new mouths to feed, homes to build, and aspirations to meet. Rapidly growing demand for food, fresh water, energy, minerals, wood and other natural resources collided with ecosystem destruction and degradation.

The human price of climate disruption was devastating and escalating, measured in burgeoning climate refugees, conflict, economic stress and human suffering. Regional wars over scarce natural resources erupted regularly, often ignited by dwindling water resources. Hotter droughts on every continent resulted in frequent crop failures, food shortages and exorbitant food prices. For the masses who fell behind economically in developed countries, the insecurity was heightened by the large number of ecological and war refugees from the Middle East, Africa, Asia, Latin American and the Caribbean where the economic prospects of working in agriculture and manufacturing turned bleak. With a population beyond the carrying capacity of a stressed planet, the great majority struggled to find work and eke out a meager existence. Times were hard for all but the wealthiest, but the impacts were overwhelming for the poor.

In the early 2040s, a climate tipping point was reached. Some scientists attributed it to the release of massive amounts of methane from thawing Arctic "permafrost" in the previous decade. Whatever the cause, the pace of ecological unravelling quickened. The ongoing climate disruptions of the previous decades were accelerating and coming in rapid succession, with no time to recover from one disaster before the next one hit. A pervasive sense of dread settled in as everyone braced for the next catastrophe, knowing it was just around the corner.

Humanity faced a stark choice: We could continue to muddle through and hope for the best or take bold action. By the mid-2040s, a consensus emerged that "saving the Earth" wasn't the issue: This was about saving ourselves. The Earth would be fine and would adjust to a radically different climate. But the future of humans was

in jeopardy. The real possibility of ecological, economic and social collapse ignited multiple and massive efforts to turn things around, from the grassroots to a global scale. A sea change in environmental activism began in poorer nations that were bearing the brunt of unravelling ecological systems. But the transformation spread across the globe with surprising speed. Public environmental values and attitudes shifted seismically, resulting in solid support for change across the political spectrum. People from all walks of life and at every level of society joined together in an effort that was very much like mobilizing for a war. Visionaries, politicians, scientists, NGO leaders, indigenous communities, entrepreneurs, religious leaders, educators, journalists, corporate chiefs, civil servants, film producers, musicians and ordinary citizens united in a series of global and regional “Manhattan Projects” for sustainability, unleashing a tsunami of technological and cultural innovation.

The opening salvo in the war on climate disruption was a risky and what some considered crazy attempt to “hack the earth” using controversial geoengineering methods to manage the global climate. This approach had been strongly opposed by environmentalists and indigenous peoples for decades: Everyone knew that intentionally re-engineering the planet by altering core processes of the oceans, soils and atmosphere would likely have unexpected and possibly dire consequences. But there was no choice -- we had to buy time to find lasting solutions. After a long and contentious debate, a resolution was passed by the UN General Assembly to establish a new international body to closely monitor and regulate the geoengineering activities of member states. The two main geoengineering approaches allowed were a variety of large-scale techniques to reduce the amount of sunlight absorbed (e.g., brightening clouds with reflective

aerosols, deploying large arrays of space-based mirrors) and techniques to remove CO₂ from the atmosphere (e.g., fertilizing the oceans with iron, mechanically capturing and storing CO₂).

A non-controversial piece of the geoengineering blitzkrieg was the global reforestation and restoration effort, dubbed Bring Back Our Forests by the Forestry Division of the United Nation’s Food and Agriculture Organization. Deforestation and mega-fires had turned forests into net emitters of carbon dioxide. But tree planting on an unprecedented scale and sustainable forest management informed by both cutting-edge science and traditional indigenous forestry began to restore forests and turn the “lungs of the planet” back into a net carbon absorber. Bring Back Our Forests included an ambitious urban forestry effort aimed at cities around the world. Lush urban forests began to transform humanity’s main habitat, where a full 90 percent of people now live.

The gamble paid off. The effects of geoengineering gave both needed encouragement and a short breathing space to implement permanent solutions. Historians of today look back at the 2040s and 2050s as a time of remarkable creativity and innovation, in which the existential threat of climate disruption united humankind as never before and galvanized all-out efforts to deal with our planetary mess. The burst of technological and cultural change over the late 2040s and 2050s touched every aspect of our lives and our relationship with the planet. Like the “Great Acceleration” of industrial society following World War II, we witnessed the equivalent of several Industrial Revolutions rolled into one, except without all the carbon. Technologies that had been gestating for decades finally came to fruition and were quickly adopted:

Crops were genetically-engineered to be drought-resistant and self-fertilizing;

Various types of artificial photosynthesis produced fuels from sunlight to be stored and used when the sun is not shining;

Innovative industrial processes were developed that mimic nature's time-tested and efficient patterns and strategies;

Renewable and biodegradable wood-based nanomaterials replaced non-renewables in countless uses;

Synthetic biology -- long feared and tightly regulated -- helped restore healthy ecosystems by bringing back extinct keystone species, creating new bacteria able to clean up pollution, and generating trees with genes designed to keep them free of disease, climate resilient and absorbing carbon dioxide.

Historians are still sorting out the lessons of the 21st century, but this much is clear: Humanity learned that the future is open and we can choose and act to bring about a desirable and sustainable future. We are not locked in to gradual unravelling or sudden collapse. A new world is within our grasp. We learned the hard way, through an initial failure to exercise our collective foresight intelligence, that climate disruption can be rapid and that it posed a grave threat. But we also learned that human creativity and innovation can be swift.

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Herland: A Classic Utopia from a Woman's Point of View

THOMAS LOMBARDO CENTER FOR FUTURE CONSCIOUSNESS

At this year's World Futures Studies Federation Conference in Mexico City (September 10 to 13, 2019), I gave a presentation introducing my new book series *Science Fiction: The Evolutionary Mythology of the Future*.¹ As I explained in my talk, through its personally engaging and imaginative narratives on the future (as well as alternate realities), science fiction is a very effective, emotionally powerful way of enhancing holistic future consciousness, impacting all the psychological dimensions of the human mind (See my book *Future Consciousness*, 2017, for an in-depth description of holistic future consciousness.²)

In my new book series I chronicle the historical development of science fiction. One of the topics covered in volume two is early twentieth century utopias and dystopias. A key utopian novel examined is *Herland* (1915) by Charlotte Perkins Gilman (1860-1935). In light of the fact that an important area of emphasis addressed

at the conference was women perspectives on futures studies, describing Gilman's novel is a very good way to bring together science fiction, utopian thinking, and women's views on the future. Also, given the renewed recent interest in Margaret Atwood's *The Handmaid's Tale* (1985)³, a thoughtful and riveting, yet bleak dystopia told from a woman's point of view, it would be valuable to examine Gilman's equally thoughtful and engaging novel to get a positive, uplifting woman's vision of a preferable human society.

Herland, in fact, is as much a broad critique of Western society, both traditional and modern, as it is an ideal vision of a better world. The novel provides a distinctive and convincing set of arguments for a preferable human society based upon an analysis of fundamental flaws in our present human reality that need to be eradicated. The main proposals in *Herland* for an improved human society concern ethical, psychological, and social-cultural changes, rather than simply

¹ Thus far, volume one has been published: Lombardo, T. (2018) *Science Fiction: The Evolutionary Mythology of the Future Vol. I Prometheus to the Martians*, Winchester, UK: Changemakers Books.

² Lombardo, T. (2017) *Future Consciousness: The Path to Purposeful Evolution*, Winchester, UK: Changemakers Books.

³ A popular TV series, loosely based on the novel, has been running for the last three years and *The Testaments* (2019), a sequel to the novel, was published this last year.



scientific-technological transformations.

The novel, indeed, is a dramatic and articulate expression, put in fictional form, of Gilman's personal and philosophical dissatisfactions with the world in which she lived. In her mind a central problem with human society is excessive and repressive male dominance, and the solution, as envisioned in *Herland*, is female emancipation and heightened self-determination.

Within her first marriage Gilman felt depressed and frustrated with the personally constraining domestic role she was supposed to follow as a dutiful and obedient wife and mother. She believed there was no outlet for her full self-development. As she saw it, she lived, as did most other women, under the control of males. As a result of her very visible dissatisfied and unhappy mental state, as a young married woman she submitted to an intensive "rest cure" for "women's nervous disorders." Given the male dominant point of view, if she was unhappy in her domestic role, there was something wrong with her. But the treatment regime just made matters psychologically worse for her.

Eventually she left her first husband and became economically self-sufficient (as best as possible) and an active member in the women's movement, especially influenced by Edward Bellamy's vision of an ideal future human society. See Bellamy's (1888) very popular *Looking Backward 2000-1887*, discussed in volume one of my book series. Gilman believed that a male dominant family structure and society not only negatively impacted women's individual lives, like her own, but hindered human social progress as a whole. As a literary vehicle to express her views—giving her thoughts personal and emotional color and energy—she wrote and published *Herland* as a serial in her own magazine *The Forerunner*. Largely forgotten after her death, interest in her writings revived in 1966 and *Herland* was finally published in book form in 1979.

The story line begins with three young men who hear of an isolated society in a remote region of the world that is presumably populated entirely with women. The three men possess three distinctive attitudes toward women: One elevates women on a pedestal, to be protected and cared for; one man sees women predominately in sexual-romantic

terms to be conquered and dominated; and one (who is the narrator of the story) at least attempts to see women as equal, self-autonomous individuals and potential partners. The three men decide to search out this land of women, each with their own agenda and preconceptions of what they will find. In the unfolding drama, each male character provides a distinctive viewpoint on "*Herland*," often highlighting the limitations in different male perspectives on the strengths and abilities of women. They all wonder, for example, how women could competently maintain a functional society without men, let alone how they could possibly reproduce.

In an airplane, the three male characters find *Herland*, observing from above with surprise and incredulity how amazingly cultivated, civilized, and clean the land, villages, and forests appear. How could women alone create such a well organized and indeed beautiful world? After landing their plane, they encounter three young women and the male who sees women as objects of conquest unsuccessfully attempts to entice one of the women with jewelry, trying to draw her close enough to grab hold of her.

This macho-male will have an especially difficult time in his subsequent interactions with the women of *Herland*, never able to fully grasp or accept that the women can be cooperative, self-sufficient, and competent without men. Moreover, in his mind the women of *Herland* have lost their femininity—the romantic gestures and enticing allure he stereotypically expects in a woman. All in all, he is both unhappy and incessantly critical the whole time he is in *Herland*.

After the first encounter the men follow the three young women back to a local town. Almost immediately they begin educational sessions with women teachers. As their learning sessions progress they are educated about *Herland* and its inhabitants. In their time in *Herland* the men observe that all the women inhabitants appear athletic, fit, and healthy. Equally, the women all seem intelligent, calm, sane, and friendly. The women excel in both body and mind. The men find it odd that the women all have short hair; it seems to them more natural (reflective of a gender stereotype) that women should have long hair. Explaining their superb physical and mental

development the women describe in great depth to the men their highly evolved educational and nurturing practices for the upbringing of their children. They are all so healthy, sane, and intelligent because of their advanced child rearing practices. The women are exceedingly dedicated to raising their children; indeed their primary adult identity is being a “mother,” and the primary purpose of their society, as they see it, is to facilitate a continually evolving system for nurturing their children, who are their future adult citizens and leaders.

A key mystery, eventually explained, is how a society of exclusively women can reproduce. As revealed, all the inhabitants of Herland are descendants of the “First Mother,” a woman who lived a couple thousand years ago and “miraculously” gave birth to five daughters without sexual intercourse with a male. Each of these first daughters possessed this same “parthenogenetic” power and the entire present population of roughly three million inhabitants in Herland emerged from this genetic line. Hence, Herland is the result of an evolution in the biological evolution of humans.

