

# After Shock

---

The world's foremost futurists  
reflect on 50 years of

**Future Shock**  
and look ahead to the next 50

---

Edited by John Schroeter

## USING THE FUTURE IN DIFFERENT WAVES

Sohail Inayatullah<sup>i</sup>

John Schroeter, Ed., *After Shock*. New York, John August Media, 2020, 534-542.

My first exposure to Futures Studies came from a class by Dr. Frank Shephard at the International School of Kuala Lumpur in 1974. I would have been in 11th grade. He showed us a short film by Alvin Toffler. In it a couple walk romantically through a forest. The music is soft, serene. We are unable to see the faces of the couple, until suddenly they turn around and we see discover that they are in fact robots. I was stunned. This was my first visual representation of a disruptive future. I was, however, prepared, as a year back at the International School of Islamabad, I had spent a semester devouring science fiction, from Bradbury to Asimov to Zamyatin. But the future was always another world. Now with this short film, the future had become this world, my world.

My second engagement with Toffler was reading his book, *the Adaptive Corporation*. I was working at the Hawaii Judiciary as a futures researcher, as part of an internship from the University of Hawaii Masters program in Alternative Futures. After a year and a half of course work, students found places where they could engage in the practice of foresight.

We learned with administrators and judges on how to use the future to understand how the world was changing and how the Judiciary could anticipate changing judicial needs. Toffler's message was prescient, obviously. He saw the restructuring that American businesses were beginning to undergo as part of the massive shift from the second wave - the industrial era - the third wave, the post-industrial. His brilliant but simple point was that corporations were using industrial ways of thinking and doing for post-industrial problems. They were in the language we as futurists use today, living in a world of used futures - practices that no longer work but continue because of institutional habit. There is a mismatch between the past the past and the emerging future.

In my review of his work, I summarized it as below:<sup>ii</sup>

"Toffler writes that instead of being routine and predictable, the corporate environment-social, political, demographic, economic-has become increasingly accelerative, unstable and revolutionary. To deal with this new environment, corporations need adaptive managers that can cope with nonlinear, discontinuous changes. These new managers must, instead of constructing permanent edifices, they need to deconstruct their companies to maximize maneuverability. They must be experts, not in bureaucracy, but in coordinating adhocracies. The adaptive manager must also be able to forecast future trends, reconceptualize basic missions, structures, procedures, products, and programs. As a first rule for corporations attempting to survive, Toffler believes that nothing is more dangerous than yesterday's success. That is, what worked during the Second Wave, Industrial era will lead to failure in the emerging Third Wave, Post-Industrial world."

I stayed on at the Hawaii Judiciary another two years and then moved to Australia as a post-doctoral fellow. Since then, in Australia, Europe and Asia, I have been working on helping nations, cities, institutions, organizations and individuals respond to the challenges Toffler posed decades ago.

During this time, I have attempted to make sense of hundreds of interventions reducing future shock and enhancing futures literacy, ensuring that they, and certainly myself and my colleagues, have optimized their, our, ability to co-create alternative and preferred futures.

While Toffler's approach was general and highly focused on the American context, the approach below differentiates and attempts to articulate a stage theory of using the future. It is derived from the six pillars approach to the future. In this participatory approach, the first pillar is mapping the future. Participants or an expert environment map out the current state of the issue - what are the pushes of the present, pulls of the future, and weights of the past. The second pillar is focused on anticipation, asking what is next. It uses the s-curve to explore current problems, trends, and emerging issues. The search for novel problems or opportunities are critical in this pillar. The third pillar takes macrohistory seriously and examines grand theories of social change. Is change linear, cyclical, spiral, or pendulum-based, for example, we explore. The fourth pillar deepens the future, and goes beyond the litany of daily events, disconnected realities and moves deeper toward systemic causes, worldviews perspectives, and foundational metaphors and myths. This is done at collective and individual levels. After the deep dive, scenarios are used to explore alternatives. The last pillar is transformation. There is focus on the preferred future, and using backcasting, anticipatory action learning, and strategic planning, the vision is made real.

As argued elsewhere, this process borrows extensively from the work of Jim Dator,<sup>iii</sup> Elise Boulding,<sup>iii</sup> Michel Foucault,<sup>iv</sup> P.R. Sarkar<sup>v</sup>, Graham Molitor,<sup>vi</sup> and Ivana Milojević.<sup>vii</sup> The process is a structured, step by step use of the future to move an individual, an organization, an institution, a city, a country or a multi-lateral group from today to a set of tomorrows and preferred futures. It includes inner work on whom the participants wish to be in their desired future and external work on the world they wish to create.