The male narrator, who quickly grows to admire Herland and its inhabitants, describes their central religion as a “maternal pantheism,” with a naturalistic “Goddess of Motherhood” that presumably dwells within all women in Herland. The fundamental social ideals in Herland are: Beauty, health, goodness, intelligence, and strength, all of which are continually reinforced in Herland’s educational practices and social behaviors. Because many of the traits the men see as feminine are actually traits that women only adopt in the context of interacting with males, the women of Herland do not possess many of the stereotypical feminine traits associated with a male dominant society.

Notably, of special significance for futurist readers, the women of Herland are very future-focused, thinking and planning for the long-term flourishing and continued evolution of their society. Each generation sees itself as an evolution, improved over the last. Indeed their religion, child rearing and educational practices, social and personal identities (as “Mothers”), and total way of life revolve around the future-focused ongoing purposeful evolution of themselves and their society.

A large portion of the novel involves discussions among the men, or between the men and women on the comparative differences between Herland and the male dominant world of the visitors. The women are very interested in learning about the outside world. Although always thoughtful and reflective on what the men tell them about their male-dominant world, the women find traditional world religions filled with irrational and “horrible ideas.” The discussions often get emotionally charged as the men personally react, sometimes strongly, to different aspects of Herland. The macho male in particular finds it infuriating that the women seem to possess almost no sexual desire toward males. Sexuality is unnecessary and is not cultivated in Herland.

As the story progresses the women of Herland decide it would be valuable to have the males bond with individual women in order to introduce more complexity into their world. Each of the three men is allowed to live with a “wife.” The macho male character attempts to physically force his mate to have sex with him. Indeed, he attempts to rape her. The attack is thwarted and he is expelled from Herland.

At the story’s end, the narrator and his woman partner are going to journey into the outside world so that she can observe first hand and better understand the male dominant society, and report back to Herland her observations.

Herland is engaging, clearly written, and highly fascinating. It is philosophically very thoughtful in its exposition and numerous debates and dialogues between the male and female characters. In a time when there were few women writers of fantastic fiction and women characters in science fiction generally were highly stereotyped and limited in their dramatic roles, Gilman presents in Herland an intelligent and compelling vision of admirable and strong women creating an inspiring feminist utopia. Gilman’s philosophical and scientific arguments regarding what constitutes an evolved human society and advanced humans are compelling. She was a futurist, ahead of her time, which indeed is one of the greatest complements to be paid to science or fantastic fiction writers.





Back to Futures:

FUTURES STUDIES AND ITS ROLE IN ADDRESSING THE GREAT CIVILIZATIONAL CHALLENGES

Luke van der Laan, University of Southern Queensland

Concern for human futures can arguably be said to be at its most urgent in the history of humanity. Viable alternative human futures seem to be on the decline as emergencies that threaten humanity increase. The climate emergency announced by 11000 scientists recently as published in the [journal BioScience](#) is the most obvious. It declares that the climate crisis “has arrived” and is “accelerating faster than most scientists expect”, causing “untold human suffering”.

Climate change and its negative consequences aside, what other existential threats to humanity are current? These too may have been broadly reported but done so largely in isolation. They include exponential increases in; human migration, digital colonisation, organised crime, weapons with mass effect, natural disasters, chance of major conflict, fragmented communities (decreasing social cohesion), mental health pathologies, commoditisation of essential natural resources (including water, wind and sun), unregulated information spaces, pandemics, unregulated genomic editing, automation and inequality amongst others. There is good reason for even the most pragmatic and advanced futures thinkers to default to dystopia given the possibility that all these (and those yet to emerge) converge into the

greatest civilizational threat humanity has ever faced. Foresight can make a difference but as Godet correctly points out foresight “is not widely practiced by decision makers because when things are going well, they can manage without it, and when things are going badly, it is too late to see beyond the ends of their noses”¹.

Similarly, Richard Hames recently [commented](#) that “From my perspective the field of foresight has failed to make a dent on the world-system. Incumbent leaders habitually make decisions, craft policies, and interpret events, without so much as an inkling regarding future consequences. We often blame them for not accessing futures methods. But the fault is ours too... Meanwhile we have become complacent and now find ourselves isolated in a prison of our own invention ... It is time to face an embarrassing truth. We have found the enemy. It is us. The real world remains mostly untouched by what we know and do. I suspect many of us remain tenaciously unaware of that.”

Within the context of this existential peril, what is the purpose of futures studies and to what extent is the futures studies community responding to this purpose? To answer this question this

¹ Godet, M. (2000, p.3). The art of scenarios and strategic planning: tools and pitfalls. *Technological forecasting and social change*, 65(1), 3-22.

article suggests two propositions: i) the dominant discourse in the futures studies domain is not fully reflective of its purpose, and ii) many futurists generally operate under the erroneous belief that foresight creates the future in as far as it includes the decision making required to operationalise its images of the future. The fact is that futurists very rarely have the decision making authority to enact the actions required to realise a preferred image of the future. At best they can, and ought to, influence those that do.

Disciplinary creep has partly corrupted the futures studies field. This may be due to either the seduction of a multi-billion dollar consulting / strategy / publishing industry, individual hubris or a combination of both. Neither fits the purpose of futures studies which is fundamentally providential. As such this article issues a call to go 'Back to Futures' by advancing and prospering what futurists are meant to and are able to do.

An explicit point of departure is that we need to accept that futures (and the development of future possibilities and preferences) are not the exclusive domain of futurists. Indeed there are many more influential and powerful communities and individuals in the 'futures' space than that represented by the futures studies community. It is not that futures studies lacks the advanced thinking, methods and ability to enable broad participation in matters of the future that is the problem. Rather, it is that many futures studies discourse gravitates toward issues that are already well investigated amongst more mainstream and dominant disciplines. Take as an example the amount of futures work published in futures studies journals around technology or business/administration. Indeed the first SoPIFF study² reviewing published futures studies work concludes that there is a strong and dominant focus on conventional, pragmatic, government-funded research into science, technology, and economic questions. Slaughter³ notes in his second study reviewing futures studies publications that the majority of its publications this century as largely ineffective in challenging civilizational challenges. A key assumption that arises from this shift is that the futures studies field may be perceived as having generally failed to reflect its core purpose of generating alternative providential futures in

2 Richard Slaughter, "The State of Play in the Futures Field: A Metascanning Overview," *Foresight*, 11, no. 5 (2009): 6-20. Emphasis added

3 Slaughter, R. A. (2016). *Academic Publishing in Transition: The Case of Foresight*. *World Future Review*, 8(2), 63-74.

the last couple of decades, especially when it was most needed.

What is the purpose of futures studies? Perhaps Wendell Bell's⁴ definition captures its essence best? He suggests that the purpose of futures studies is to "maintain or improve the freedom and welfare of humankind and the life-sustaining capacities of the Earth ... speak out for the interests of as-yet-voiceless future generations [and] identify possibilities and bring them to the attention of people".

It is proposed by this article that perhaps the notion of foresight as used by futurists has become contaminated by a) the inaccurate definitions made popular by the futures studies field itself, and b) presenting foresight to do what it fundamentally is unable to do. What jumps to mind in the latter respect is the inaccurate use of the term strategic foresight, but that is a whole article in itself.

The problem revolves around assuming decision making within the pursuit of futures studies and foresight. The term foresight is often misused by futurists and is increasingly mistakenly used in the literature thereby perpetuating a promise that cannot be fulfilled. It is abundantly clear from numerous leading and contemporary futures studies authors⁵ that the work of futurists is to develop possible / probable / preferable futures as foresight (images of the future). These are not meant to be accurate predictions or include planning / decision making itself but to broaden the scope of possibility as a source of influencing decision making which constitutes a different albeit highly associated process.

If foresight is not planning⁶ and conducted to gain more knowledge about what is to come in order to inform decision making, then the idea that futurists directly create the future is inaccurate. Unfortunately many futurists sustain the idea that foresight is an outcome of strategic or policy action whereas it technically only presents an input to further processes and considerations. As futurists we hope and advocate that meaningful decisions will eventuate based on our work – that is usually the end of our remit. However, persisting

4 Bell, W. (2012, pp.21-22). *Understanding the futures field*. In Hicks & Slaughter, *Futures Education*, 15-26.

5 See the writings of Bell, Cuhls, Slaughter, Sardar, Inayatullah, Dator, Godet and numerous others that re-inforce the notion of purpose of futures studies being the use of foresight to influence decision making (and not the planning itself).

6 Coates, J.F., 1985. *Foresight in federal government policy making*. *Futures Research Quarterly*, 1(2), pp.29-53.

in inaccurately publishing and describing the praxis of foresight has and will continue to lead to a decline of the legitimacy of the field. More importantly, futures studies as a systemic whole will fail in addressing the civilizational challenges of our time.

The "Back to futures, beyond strategic foresight: the nexus between foresight and strategy in the 21st century" session at the 23rd WFSF Conference (Mexico) fully consulted on and investigated a) the nature and purpose of futures studies, and b) accuracy of use in its foundational concept of foresight. It concluded that: Futures studies is an academic discipline and field of research⁷ that includes amongst its pursuits the study of foresight as: a) a cognitive ability⁸ b) organisational / social capability c) process that generate images of the future that are developed in order to influence decision making. It is noted that the purpose of futures studies is to identify possibilities and bring them to the attention of the highly related but separate process of decision making. The following propositions were agreed:

Proposition 1: Futures studies is an academic field

that includes foresight as a foundational concept. Foresight should be differentiated in the literature in terms of how it relates to a) individual cognitive ability, b) organisational or social capability, iii) a process that generate images of the future.

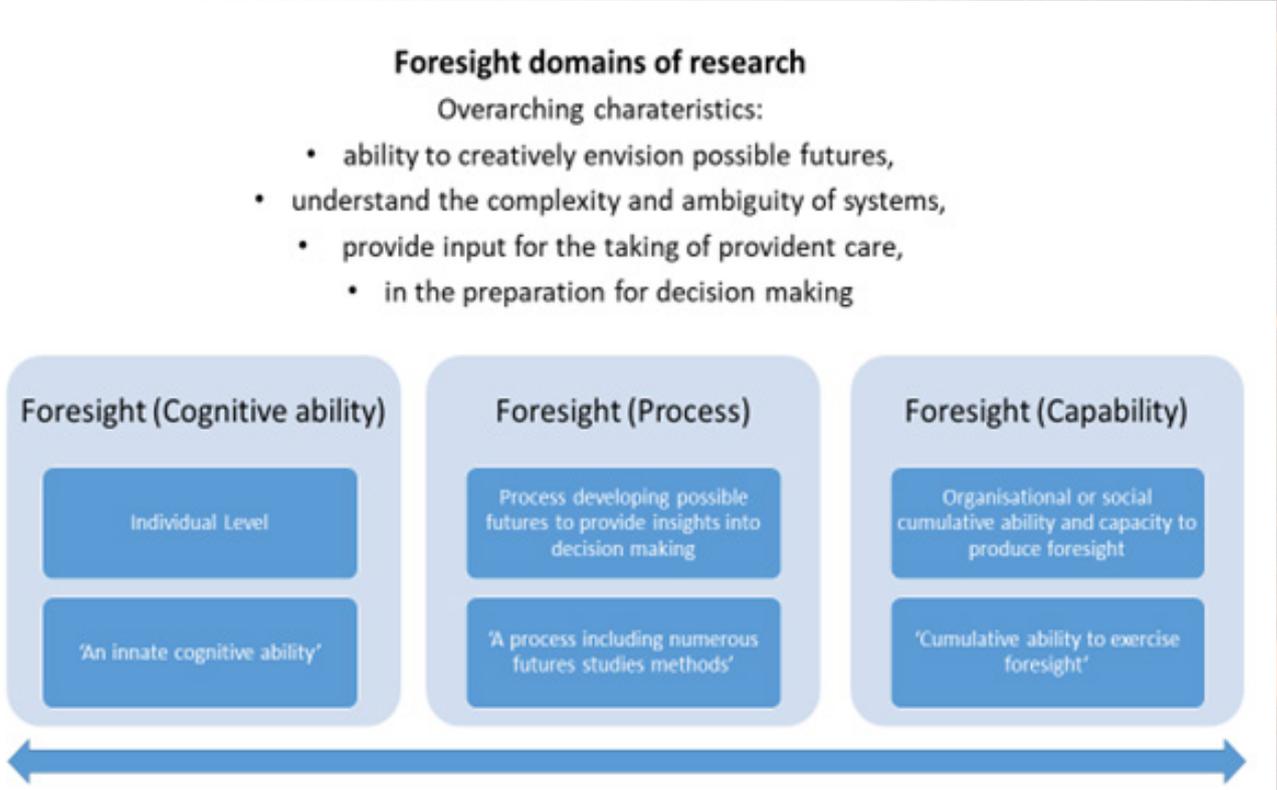
Proposition 2: Current usage and understanding of foresight in the futures studies context is unclear and / or causing confusion. This is occurring in both i) the futures studies field, and ii) the external environment, specifically as related to its derivative strategic foresight and its inclusion of strategic decision making.

Proposition 3: The inability to accurately reflect the purpose of foresight affects the legitimacy and efficacy of the field due to misalignment with the purpose of futures studies.

Proposition 4: A redefinition of foresight (and derivatives) and alignment with prospectiva (Spanish) / prospectiv (French) is necessary in order for the field to progress. The 23rd WFSF Conference, Mexico City, encourages further definitional research in this regard.

The following conceptual model may help guide such research:

⁷ Dator, 2015; Slaughter, 2016; Bell, 1996
⁸ Gary (2008); Hayward (2003); van der Laan (2010)



It is suggested by this article that if futures studies is to meaningfully respond to the great civilizational challenges now being faced by humanity, it should be true to its purpose, potential, limitations and enduring spirit following on in the steps of the pioneers that went before us.





The Fourth Industrial Revolution **STORYTELLING**

Victor V. Motti
Director, World Futures Studies Federation (WFSF)

Very recently I launched a new playlist on my YouTube channel and I called it Let's Connect the Dots Series. The aim is to apply a system approach both static and dynamic to obtain deeper insights about the scenarios related to any core issue of interest. This approach will help us become better storytellers.

One of the key issues which discussed many times among professional futurists is the Industry 4.0 or the Fourth Industrial Revolution. We can define it generally under the broad term of smart operations. That is the current and developing environment in which disruptive technologies and trends such as Big Data, the Internet of Things (IoT), Robotics & Automation, Virtual Reality (VR) and Artificial Intelligence (AI) are changing the way we live and work.

Obviously we are facing complexity and uncertainty. Therefore, it is appropriate to apply strategic foresight thinking here. There are doubts about the positive and negative impacts of the fourth industrial revolution. In order to address better and deeper the contradictions, the tensions, and the consequences and also informing the key stakeholders about known and unknown emerging issues in the world economy and society, we can apply two helpful futures studies tools known as the "Future Wheel", to identify the key factors, and "System Dynamics Conceptual Mapping", to understand the relationships among such factors.

When we map the relationships among the key factors involved several story-lines emerge that are worthwhile for further consideration. The Age

of Abundance is characterized by the narratives of a) **Smart Everything Accelerates Exponential Growth** and b) **Near Zero Prices New Investors**. These are the common stories we are hearing from the Silicon Valley futurists. If smart operations are widely adopted by the diverse industrial sectors, there will be exponential growth of productivity. This will lower production cost and increases the profit margin. When corporations are doing well in their accounts they will invest more and the economy grows, creating more jobs. More employed people fuel the consumption of goods and services and contribute to a bigger demand in the economy which in turn provides the incentive for the industry to use even more smart operations. Another related system dynamics feedback loop tells us if the production costs are decreased the prices goes down. With less inflation in the economy consumers can save a larger part of their income and invest that money in the capital markets themselves. That will also give the required financial resources to corporations so that they can expand their smart operations even more.

Such a narrative also promises two key outcomes that are a) **Smart Resource Use Enables Sustainable Development** and b) **Smart Energy Saves Ecology**. Smart operations will enable a major shift toward adoption of circular economy business models and play a key role in waste reduction in the economy. That will also optimize the total energy demand in the industries. When the demand for energy and in particular fossil fuels as the key source of energy is reduced there will be less industrial pollution which helps us control ecological degradation. The better the quality of the environment the more interest will be among industry leaders to shift to the circular economy. Another path of impact can also be considered which tells us that in addition to energy consumption, the use of raw material and therefore resource extraction will be controlled as well. This eventually saves the ecology.

Apart from this inspiring story and the dynamic behind it, we should note that on the negative side, a Monster of Conflict in Physical and Mental spaces might be awakened by the narratives of a) **Disruptive Tech Shoots in the Foot** and b) **Super Rich makes Super Conflict**. Such a narrative also

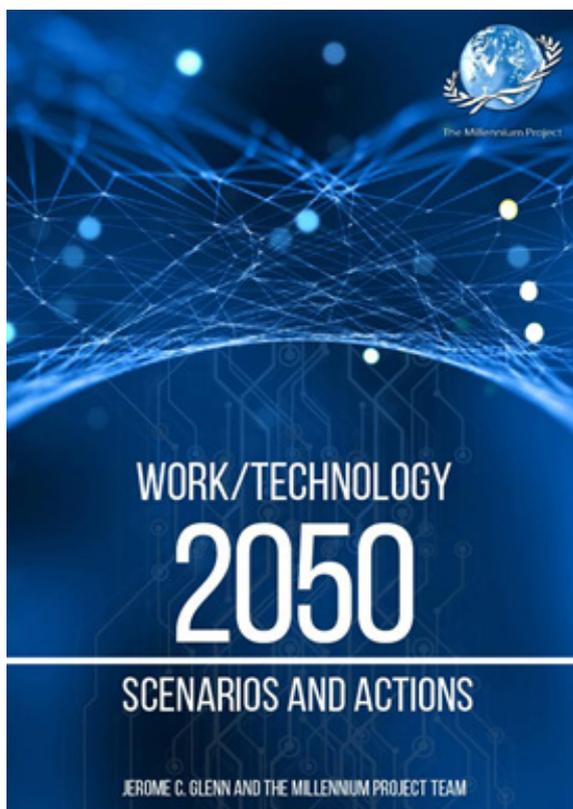
foresees an army of **Psychotherapists Battle Jobless Pandemic**.

One of the big alarms that are often sounded about the consequences of the fourth industrial revolution is that smart operations will bring a large and massive scale of structural unemployment. People will become simply redundant. The key outcome of this chronic unemployment is a big pressure on the mental health of people. This will likely initiate protests, social unrest, political instability, and even armed conflict. Such events, in particular if the monster of war wakes up, indeed can have a large and negative effect on the physical infrastructure of communities and countries. Without such infrastructure which is vital for the usual functioning of an economy the smart operations will bring a massive scale of structural unemployment.

On the other hand, corporations that are using smart operations will have easy and wide access to the global markets, significantly harming the business of local competitors. The market will comprise a billion people and will make billions of dollars. The story is about a handful of winners who take it all. A global monopoly for the giant corporations will take shape. When the high net worth corporate owners become super-rich, the income gap widens even more and social inequality will increase worldwide. This path also results in more protests and instability and finally destruction of the physical infrastructure.

The final story-line is about how to treat a tsunami of mental health problem or battle the monster in the mental space. There will be more mental health problems because lifelong unemployment will provide the conditions for the growth of drug abuse, addiction, and even suicide. This in itself triggers a demand growth for all kinds of mental health treatment centers and facilities. Therefore, there will be a high demand for talented people trained in psychological therapy and mental care. Only through effective counseling services for this growing group of patients we can hope to keep mental health conditions in society in balance.

You can watch and see the system maps in this video: <https://youtu.be/UhpgEk3Hoak>



195 pages in print (US\$45.95) and
download (US\$25.95)
[http://www.millennium-project.org/
projects/workshops-on-future-of-work-
technology-2050-scenarios/](http://www.millennium-project.org/projects/workshops-on-future-of-work-technology-2050-scenarios/)

WORK/TECHNOLOGY 2050 SCENARIOS AND ACTIONS

By Jerome C. Glenn and The Millennium Project Team

A pragmatic exploration of possible futures – choices and consequences, really exercised my imagination. --- Vint Cerf, Internet Pioneer

The world is aware that the concentration of wealth is increasing, income gaps are widening, jobless economic growth seems the new norm, return on investment in capital and technology is usually better than on labor, future technologies can replace much of human physical and mental labor, and long-term structural unemployment is a “business as usual” surprise-free forecast. But the world is not aware of long-range strategies to address these issues, other than focusing education on science, technology, engineering, and mathematics. Improving STEM education is good, but insufficient to address

global unemployment due to artificial narrow intelligence moving eventually to artificial general intelligence, robotics, 3D/4D printing, synthetic biology, drones, nanotechnology, computational science, blockchain, cloud analytics, cognitive science, augmented human intelligence, quantum computing, conscious-technology, and future synergies among these.

The Millennium Project conducted a three-year, international, multidisciplinary, and trans-institutional study involving panels of experts from around the world to assess concerns and identify actions that could help long-range thinking and strategies to address the work/technology interplay by 2050. The inputs collected over the first phases were used to develop three Work/

Technology 2050 Global Scenarios. Each scenario is about ten pages of rich detail with cause and effect links and decisions connecting the present to 2050. Why 2050? Because it is not plausible to show serious economic and cultural changes over five or ten years, and it is these alternative changes that are important for our consideration today.

Scenario 1: It's Complicated – A Mixed Bag. A business-as-usual, trend projection of the increasing acceleration of change with both intelligence and stupidity characterizing decisionmaking. Irregular adoption of advance technology; high unemployment where governments did not create long-range strategies, and mixed success on the use of universal basic income. Giant corporations' powers have often grown beyond government control, in this government-corporate, virtual-3D, multipolar world of 2050.

Scenario 2: Political/Economic Turmoil – Future Despair. Governments did not anticipate the impacts of artificial general intelligence and had no strategies in place as unemployment exploded in the 2030s and 40s leaving the world of 2050 in political turmoil. Social polarization and political grid-lock in many forms have grown. Global order has deteriorated into a combination of nationstates, mega-corporations, local militias, terrorism, and organized crime.

Scenario 3: If Humans Were Free – the Self-Actualization Economy. Governments did anticipate the impacts of artificial general intelligence, conducted extensive research on how to phase in universal basic income systems, and promoted self-employment. Artists, media moguls, and entertainers helped to foster cultural change from an employment culture to a self-actualization economy.

30 Workshops and Delphi Studies on Actions:

The detailed scenarios were translated and given as input to 30 workshops organized by The Millennium Project Node Chairs around the world. These workshops recommended over 200 strategies and actions to address the issues raised in the three scenarios. These actions were distilled to 93 and organized into five categories: government and governance; business and labor;

education and learning; culture, arts, and media; and S&T communities. These were the categories for five Real-Time Delphi panels conducted in parallel. Each action was rated in terms of effectiveness and feasibility. Panellists were asked to explain their answers and add additional comments. This produced hundreds of pages of text that were distilled to one page of text for each of the 93 actions, making rich resource for anyone responsible for implementation.

Many have argued that every technological revolution from the agricultural age to industrial age and on to the information age created more jobs than each replaced. True. So what is different this time? Plenty:

1. the acceleration of technological change;
2. the globalization, interactions, and synergies among Next Technologies (NTs);
3. the existence of a global platform—the Internet—for simultaneous technology transfer with far fewer errors in the transfer;
4. standardization of data bases and protocols;
5. few plateaus or pauses of change allowing time for individuals and cultures to adjust to the changes;
6. billions of empowered people in relatively democratic free markets able to initiate activities; and
7. machines that can learn how you do what you do, and then do it better than you.

A growing body of artificial intelligence experts believes that if socio-political-economic systems stay the same, and technological acceleration, integration, and globalization continue, then half the world could be unemployed by 2050.

A great database of solutions and wealth of ideas for how everyone can play their part in dealing with an uncertain future. --- Hazel Henderson, CEO, Ethical Markets Media

Work/Technology 2050: Scenario is available at: <http://www.millennium-project.org/projects/workshops-on-future-of-worktechnology-2050-scenarios/>



CONVERSATIONS ON THE FUTURE WE WANT...

UN AGENDA 2030

Interview with Fabienne Goux Baudiment

The UN's Sustainable Development Goals (SDGs) were adopted in 2015 as the universal call to action to end poverty and hunger, protect the planet and ensure inclusion, peace and prosperity for all by 2030. However, without active individual involvement Agenda 2030 is not capable of delivering wide scale impact. Understanding of the SDGs and actions towards achieving them should be integrated in everyday lives of ordinary people. We need ways to reach people in ways that speak to them and offer content in a form that allows them to engage.

In this interview we hear from FABIENNE GOUX BAUDIMENT, founder

proGective and a Former President of the WFSF. Fabienne's work centers innovative and foresight-oriented solutions.

As an engineer, I have always believed that engineers should be considered as part of the vanguard of the construction of the future. Yet that voice is often not present as leaders in the policy spaces that are driving the conversations about the SDGs. Is that beginning to change and if so how?

Well I think engineers are more pragmatic than leaders in the policy spaces: they are right now building new solutions, more sustainable, to face the current challenges such as desalinization, solar micro-grids, M-PESA, dew catchers, etc. They don't really

care about politics or even policy design, that's not their stuff. And I don't think this will change as the new gen of engineers is increasingly more pragmatic and interested in developing sustainable innovative products and services.

So much of Engineering is integral to the SDGs from providing solutions to water, health, energy, the ICT and Space Sciences and Technologies that are critical to the Sustainable Development Goals. How do we ensure that engineers, especially those working at the nexus of the policy and political spaces in the service of creating sustainable systems and futures have the capacity to do and use foresight as a design tool?

That's a very accurate point. The fact is that few schools of engineering dare to embed foresight as a discipline in their curricula, most probably because of the old-fashion way to oppose soft to hard sciences. Most engineers feel uncomfortable with social sciences, which foresight is part of. So they won't change the curriculum to make some room for such a so improvable matter. However, here and there, some schools of engineering are more open than others and futurists like myself in France for ex., succeed to sneak in and thrive. Maybe the best way to bring foresight on the forefront would be to address the heads of such schools through their professional associations (like UNICON, if the same exists for the schools of engineering).



You are also serving on the Scientific Board of the International Oceans University. How do you see this institution supporting the SDG 14 – Life beneath the Water?

The UIM (Université internationale de la Mer) supports the SDG 14 through its think tank, the Ocean Open University and a dedicated program of awareness-raising.

Our awareness campaign from October to April displays a monthly public keynote lecture, given in our headquarters in Cagnes-sur-Mer (France) by leading experts in the fields dealing with ocean, from biology to climate change to sustainable tourism. Then from May to September, we organize a campaign of citizen science where people along and on the sea can use our app to make observations about jellyfishes, cetaceans, plastic waste, etc. reported directly to the European scientific base Copernicus.

The think-tank activity is dedicated to develop three fields of practical knowledge: the Sustainable Blue Growth, the Resilience especially in island eco- and human-systems, and the Future of Oceans.

To clarify the purpose, the OO University defines the “Blue Growth” similarly to the European Union: Blue Growth is the sustainable growth of the marine and maritime sectors as a whole, mutually balanced. Seas and oceans are drivers for socio-economy and have great potential for innovation and growth. The main concerned sectors are aquaculture, coastal tourism, marine biotechnology, ocean energy and seabed mining. The OOU contribution is to use Operational foresight as a powerful tool to clarify the understanding of these issues for all concerned actors (businesses, public authorities, consumers, etc.), to anticipate disruptions and opportunities and to elaborate long-term, sustainable solutions (new business models, legal frameworks, coordinated concrete actions, etc.) considering people as well as economy.

Defining resilience as a fundamental component of any development model, the Ocean Open University has elaborated a 5-step method to develop resilience, especially in island eco- and human-systems, bridging the three steps of a natural disaster: Before the risk materializes, During the occurrence of the event and After the risk has materialized.

Considering that Humanity could not survive without a safe ocean system, the Ocean Open University dedicates itself to the future of ocean and ocean-related activities, through horizon scanning curation, events organization, action-learning/training, advisory and project management.

An example of this dedication is our current work with the Senghor University and the Francophone Institute for Sustainable Development (part of the International organization of Francophonie) to create a MOOC devoted to Challenges of the blue economy: Introduction to the sustainable management of marine and coastal areas, mainly addressed to African countries but not only (English subtitles). From political, societal and legal contexts to fishing and fisheries, from climate change and ecological conditions to the Blue Economy and from Ocean governance to the Ocean Foresight, this is a really innovative and future-oriented curriculum.

So, yes, I think the International Ocean University can make the difference to reach this SDG 14, along with all the various initiatives like the Ocean Global Decade by Unesco.

How might organizations like WFSF and others in which you have influence help to create a global community of practice around this challenge?

The strength of the WFSF is to be a very heterogenous and global group of futurists, bringing many different capabilities together. With the Internet it is now easy to organize a virtual group of voluntary futurists, really devoted to this topic. If we can succeed to bring this group under the umbrella of a powerful organization (such as Unesco or the Monaco Blue Initiative or any kind of philanthropy) with an efficient leadership, then it could bring a really global and bridging vision of what to do at different levels, according to different contexts, to face the coming issues related to Ocean.

I organized in 2016 and 2017 such a panel of prominent futurists, equally male and female and from the different continents, to contribute to enlarge the vision of the future of the world developed by the Moroccan Royal Institute for Strategic Studies. I wasn't an easy task to bring them all together but the richness of views they displayed was really brilliant and useful. So I am quite convinced this would work if applied to Ocean futures. The keyword is very basic: unity is strength, while fragmentation is weakness.

What are you doing now to advance the use of strategic foresight for advancing the SDGs and what do you see on the horizon for more in harnessing these tools of empowerment and engagement?

To advance to SDGs, I have been working on two specific tools. The first one, that I have developed since my PhD in 1998, is the move from strategic foresight to operational foresight. If you read futures-oriented strategic reports, they generally give you some loose orientations: most readers can't design the concrete path from these recommendations and even less see how they put them in action. From my background in political sciences and my decades-long experience in territorial foresight where I worked closely with local elected and governmental officials, I come to understand very pragmatically what a decision-maker need to lead and make change. I have designed the "operational foresight" based on this knowledge: it includes systemic thinking to identify the collateral impacts, collective intelligence to onboard the stakeholders, confrontation of paradoxes, a values compass, etc. The current challenges request us to act swiftly, accurately and leave no room for errors: we have to assume this and operational foresight can help to path the way towards sustainability.

The second tool which I am developing right now is a new model of development. This is not a creation of mine from scratch. Indeed, after two years studying both the drivers of

change and the different positive initiatives in the world to change radically the way to do things, from permaculture to dew catching, from the Blue Economy by Gunter PAULI to the Pos+ive Planet movement, I have identified a pattern emerging from all this. This pattern designs clearly an emerging new model of development. I wrote down this research in a report published by IRES this year that will soon be available online.

When you think about success in the year 2030 what do you see for then?

I do not believe that we will be able, by 2030, to tame the wild turbulences (climate change, shortage of natural resources, social and individual inequities, destruction of living ecosystems) that our predatory economy have created. We will need more time to

change our mindset and set up a whole new model of development, putting an halt to the Anthropocene. Especially with the 2 more billion people that will be born by 2050, a slowing down world economy and the rise of protectionism and tribs.

Yet, by 2030, we can educate all the children at school telling them about how unsustainable is our current way of life and how they can think of improving it, giving them the means to experiment and develop new, own ways to build a better world. By 2030, we can have DAVOS making the global decisions that the politicians don't dare to make (cf. the inefficiency of the COP process). By 2030, we can design new policies helping the "changers" to make change where they can, free from bureaucracy and bribery, free for being more human.



The Millennium Project

GLOBAL FUTURES STUDIES & RESEARCH

Operationalizing the Future: **A REVIEW OF WORK- TECHNOLOGY 2050 SCENARIOS AND ACTIONS**

By Leopold Mureithi
University of Nairobi

Jerome Glenn and The Millennium Project Team took three-years carrying out an international study that culminated in the production of three detailed scenarios that could unfold in the area of work and technology, and actions that could be undertaken to operationalize such scenarios out to the year 2050. Their process involved literature review, at the initial stage, “to find what questions were not asked and those that were answered inadequately.” A survey was then mounted to address those gaps. Draft scenarios were reviewed and improved upon by hundreds of futurists and relevant experts as well as by the 63 Millennium Project’s Nodes around the world. Thirty national

workshops were conducted in 29 countries. Out of these, a raft of proposed actions were teased out and 93 distilled for retention.

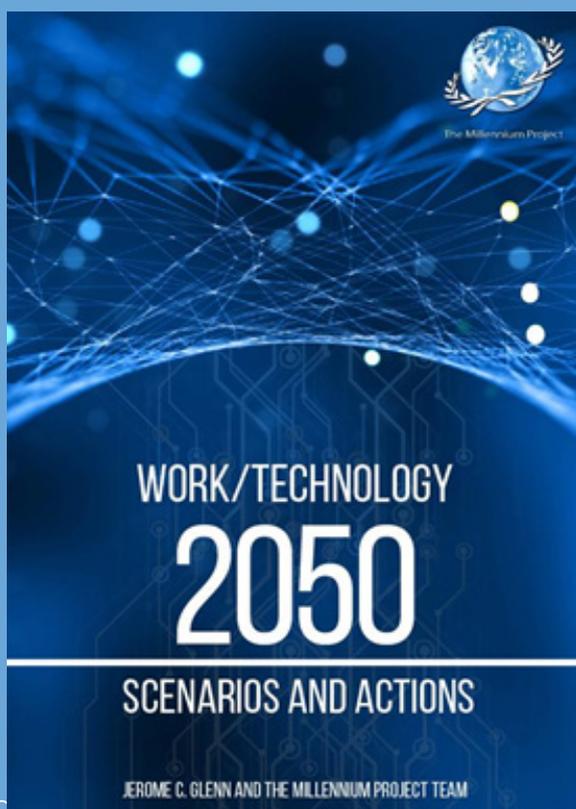
The core concern of the book is how to respond to the future of work challenges arising from technological progress, with artificial intelligence (AI) matching from artificial narrow intelligence (ANI), through artificial general intelligence (AGI), to artificial super intelligence (ASI) (p.32). This trend moves physical, digital and biological technologies from mere interface to convergence. Scenario analysis is utilized to clarify the issues involved, and map out strategies, and operationalize actions.

Three scenarios were identified and can be classified into dystopia (Political/Economic Turmoil—Future Despair); utopia (If Humans Were Free—The Self-Actualization Economy); and in-between business-as-usual (It's Complicated—A Mixed Bag). In dystopia, “governments did not anticipate the impacts of artificial general intelligence and had no strategies in place as unemployment exploded in the 2030s leaving the world of 2050 in political turmoil. Social polarization and political grid-lock in many forms have grown. Global order has deteriorated into a combination of nation-states, mega-corporations, local militias, terrorism, and organized crime” (p. 14). In utopia, “governments did anticipate the impacts of artificial general intelligence, conducted extensive research on how to phase in universal basic income systems, and promoted self-employment. Artists, media moguls, and entertainers helped to foster cultural change from an employment culture to a self-actualization economy” (p. 14). The business-as-usual stance marks “both intelligence and stupidity characterizing decision-making. Irregular adoption of advance technology; high unemployment where governments did not create long-range strategies, and mixed success on the use of universal basic income. Giant corporations’ powers have often grown beyond government control” (p. 14).

constitutes an appropriate basis for decision-making. But, clearly, business-as-usual and dystopia have parallels characterised by lack of or faulty anticipation. Their outcomes are to be avoided, leaving the self-actualization utopia as the preferred future. The book is full of actions meant to avoid dystopic outcomes and promote utopia. Actions in the areas of government and governance; business and labour; science and technology; education and learning; and culture, arts and media. To the book’s credit, these actions are covered in considerable detail (pp. 56-178). Discussion on effectiveness and feasibility of each action is done well, thus addressing the issue of the gap between intents and outcomes. Yet, the importance of exposure and competence as enabling factors cannot be gainsaid.

One possible consequence of technological progress is *full unemployment*, a term coined by Jim Dator. In such an eventuality, all tasks and jobs that can be automated will be. A national universal basic income and services (UBIS) programme might have to be put in place so as not to leave anyone uncared for. The book delves into this and proposes “new sources of income ... for the basic income payments” (p. 38). Not acknowledged, though, is the likelihood of institutional factors limiting this prospect of a new socio-economic order in some governance milieux.

Covering some 200-pages, the book is fittingly dedicated to Eduard Cornish (1927-2019), founder of the World Future Society in 1966, thus creating “the space for the most diverse conversations on the future.” (p. 5). It book is a well-written treasure trove of information and choice actions, easy to read and -- as one participant commented -- “very useful for biz, life and our organisation” (p. 179). Specific contexts could utilize the three scenarios elaborated therein as reference for learning, appropriate adaption, and elaboration. Being basically a narrative on what was done, it is near-impossible to fault the book under review. It is a worthy read for those interested in the application of the futures craft. Futures of work is work in progress.



Each scenario is a narrative of what could happen and

2040

A FUTUREMENTARY DIRECTED BY DAMON GAMEAU

A FUTURES FILM REVIEW FOR HUMAN FUTURES MAGAZINE
by David Lindsay-Wright (PhD)

FOREWARD

Welcome to this new series looking at films with futures themes, that is, 'futures films'. To analyse this compilation of curated futures films I apply a framework I call loFAM – or **Image of the Future Analysis Model** - which although it doesn't exactly roll off the tongue, I have found this framework very effective in understanding what the images of the future that surround and bombard us are saying or trying to tell us about our collective futures. As a framework for analyzing and also designing images of the future, loFAM builds on Lasswell's pioneering Communication Formula of 1948 which asks:

Who, says what, to whom, in what channels, with what effects?

This Futures Studies (FS) customized model expands on Lasswell by re-questioning with FS-specific questions that now ask: **who** – are the media authors and what positions do they maintain vis-à-vis the futures theme they have produced, **says what** - about the future and what is NOT said; **to whom** – the audiences they are appealing to; **how** – that is, what genres, communication styles or strategies do they use to tell the story and are they conscious or vicarious? In **what channels** – which now includes the proliferating social media

channels as well as TV, film, and so on. Finally, with **what effects** - potentially encompasses effects on the audience, what value is created – economic, commercial, social, ethical and so on - and how does the artefact continue to impact on the future over time and space - a dynamic referred to in literature studies as Travelling Theory.

KEY WORDS: alternative (future) story; fact-based dreaming; futurementary (my coinage); futures film; image of the future (from Fred Polak); IoFAM (image of the future analysis model); scenario; visualization.

Damon Gameau's 2040 – a Next-Level Futurementary

SPECS

Release: 2019

Genre: Enviro-documentary or in my Futures Studies speak, 'futurementary'

Length: 92 minutes

Budget: approx. \$3M AUD

Box office: approx. \$1M AUD

Who? Writer-director-actor cum activist Damon Gameau is an Australian with one feature documentary under his belt – *That Sugar Story* – one of that country's most-watched feature documentaries. He's also a Dad, a husband, and according to Luke Buckmaster's insightful analysis of *2040* in *The Guardian*, apparently, he's also an idealist, a term often used in a pejorative sense, as though it's a bad thing to have ideals! So, instead I prefer to think of him as a Realistic-Idealist/natural born futurist who also has a quiet and well-measured sense of humor – a breath of fresh air for the field of Futures Studies - which tends to rather humorless on the whole.

Says what? Damon knows how to construct a good serious yarn. He's unassumingly intelligent without being preachy – perhaps a reflection of the Aussie character - a nation not renowned for respecting its brightest people. His low-key sense of planetary doom helps him communicate his serious messages, messages which in a nutshell suggest that although our global environment may have reached a 'tipping point', all the solutions to the world's environmental problems already exist. Even excess carbon can be sequestered and stored to reverse catastrophic effects. But ultimately, his big tell-ye-er-friends-and-family take home is all about telling a new story, not the same old stuff – or in contemporary academic

Inayatullah-ese¹ – the 'litany'. Everything that is needed to make systemic environmental change, according to Damon already exists and is being used although usually not from the global centers of power but from the peripheries. Small changes emerging from the little-known peripheries can potentially make big differences – a kind of positive technological (soft and hard) butterfly effect.

An important strategy for Damon is the genre he declares, one of his own making he calls "fact-based dreaming" – in which his goal to make and tell a new story, a new vision for the future – *2040* – using currently existing technologies. That's the rule that guides and frames his film *2040* - all the technologies - soft and hard - must already exist.

What is not said? My well-meaning academic colleagues could scribe encyclopedias about all the things Damon did *not* say – because anyone who's actually made a feature film knows it's not possible to say everything about everything in the 92 minutes that is *2040*. Sure, he could have said more about the Big Corporations knowingly creating confusion with the public by borrowing from the dirty tactics of the tobacco industries exploiting every trick such as programmed bots that generate fake 'likes' making their products appear more popular than they really are. Sneaky! 53 minutes into the film when he laments while jetting across the world at altitude about how hard it is to know what we *should* do about the environment he could have gone into more detail. And aficionados of dystopian sci-fi may have pined for end-of-world scenarios in an otherwise Pollyanna-ish future, begging the question: Is he overly optimistic and is he simply avoiding the really tough questions about our human futures?

To whom? Upfront, Damon declares his storytelling audience to be his four-year old daughter Velvet, and her generation, having identified the preoccupation of young people with the state of the planet who with all the mass media of doom and gloom feel dis-empowered to positively influence making Earth – our pale blue dot - a better place. For this cohort he has a special name: the Re-Generation - who are featured in party mode at the finale of the movie. More broadly speaking though, his target audiences are wider. He is in fact more communication his vision for *2040* to anyone with an interest in making our

¹ From academic Futurist Professor Sohail Inayatullah, whose Causal Layered Analysis model is structured with the litanies at the top – the ways in which futures issues are presented in the mass media and which tend to dumb down the complexities of such issues, potentially masking preferred alternatives.

planet a genuinely better place not just for future generations – the Re-Generation and beyond – but for right now. Let us not forget we Futurists as a definable audience cohort – who should have more than a passing interest in the influencing power of media, stories, and the arts to act as change agents.

How? Damon deploys a tool-box of techniques to convey his world-saving messages. Firstly, he travels around a bit – apologetically no less – starting off on his planet-saving journey to little known Bangladesh on his first stop in search of solutions of a better but also plausible future where he talks with a 23-year-old alternative energy entrepreneur about his plan for a solar energy-based micro-grid model. This is where the director skillfully uses one of many animated futures visualizations – a second technique – with simple computer graphics showing how the houses connect to each other and then with other villages in an ongoing network of shared energy – a resilient distributed energy system. Congratulations Bangladesh – go straight to 2040 – you have just skipped the centralized grid system, the ball and chain that holds back those superior developed Western nations!

A third technique involves Damon's fast-forward vignettes to the year 2040 where he visualizes how various sectors, including the futures of energy, would actually be like for his daughter Velvet – now 26 years old – and Damon himself a more-youthful-than-average Aussie 60-something, where the world could have gone best-case or worst-case scenario. He storifies these scenarios with some light humor, albeit in the universal style of cliché Daddy jokes. Fred Polak the Dutch scholar and author of the influential book *The Image of the Future* made a point of showing us how humor was under-utilized as a communication strategy in the Futures world. Futurists with a comic twist, take note.

More globe-trotting. Next stop New York, USA where stuck in traffic Damon gets tense as a segue to his next topic – cars and traffic pollution. He explains how back in 2019 we are still tied up in the outdated paradigm of actually owning our vehicles – a that reality has shifted while we were stuck in traffic – as status symbol to an on-demand commodity – much like the way we increasingly consume music online in place of CDs, cassettes, and vinyl records, ad infinitum. Next scene cuts to the 2040 vision where car ownership is a

quaint cultural vestigial re-imagined to a new paradigmatic future where driverless cars and ride-share vehicles free up the space taken by highways and carparks to make way for green spaces such as urban food farms and the world's oil fields have been regenerated with carbon-capturing forests. Damon cheekily closes this scene bursting with big serious ideas with his signature low-brow humor pointing out another overlooked benefit – 'a helluva lot less road rage'.

A fourth story-making/telling technique is his quirky use of multiple animations styles – low-tech and hi – cut-out stop-motion figures and sci-fi-like 3D computer graphics. In an early scene, ironically and tragically a somewhat comical paper cut-out animation scenes depicts a thicket of trees on fire – little did the director know that Australia only a few months later would be burning to the scale of millions of hectares the size of some European countries.

Technique number 5 involves Damon's use of expert voices just to show he's done some research, is prepared to listen to alternative voices, and didn't make this stuff up from his 'idealist' imagination. Starring experts included Kate Raworth proponent of doughnut economics; Dr. Amanda Cahill author of *The Next Economy*; a brief cameo by Nobel Peace Prize recipient Malala Yousafzai; Paul Hawken's Project Drawdown where sitting on a wind turbine (Afraid of heights? Look away) with the 2040 director, explains how we can actually reverse global warming by eating less meat or at least growing cattle on free-roaming grassy fields. And there is the Aussie outback armchair expert and champion of alternative agriculture busily promoting the use of plants to pull carbon from the atmosphere and store it in the soil.

Back in the USA, Woods Hole MA, Dr. Brian von Herzen (The Climate Foundation) sails his yacht while explaining his solution to climate change – seaweed-based marine permaculture. Now, as a former AssPro at FUTURE UNIVERSITY HAKODATE in Japan where seaweed is a hot research topic (along with the usual suspects, robots, AI, and the like) and as a regular consumer of various seaweeds, I have long sensed that seaweeds are no ordinary food. In fact, seaweeds are so versatile not just as foods, but as efficient carbon-sequestering plants, as well as harbouring potential as the raw material for bio-plastics. Seaweeds as super-foods / super-raw materials. Entrepreneurs make a note!

A sixth communication device in *2040* is the director's inclusion of those endearing talking heads with young children about what they want to see/have/be/do in the future. Their idiosyncratic and bizarre ideas like disposing refuse in the "intergalactic rubbish dimension" would sound familiar to parents who actually listen to their kids, while to an entrepreneur looking for the next billion-dollar venture start up, this might sound like money in the bank. Nonsense or visionary genius, these quirky futures are worth an earnest listening to.

Storytelling technique no. 7. Damon even throws in a token 'scientific' experiment or two just to prove it's all real and that simple solutions exist right before our very eyes – with one demonstrating what happens to rain run-off on three different kinds of soils. A few more of these would be great and I'm hoping he's left this segment to be expanded for a *Mythbusters*-type television series that builds on the groundwork and basic ideas of *2040*.

Final technique no. 8 - for this author with a niche in the visualization of futures images, if I were to pick just one single feature I liked most about *2040* it would be the scene 64 minutes into the movie where Damon is in Oberlin Ohio visiting first-hand a community and its school who are engaged in raising awareness of locally consumed natural resources using visualization devices. In particular, the school uses a Dashboard that shows data in real-time of how local energy resources are being used and/or wasted. School Dashboard as behavior change communication (BCC) tool!

In what channels? This got me a thinking: was a feature film - or futurementary - the best way to get the film's transformational messages across to his desired and/or unanticipated audiences? Probably not, and this is where I find myself in agreement – tentatively - with The Guardian's Luke Buckmaster, who made a point of commenting that *2040* would have worked better as a TV series. But then I thought, hold on – there's a romance about the big screen that no small screen (TV plus all permutations of screen devices) can match – although those 'small' screens keep getting bigger. Once a film has been screened at the cinema and once people have gotten excited about it, then come the more serious follow-ups and spin-offs – the television series, Netflix, and the rest of the media-sphere. The other thing about TV is that younger generations are apparently

trending towards less television and more hand-held devices to watch YouTube and the like. So maybe a YouTube channel or Instagram might be a more persuasive behavioral change agent than good old-fashioned TV? There's got to be a paper in that idea. Anyway, it is hoped that a film as potentially life-transforming as *2040* it would take on novel, replicating, evolving life-forms that bring systemic changes in the real world – crossing education, community programs, apps, politics, policy-formation, new eco-businesses, and global movements.

With what effects? Starting with the effects *2040* had on me – the immediate effect was something like: "Damn, that should've been me who made that film!" But then after a bottle of Terranova an organic locally grown red wine (a true story), that micro-thought morphed into: "*I can do better – in fact – I'm going to invent a new genre of film – the futures film, and kickstart a global boom in serious futures themes for all those billions of movie-goers fed up with those here-we-go-again Hollywoodian dystopias starring cowboys and cowgirls in space*'.

Having gotten that off my chest, anyone reading this review in search of a worthy PhD topic, consider this title: 'A Travelling Theory Analysis of Damon Gameau's *2040 Across Space, Time and Intergenerational Cohorts*', which actually means: how has this movie influenced and mobilized people across different countries over time into some form of tangible action – be it a small tweak of one's daily carbon-producing habits or a personal aspiration to stick on the fridge that says: '*I'm going to start my own movement and put those amazing who-would-have-known ideas into practice, right here right now!*' Which, as it turns out, Damon the director has kind of kickstarted already in the form of a movement that anybody can join and build on at *What's your 2040?* Go visit: www.whatsyour2040.com.

That's a wrap. For all its I-could-have-done-better imperfections that could have been ironed out on a billion-dollar budget, my concluding opinion is that *2040* deserves to be recognized as one of *THE* best futures films to date. All Futurists, and non, will find much of value in taking 92 minutes out of their busied lives to sit down and watch this film carefully, and if so inclined, sign up to *whatsyour2040*. Then, wait for the TV series – and other spin-offs coming to a screen near you soon.

BOOK ANNOUNCEMENT

The Design of Project-Based Learning – Learning Methodologies to Transform Our Futures

by Noyuri Mima, PhD., Professor, Future University Hakodate

As Japan's population ages and its birth rates decline, the futures of higher education in this country not to mention the rest of the world are increasingly being questioned. In this context, the learning methodology known as Project-Based Learning (PBL) is attracting global attention and generating excitement in education circles. For almost two decades, PBL has been in operation at Future University Hakodate (FUN) and its effects and benefits are disrupting the notion of what learning is about and for.

In 2000 Project-Based Learning became a reality at FUN, a unique disruptive learning institution specializing in the Information Sciences with leading scholars in Artificial Intelligence and Intelligent Systems, robotics, Complexity Sciences, new communications technologies, and innovative learning philosophies. Under the guidance of Professor Noyuri Mima, a specialist in the field of learning philosophies, this bold experiment in Project-Based Learning at FUN has become the subject of this book, a book which brings to the rest of Japan and the world, the fruits of two decades of pedagogical experimentation and discovery around the PBL initiative.

In *The Design of Project-Based Learning – Learning Methodologies to Transform Our Futures*, 20 years of experience is condensed into a readable

format for the benefit of educators and education reformers, students, curricula designers, futurists, policy-makers, and those with an interest in our global collective pedagogical futures.

The six chapters cover the histories and educational theories that have come to inform the Project-Based Learning initiative at Future University Hakodate; How PBL is situated within the context of FUN's overall curriculum; Interviews with academic staff at FUN telling their stories around the PBL experience; Applications of PBL projects to local community real-world problem situations; Situating Future University's PBL program in the global educational context such as the OECD's (2018) *THE FUTURE OF EDUCATION AND SKILLS - Education 2030* and the United Nation's Sustainable Development Goals.

This is a book that can be used in for trans-disciplinary purposes as a guide to implementing similar PBL programs at other educational institutions or for individuals and organizations to select aspects that are of interest or practical benefit.

The English summarized translation embodies the essence of the book with these words:

Don't predict the future - let's create better futures, together!



BOOK INFORMATION

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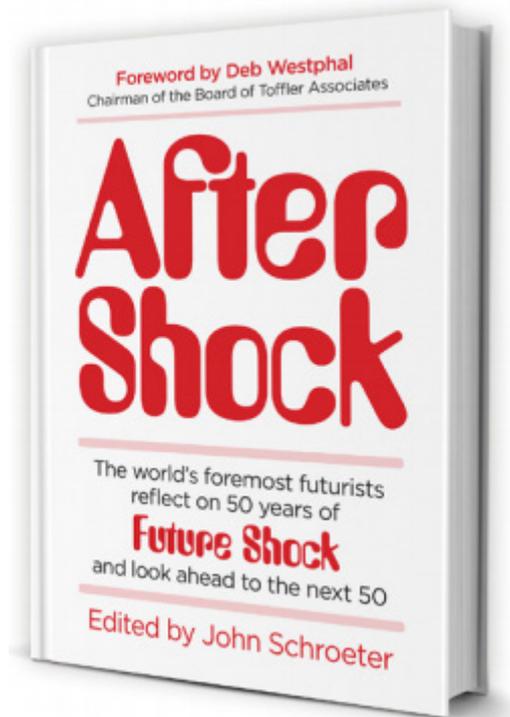
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After Shock

edited by John Schroeter



In bestseller, would Whether 1970, inevitably futurists Future the Tofflers' Alvin Shock—the be brought and warnings Heidi title about describing Toffler about by “too the were much a acceleration thrust condition change upon whose in of the too technological world short characteristic a stage period and by of “shattering the social time.”

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prophetic or apocryphal, their insights were—and continue to be—potent catalysts for contemplating our probable, possible, and preferred versions of the future. Indeed, in the end, we will realize either the world we fear to imagine or the world we dare to dream.

Dare, then, to journey into all these potential fu- tures, guided by the extraordinary insights of the world’s foremost thought leaders who in the pages of After Shock collectively chart the course to an abun- dant future for all.

— Marking the 50-year anniversary of Future Shock, the compendium of essays comprising this landmark vol- ume offers surprising reflections on the classic text, as well as presents remarkable—if not startling—views of the future through the very unique lenses of more than 100 thought-leading futurists spanning Ray Kurzweil to Lord Martin Rees, and featuring a foreword by Deb Westphal, Chairman of the Board of Toffler Associates.

#happy2050!

What future do you want?

By Mara Di Berardo, Millennium Project Italian Node co-chair

An awareness campaign by the Millennium Project aiming at stimulating public positive thoughts at 2050.

On December 21st, 2019, the Millennium Project Italian node launched #happy2050 on the main social networks with the support of the Millennium Project (MP). This simple, fast awareness campaign aimed at stimulating public positive thoughts at 2050:

"What future do you want for you and the others? Start creating our collective future today! Share your ideas with our card by using #happy2050 or fill the form at <https://lnkd.in/d6uHpqi>.

#happy2050 was born by analysing the results contained in the MP' report "Work/Tech 2050. Scenarios and Actions" (Glenn, 2019), whose aim is to stimulate a global, systematic, research-based discussion on how to make the transition to a world economy changed by foreseeable future technologies. Work/Tech 2050 is an international, multidisciplinary, and trans-institutional study. It involved panels of experts from around the world to assess concerns and identify actions that could help long-range thinking and strategies about

work/technology interplay by 2050. The inputs from hundreds of international experts taking part in the Real Time Delphi (RTD, Gordon, Pease, 2005) formed three alternative Work/Technology 2050 global scenarios.

The first defines a complicated situation where few governments anticipated the impacts of the Next Technologies. The second describes a future despair with political and economic turmoil because no government put strategies in place to address a massive future unemployment. The third positive scenario fulfils strategies for the self-actualization economy to free humans. These scenarios were inputs to 30 following charrette workshops conducted in 19 countries, which produced over 250 suggestions, distilled to 94 actions and assessed by the experts in terms of effectiveness and feasibility through five RTD.

Defining who should execute such actions, at what level and how, should be the next steps of the research. But how can planning a longer temporal horizon, push decision makers to include futures more into the process, postulating possible, probable, and preferable futures? And how addressing our futures with positivity,

focusing “(...) minds on the opportunities involved (as the third scenario does), since enough has been said already about the dystopian future of work” (Danheim, 2019)? The actions contained in Work/Tech 2050 show that we need significantly stronger international and trans-institutional cooperation, and a decision-making process considering long-term interests of citizens and the public.

When decision makers are not inclined to change their short-term point of view, the public can become the key for change, similarly to the recent worldwide movement under Greta Thunberg claiming for climate change solutions and the centrality of the theme in our agenda. We can demand more social foresight, a systematic, participatory and multidisciplinary approach to explore mid- to long-term futures and drivers of change, systemic thinking and anticipatory knowledge spaces for various stakeholders and experts, thus defining solutions to address our complex world, where forecasting is not sufficient anymore. We can ask to include a public vision about what is more desirable, choosing among trajectories traced toward the futures from today, and collectively anticipate the actions we want in a variety of possibilities, giving form to the future into the present as an anticipatory activity (Miller, 2018).

In order to do that, we need to create public opinion about the futures, understanding their importance in what we see and do, as recently discussed during the UNESCO' Global Futures Literacy Design Forum in Paris. Futures literacy (FL) is the capacity to explore the potential of the present to give rise to the future (Miller, 2007), following its three levels: temporal and situational awareness, expliciting our individual anticipatory assumptions (Miller, 2018) in terms of values and expectations; discovery, to push our boundaries when thinking about futures; and choice, using expectations, values and possibilities to build scenarios.

Improving our ability to use different futures in different ways, could help us with living in the imagination age (Magee, C., 1993) in a more active way, so that single and collective, imagination for anticipation become a real key for positively affecting our future, instead of being subjected to it. We should work on it together, as we are all part of our integrated collective future, defining what we decide today. How do we involve people and

decision-makers into FL processes?

#happy2050 is an experimental campaign to make people start thinking about the futures and understand what the public opinion for a better future is. It is not a collective FL laboratory; neither is a structured communication method for collective intelligence and a representative survey. #happy2050 is a simple contribution by the MP Italian node to start stimulating a first positive public futures thinking at 2050, and the 2020-year opening a decade helps reasoning by timeframes.

The small campaign closed on the 6th of January 2020 and collected various thoughts worldwide at 2050. The main addressed theme is the environment, with most of the environmental problems solved at 2050, thanks to accelerated next technologies. A “Sustainable” (Gian Antonio from Italy) future is one of the main positive image of the future from the respondents: “I want more technologies and care for the environment and health” (Aura from Italy); “Zero-energy/waste, sustainable life in decentralised, smart connected, decarbonised environment and peaceful world where human beings share their benefits, know-how and best practices and live in harmony with nature” (Vicente from Switzerland). The work/tech positive scenario meet much of the sustainable development goals after all, and that says a lot about setting priorities for humanity.

Space and human longevity, another recurrent thought, maybe encouraged by the most known science fiction visionary and writer Isaac Asimov' birth recent centennial: “Holidays on Mars” (Mario from Italy); “I want a future in which we already tackled and figured out our species' mortality problem and we mostly passed the long struggles of ‘who has the right to become immortal?’. We're reaching a population/resources equilibrium, mainly through brave and voluntary (of course paid) colonization of the Moon and Mars. Meanwhile, interplanetary corporations are on the brink of a new wave of hostilities and confrontations over newly discovered resources of the solar system” (Pouyan from Iran). And should we leave our planet because we can no longer live here or because we just want to?

Thoughts about a less unequal economy, and about work tied to automation, one of the main problems addressed by the MP's “Work/Tech 2050” report, could not miss: “Liberty to chase our opportunities despite the automation of

most jobs...”, and getting then back again to the environment: “...a planet that won’t burn due to inaction in the face of climate crisis.” (Natasha from Canada); “I hope in 2050 that a balance will be achieved between human well-being and that of the planet as a whole. We should break out of a capitalist world focused on personal short-termed financial gain.” (Martine from Belgium); “A society where less inequalities are preserved, therefore where there is a better redistribution of economic resources. We should get back to cultivate an idea of social entrepreneurship. Moreover, I would like to live in a society where such social and economic policies are ‘sustainable’. That is characterized by environment protection, also with the fundamental contribution of technological innovation (in any field of activity)” (Luigi from Italy).

One of the most quoted idea is some kind of (or base for) collective intelligence, starting from “The real semantic internet, sharing and synergy on knowledge. Not just data or AI but real collective intelligence connecting humans, machine and time with exponential interaction” (Andrea from Italy); “In 2050 we won’t have a climate crisis because all nationalities have collaborated and we are not just meeting but beating the Paris climate change targets. We will have a more balanced world between rich and poor, with education and basic healthcare for all. The U.K. will be reunited with itself and with Europe. Stronger together.” (Angela from UK). “The mainstream ideology/myth on the planet tells the story of humans applying the principle of Interdependence: the purpose of all human activities is to regenerate nature, society and humans. Society enjoys a shared and durable prosperity.” (Eric from Italy); “The 2050 I would like is a year where man can have gained trust in himself and in its own capacities again. Without being ashamed of technology and science. Without being ashamed of being proud of its achievements. And being aware that with great power comes great responsibility” (Mattia from Italy). And essential prerequisites, also to address many global challenges facing humanity (Glenn, Florescu, 2017) are: “Accountable decision makers, top education and equal opportunities, stakeholder as driver to business” (Consuelo from Italy), also hoping to have “...women guide the main organizations in the world” (Fabrizio from Italy) and “A world without transnational organized crime” (Conception from Mexico).

Here is an overall vivid image closing with references to human spirituality: “30 years from

now...a future where humanity is coming into a more peaceful collective harmony with each other and with nature using our technical genius and creativity to work towards solutions to achieve these goals. We are greening and farming more in urban landscapes, recycling water and materials, using alternative energies (solar, wind), and we apply eco-consciousness to all we do and create, including bearing children. Our educational systems are being reworked and are on track to support more self-actualized inspired careers that consider longer lifespans, and so too our medical systems which are now incorporating more and more alternative wellbeing practices, including healthy dying. A new global spirituality is becoming more and more popular that honours our oneness, and new community centres are being created that host those practicing this perspective -- versus the theologically outdated fundamentalist religions that divide and separate. In fact, churches, temples and mosques are beginning to transform and adopt this new spiritual cosmology” (Kate from USA).

After having reached “A future of sorority” (Annalisa from Italy/France), “Prosperity for all, Equal Social Rights and Justice for all, Better Health Conditions for all, Good Nature for all” (Azhar from Pakistan), what is left? “Transcendental happiness for all. Don’t try it, do it... now!” (Tomas from Mexico), thus getting back to that “Self-Actualization economy in a Conscious-Technology Civilization” Glenn talks about in “Work/Tech 2050.

Then, let us hope in “A future where we meet each other at eye sight” (Céline from Switzerland), with “Peace, health and prosperity for all” (Lidia from Italy): we believe that “Dreams can become reality” (Angela from UK), after all.

For info and ideas, please write to Mara Di Berardo, Millennium Project Italian Node co-chair: [mdiberardo\[at\]gmail.com](mailto:mdiberardo[at]gmail.com).



Artwork: MP Italian Node
Ph: Alexandra Sokol

#happy2050!

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WFSF YOUTH PERSPECTIVE



Hello, my name is Andrés Castellanos, I'm 11 years old and I'm from Colombia.

I'm very excited and grateful for this opportunity the WFSF gave me to participate in the 23° WFSF World Congress - the uses of future. I am also happy for the opening of the junior section for all the kids in the World, so we can participate and give our opinions, because as kids, we are the thinkers of the future and we want to know how to act.

In the congress talked about topics like technology, families, education, political participation and the environment, etc.

I met different people from different races and countries, but most importantly with different ideologies and points of view. All of these led me to see different situations, and to learn about the importance of this organization, because through the anticipation of futures it allows us to appropriate our actions in the present.

I love Mexico and that is why I was very pleased that the congress venue was at UNAM and I was very happy for the experience I received, and I hope to continue in this field of future and prospective studies, always improving more and more.

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THREE CONFERENCES THREE WEEKS

*Futures Conference Immersion:
Review of the 2019 WFSF Conference*

by Elissa Farrow

- Messages and narratives of the future can create change. (Fuller, June 2019, Turku, Finland.)
- Humans cannot describe sense and make sense of the world in the present without their images of the future. (Millar, September 2019, Mexico City, Mexico.)
- Next year Athena (AI Robot) might be doing my presentation. (Jackson, September 2019, Bangkok, Thailand.)

I am diving in the cool ocean. I see sea creatures, plants and dappled, greeny-blue light. I feel the cool temperature and the pressure of the depths. I hear the gurgles of my bubbles and the shhhh of my breath as I exhale. I come up for air. I feel the sun on my skin and salt stings my eyes a little. I am feeling different from my immersion: vitalised, energised and centred. I go in again.

I am in year two of my futures doctoral research at the University of the Sunshine Coast, Australia. I am exploring the implications of adaptation on organisational futures due to Artificial Intelligence, and in 'immersion mode'. Two of my supervisors for this adventure, Dr Marcus Bussey and Professor Sohail Inayatullah suggested I attend a futures conference. They thought it would enrich to my understanding about futures knowledge domains, be a chance to test and share my own research, and most importantly meet the community of futures and foresight researchers and practitioners who have created this field. I agreed totally.

I conducted a search of futures conferences, commenced abstract submission, blocked out the diary and saved up for my futures 'deep dive'. I had joy with my abstracts and I believe I am the only person who was lucky (and a little crazy) enough to attend three futures conferences in one year:

- Finland Futures Conference, Turku, Finland (12-13 June 2019)
- World Futures Studies Federation, Mexico City, Mexico (10-13 September 2019)
- Asia Pacific Futures Congress, Bangkok, Thailand (17-18 September 2019)

One of the ways that I learn is through participatory and immersive processes. This blog covers my insights of the three conferences which I have captured using a comparative Causal Layered Analysis table. Causal Layered Analysis (CLA), as many Journal of Futures Studies blog readers would know, is a futures research methodology and theory of knowledge created by Inayatullah (1998) that is “concerned less with predicting a particular future and more with opening up the present and past to create alternative futures” (Inayatullah, 1998, 815). Conducting a CLA is a rewarding insight process and is a matter of exploring first and then using CLA to extrapolate the insight. So firstly, some context and the story of my experience at each of the conferences.

The first conference was in Turku, Finland and organised by the Finland Futures Research Centre. This was my first trip to Finland, and my impression of Finland before arriving was of a European country held up as a positive example of innovation, liberalism, green space and equality.

The theme of the Finland conference was constructing social futures which linked strongly to the Research Centre’s aims of promoting sustainable futures. Presentations explored concepts around sustainability, responsibility and power from either an academic or practitioner perspective. There were around 300 people in attendance at this fantastic old repurposed railway station/convention centre in Turku on the west coast of Finland. A city from the middle ages on the beautiful Aura River. Historically, always a major trading point with other parts of Europe. Food and cultural experience is important to me as part of any immersive experience. Food at this conference was pre-dominantly vegetarian and very seasonal. Delegates were from many (mainly European) countries and presentations outlined new forms of participatory democracy, technological and innovative practices as well as new theories and case studies of social futures research.

The conference started with perspectives on power and that futures projects brought important insight but were at times cursed like Cassandra of Troy who are “blessed to know the next steps but cursed to not be believed or have others care” (Milojević, 2019). I really enjoyed finding and building connections with “other Cassandras” (Milojević, 2019). Symbolic power and using images to rehearse the future as a way of investigating it were insightful to me. Having the ability to reflect on the future with explorations of biospheres and narrative, confirmed that I needed to consider trans-contextual and planetary influences more deeply as part of my research domains. I learnt about tools that linked design to anticipating and dramatizing narratives to build understanding of social reality and create futures. Some techniques presented were not verbally articulated, but performance, movement and art oriented to shift people’s behaviour and course of action in the present (Härmä, 2019; Myllyoja, 2019). My own presentation at this conference was about “actionable futures” (Farrow, 2019), which seemed to strike a chord with a number of participants, who were keen for ‘action’ rather than just academic rhetoric or talk. Future’s literacy and building futures resilience and capacity was another theme of the Finland Conference; a powerful example was given in relation to changing the narrative around climate and the importance of ‘social unlearning’ and alliance building between different groups. Key takeaways for me at the end of this conference was to bring a stronger sense of a duty of care in futures work and “replace the ethics of probability with an ethics of possibility” (Fuller, 2019), given our situation of living on a “lively planet” (Facer, 2019).

Conference two was in Mexico City, organised by the World Futures Studies Federation (WFSF) and is held only every few years. The WFSF is the first professional organisation of futurists founded in the 1970s and thus has a legacy and formalised global governance structure that is more traditional and reflects a “homage to the giants” (Millar, 2019). The theme of the conference in Mexico was four-fold – Traditional, Cosmopolitan, Creative and Holistic. This conference was bilingual (Spanish and English) and also the first time a WFSF conference was held in Latin America and had Youth Chapter representation. It was held at the UNESCO listed UNAM (National Autonomous University of Mexico) and conference activities

and presentations demonstrated the diversity of community-based futures practice, and great hope and opportunity for Futures insights and actions to make a positive difference. There were around 400 people in attendance. Being geographically in Mexico and at a university added a more formal nature to conference opening and close events. The timing of this workshop coincided with major issues including the Amazon jungle burning, the wall being built by the United States of America Government and socio-environmental challenges forcing more people to urban areas from regional settings. Diversity, economic growth, planetary consciousness and anticipatory futures literacy were themes across the conference. Miller (2019) linked the concept of anxiety reduction to being more anticipatory in our futures literacy so that “how we anticipate matters as it changes the present and lowers our levels of anxiety”. Technology and innovation insights were tied to economic prosperity, growth and opportunity. “We need economy but with soul” (Alcocer, 2019). Futures in ‘post-normal’ times, connecting complexity, chaos and conflict was also a theme (Miklos, 2019).

Being in Latin America and operating in ‘post normal’ times seemed more ‘real’ rather than academic. I felt a stronger sense of urgency at this conference around the need to “create futures consciousness” (Lombardo, 2019) and for futurists to move from predictive to committed participatory and proactive sessions to help reach the future. To end this experience dramatised futures and music was a theme of this conference, with ‘dancing futurists’ at a cocktail party and dinner with Mariachi band. One lasting memory I have is the specially commissioned play “Fragments of the Future 2050” (Berenice & Baena, 2019) that was used to close the conference – leaving us with a hope rather than dystopian future, and the official launch of a young person’s chapter of the WSFS with the first member presenting just 11 years old.

Conference three was in Bangkok, with around 200 attendees. Being in Bangkok, Thailand you can feel and see the rapid growth and thirst for innovation with influences across other ASEAN countries. This was my second time to the Asia Pacific Futures Forum (APFN). The theme of the conference related to culture, technology and security in the region. The conference was held in a very modern and funky industrial themed co-

working and conference space. The organising committee was more of a collective not linked to a particular institute or university, but instead hosted by a Thailand government agency, the National Innovation Agency. Lots of spontaneous gatherings and connections in the Thailand people’s spirit of Sanuk (play and humour). I really enjoyed the ‘open space’ segment of the conference. This segment was where anyone could nominate a topic in one of two rounds of seven topics for discussion. Topics included futures poetry, meditation, novelty, data governance and region-specific topics such as the silk road and China/Hong Kong futures. At this conference there was a strong innovation theme. Sharing of advanced and innovative methods of futures methods including games, improvisation, new forms of analysis (Artificial Intelligence) and more of an opportunity to test and trial prototype approaches. Key note speakers discussed futures of security (bio and crime), automated vehicles and Artificial Intelligence (AI). Technology and innovating linked to visualisations of green, city urban design and planning and being used in future’s prediction (Jackson, 2019). This conference had a feeling of protecting the integrity of a deeper form of collective and reflective futures practice. Sharing and growing ‘circles’ of young futurists (Zheng, 2019) and the metaphor of being stronger together in our diversity like the “Avengers” (Inayatullah, 2019). I felt a shared desire for joined up and collective futures and of course a focus on Asia, rather than a more global focus such as the WSFS. The desire to design models of open democracy, open space and open source futures insight (like the Journal of Futures Studies) were themes that emerged across the conference for me.

Diving in deep, I gained many insights which challenged my world view, my doctoral study scope and my consciousness. I could have attended over 265 different presentations or workshops across the three conferences. I ended up being drawn to the topics that connected most to my area of research or to the particular presenter. Thus, the CLA and my own personal experience does not reflect the totality of the conferences and is biased to the sessions I attended and aligned more to my personal research focus. But regardless, the process still took me deeper (see Table 1):

	Finland	Mexico	Thailand
Official Theme of Conference	CONSTRUCTING SOCIAL FUTURES – Sustainability, Responsibility and Power	USES OF THE FUTURES. Business as usual or Traditional uses OUR DUTY AS GLOBAL CITIZENS or Cosmopolitan Uses / Planetary Uses FUTURES AND BEYOND or Creative Uses STUDIES OF THE FUTURE AS AN ALL or Holistic Uses	Culture, Technology and Security in ASEAN and the Wider Asia Pacific
Litany	<ul style="list-style-type: none"> • New forms of participatory democracy and their consequences • Social Futures • Foresight and effect on sustainability transitions • Foresight combined with corporate social responsibility 	<ul style="list-style-type: none"> • Futures has to be more than scenario building • Futures voice has not been heard, it is time now. • We are in Post Normal times • Futures literacy linked to prosperity 	<ul style="list-style-type: none"> • Actionable Futures • Digital, augmented and autonomous • Future of ASEAN and its neighbours • Artificial Intelligence shaping the future • Gaming the future
System	<ul style="list-style-type: none"> • Government investment and commitment in futures • Anticipatory futures literacy • Linking futures studies, social theories and methodologies • Dramatised narratives • Innovation economy • Corporate Applications 	<ul style="list-style-type: none"> • Futures Literacy – anticipatory • Government and political used futures • Futures embedded in other knowledge areas (drama, design and business) • World Futures Studies Membership and Governance • Youth Futures, protest and social dynamics • Creativity and art in influencing the future 	<ul style="list-style-type: none"> • Government investment and commitment in futures • New forms of localised economics and democracy • Digital and AI futures and use in futures • Risks and Resilience thinking in futures • Games for the future • Open space and involvement • Security (country, personal, bio)
World View	<ul style="list-style-type: none"> • Calibration • Duty of Care • Ethics of possibility rather than an ethics of probability • Green Futures (food, forests) 	<ul style="list-style-type: none"> • Consciousness • Hope and Opportunity • Expanded participatory and proactive futures over predictive • Inclusive diversity (bi-lingual and planetary, youth) 	<ul style="list-style-type: none"> • Collectivism • Experiential Futures (act, play, involve) • Open – space, democracy, insight • All can share and contribute
Myth/Metaphor	<ul style="list-style-type: none"> • Green, Clean and Seasonal • Futurist as Cassandra of Troy (Milojević, 2019). • Exploring the Uncanny Valley (Film - Härmä, 2019) 	<ul style="list-style-type: none"> • Save the Amazon, Save Ourselves • Fragments of the Future 2050 (Play by Berenice & Baena, 2019, 3 scenes - utopia, neutropia, dystopia) • Dancing Futurists 	<ul style="list-style-type: none"> • Future Avengers (Inayatullah, 2019 borrowed from Marvel)) • The Expanded Now (Hames, 2019)

I had a tangled and rich experience that opened my perception up culturally, psychologically, energetically and intellectually by these three distinct experiences. What I realised from the CLA process, was that each layer of the analysis comparatively showed inter-relationships between a number of eco-systems:

- the effect of the geographic and ecology of the location of the conference (Northern Europe, Central America, and Asia);

- the physical and architectural spaces the conference was held within;
- the host countries history, religion, culture and other forms of unique socio-cultural complexity;
- the world view, agendas, themes, structure and professional focus of the organising committees (formal to collective);
- the importance of cross domain futures interaction and approach: games,

dramatization, art, empirical, participatory, automation, anticipatory;

- the individual world view, cultural experiences, professional experience that each participant brought and chose to share; and
- my own place in all of that, my epistemology, and perspective or bias I may consciously or unconsciously hold due to my life experiences.

I found that I was renewed after each experience. Even as I write this blog, I realise that the most important part of this deep dive was what my 'embodied' experience was. My own metaphor shifted from being a diver in the ocean, separate and more observational, to a more enmeshed metaphor of 'I am nature'. More layered, immersed, open, inspired and receptive. The organisers and volunteers of these conferences did an incredible job to organise three very different experiences. Within the futures community there is a very diverse, rich, warm, insightful and at times frustrated by the lack of action, but predominantly optimistic in their world view. I am grateful to have the opportunity to commit the time and resources to undertake this immersion process. I am also glad to be part of a inclusive community who are positively building communities and hope for our collective futures.

About the Author

Elissa Farrow from About Your Transition is a consultant and Doctoral Researcher with the University of the Sunshine Coast. Her research is exploring the area of organisational change and adaptation to the evolving field of artificial intelligence using future's methodologies, in particular those that fall under Anticipatory Action Learning. Elissa has supported organisations to define positive futures and then successfully transform to bring lasting benefits. She has worked within a range of industries in both Australia and the Asia Pacific Region.

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2020

HUMAN FUTURES CALENDAR 2020

APRIL

Urban Future Global Conference
April 1 - 3, 2020
Lisbon, Portugal
<https://www.urban-future.org/>

The sixth International Climate Change Adaptation Conference – Adaptation Futures 2020
April 27 - 30, 2020
New Delhi, Delhi, India
<http://adaptationfutures2020.in/>

Foresight Seminar (5 Days)
Apr 27 - May 1, 2020
Houston, Texas, USA
<https://www.uh.edu/technology/programs/professional/fore/seminar/index>

MAY

Library Futures Conferences
May 3 - 4, 2020
Vienna, Austria
<https://www.oclc.org/en/events/councils/2019-20/library-futures-vienna.html>

Living Future Sustaining hope within crisis
May 5 - 8, 2020
<https://unconference.living-future.org/>

Near Future Summit
May 13 - 15, 2020
Ojai, CA
<https://www.nearfuturesummit.com/events-1>

JUNE

Futures Conference: Learning Futures
June 10 – 12, 2020
Helsinki, Finland
<https://futuresconference.fi/2020-2/>

Primer 2020: Activating Futures
June 24 - 26, 2020
Atlanta, GA
<https://2020.primerconference.us/>

JULY

International Conference on Foresight
July 27 - 30, 2020
Athens, Greece
https://www.atiner.gr/foresight?utm_source=researchbib

AUGUST

Foresight Seminar (5 Days)
August 10 - 14, 2020
Houston, Texas, USA
<https://www.uh.edu/technology/programs/professional/fore/seminar/index>

SEPTEMBER

OCTOBER

2020 Digital Futures
October 12 - 14, 2020
Cleveland, OH
<https://www.iriweb.org/events/2020-digital-futures-conference>

Our Coastal Futures Conference
October 19 - 22, 2020
Gold Coast, Australia
<https://coastalfuturesconference.com/>

NOVEMBER

FTC 2020 - Future Technologies Conference 2020
November 5 - 6, 2020
Vancouver, Canada
<https://saiconference.com/FTC>

DECEMBER

JANUARY 2021

Future of Education Technology Conference
January 26 - 29, 2021
Orlando, FL
<https://www.fetc.org/>

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<https://www.journals.elsevier.com/futures/call-for-papers/3rd-international-conference-on-anticipation>

(2) Call for Papers: Special Issue on “Futures Literacy; character, capabilities and significance”

Futures: The journal of policy, planning and futures studies

Submission deadline: June 30, 2020

<https://www.journals.elsevier.com/futures/call-for-papers/futures-literacy-character-capabilities-and-significance>

(3) Call for Papers - Ethics and the Future of Meaningful Work

Submission deadline: October 31, 2020

<https://www.springer.com/journal/10551/updates/17488220>



World Future Day:

**DO NOT
FOLD, SPINDLE OR
MUTILATE...
THE FUTURE**

by Tyler Mongan

In 1937 IBM was processing 5 -10 million punch cards everyday. I recall my grandmother telling stories of life in the 1940's, working with this "advanced" form of technology. These stiff pieces of paper, with the presence or absence of holes, were an essential part of digital data processing. If you grew up during this era you would be familiar with the famous line engraved on the cards, "Do Not Fold, Spindle or Mutilate", reminding you that these cards needed proper handling to ensure for future use.

In the 1980's punch cards faded away and magnetic disk storage became the new norm. For my grandmother this new technology was part of a futuristic world that she would never understand, but for me these magnetic floppy disks were the gateway to exploring the future of technology. 40 years later the future I was dreaming of as a child... with smartphones, emails, computer applications, live video streaming and conference calls and instantaneous data transfer...is in reality much more than I could have imagined in the 1980's.

I wonder what futures the next generation will imagine?

March 1, 2020 was World Future Day. Nations and cultures celebrate many days throughout the year, but Future Day might be the only day dedicated to thinking and dialoguing about how the future is transforming us and how we can create a more positive future. As I reflect back on my education, I realize there was no formal training on how to think about the future, rather the future was something you just dealt with as it emerged. On

the other hand, I spent many hours studying and memorizing the past. I wonder how that affected my ability to imagine the future as a child?

Maybe we need more than just one day dedicated to public discourse about the future. Within the current context of uncertainty, complexity and exponential change, the future demands more attention. But when we look to the future, it does not seem so bright. Edelman's Trust Barometer 2020, which was started in 2001, reports a growing inequality and distrust in the future. People fear being left behind, losing jobs, and being led into the future by unethical leadership. For most people the future seems folded, spindled or mutilated...an unusable punch card...and nothing can be done to fix it.

Neuroscience research reminded us that the brain sees the world not as it is, but as we are. Within a growing narrative of fear and helplessness, the next generation, 1.8 billion highly connected and digital savvy young people, might feel like the future is something that is being folded, spindled or mutilated. If we ask the question, "what futures will the next generation imagine?" within a context of fear and helplessness, we continue to retreat back to the same narrative.

Instead, what if we first shift the context and also ask the question in a new way, "what futures is the next generation not able to imagine?" This might provide the insights and actions required to create more equal and trusted futures and shift the global narrative in a more positive direction.

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