However, in the past decade, workshop participants have repeatedly asked what are the best methods for different situations. Do they need to go step by step through the six pillars or are certain methods more appropriate for certain groups or situations? For example, when a CEO or board chair asks me to conduct a process, I always ask a number of questions. I generally ask: when individuals leave the room at the end of the day or days, what do you wish their cognitive and emotional state to be? This is another way of asking for the product, but focused at the inner level. Some state: "I want them excited about the possibility of a new future?" "I want everyone aware of the challenges ahead." Directors also say - "I need to get them out of the day to day rut, they are too busy with what really does not matter." Or: "they see issues from only one view, I need to expand their worldview." "We have no direction nor strategy - we need a way forward." "We understand that if we don't disrupt ourselves, others will disrupt us." "We think in terms of one future, I need to get all of us to think of alternatives." These questions help me design the day, alerting me which pillar to focus on.

Based on these requests and attention to what works and what does not, I have developed the following step-by-step guide to using the future. It is a move towards a theory - at the very least a conceptual framework - of using the future. This approach is insight and case study based. I have few quantitative impact studies to "prove" the claims made below.<sup>viii</sup> Correlation and causation are

implied, suggested, in the case studies but not proved.<sup>ix</sup> There is a natural progression through states, however, linearity is not implied, one can move up and down, as appropriate given the success or failure of the futures thinking/practice intervention.

## SOCIAL INJUSTICE - ITS NOT FAIR

In my work - and with a hundred plus colleagues<sup>x</sup> - I have noticed that stage one is the state of social injustice, the perception that reality is not fair. Individuals and collectivities are best served by a focus on theories of social change, particularly, thinkers that help them understand that their state is not eternal. Ibn Khaldun<sup>xi</sup> reminds that all systems decline, thus, while the group may today be at the bottom, they may be on top later. Sorokin suggests that systems sway back and forth in a pendulum motion, between centralization and decentralization, for example; or between a concern for inclusion - soft solutions - to infrastructure planning, hard engineering solutions. One group of city planners that were focused on homelessness saw that their projects were about to be terminated since a new Mayor, who was focused on tunnels and security, had been elected. The works of Sorokin<sup>xii</sup> helped them understand that they had to be patient - "hitting the wall with their heads" would not work, the system would not budge. Insight and understanding are crucial here. Once this is understood - within the terms of the participants - then I try and move toward theories that create change. One can use Polak<sup>xiii</sup> and move the system toward a perception that the future can be bright and that they can influence this future. One can use Toynbee<sup>xiv</sup> and search for the creative minority. Or one can use Sarkar and help them understand that reality is cyclical, but through balanced leadership, a spiral can be created. Scenarios that show this movement can be powerful. Using Sarkar, one group of executives understood that they did not have balanced leadership. It was overly focused on commercial, accumulating capital and not enough of on idea generation. Another decided that will the present was difficult, to move onwards, they needed to organize and inspire the creative minority to create the new future.

## RISK MITIGATION

And if power has been achieved, then what? Many groups who have power, wish to retain it, obviously. For them, foresight is about using the future to mitigate against external situations where profits, power, social capital - "the loot" - disappear. With this group, while certainly the big picture of macrohistory is important, they care little for grand patterns of change, for the *longue duree*; rather it is events and issues that could potentially disrupt their business model that are most important. Molitor's Emerging Issues Analysis<sup>xv</sup> is the most important method in this phase. The S-curve helps organizations understand that they are too focused on current problems and have not spent enough time identifying future risks. Once this is done, then the implications of these risks can be teased out with futures wheel. Following that, new areas of opportunity can be explored, helping the organization move from what it is good today to new capabilities for tomorrow. Often I explore the structural implications of the vegan<sup>xvi</sup> and plant based revolution as well as the vitro meat based revolution (cellular agriculture).<sup>xvii</sup> This challenges the worldviews of departments of agriculture and those in the food business. They can either see these new products and the cultural shift this is part of - new science, new tastes - as a threat or as an opportunity. Understandably a focus on defending comes first. One group suggested that the first response scenario was to kill the vegans, the second to kill the scientists and the third to kill early adopters. It is only with a great deal of effort that

certain individuals begin to see that their core product: land, meat, milk, loans to the agricultural industry - may be a stranded asset.<sup>xviii</sup> Instead of defending the current reality, the used future - what worked before, but no longer does - it is more appropriate to look for new markets -financial and epistemic. These could be a shift towards organics, or investments in cellular agriculture, or becoming hubs for the new meat in nearby regions (for example, just as in Islamic finance, where Malaysia and Singapore lead).

## ALTERNATIVE FUTURES

To move out of this stage, it is crucial to acknowledge risk aversion, and then slowly shift toward possible opportunities. Data orientation, i.e. quantitative evidence to back up any possible futures is critical as decision-makers will not support a project based on intuition or hunches. Examples or case studies of other nations, cities, organizations, and persons having used the future successfully are crucial for conceptual movement to occur.

In projects with national and state libraries we used alternative futures thinking to move out of the budgetary crisis. In scenario one, there was no change. This would lead to a world where librarians were the "digital dinosaurs" - the median age increasing and book loans decreasing. In the second, the libraries became centers for digital downloads. They imagined holograms meeting citizens as they entered the library, and guiding them on their information journeys. In the third future, space became crucial. Libraries would transfer their key performance indicators to not books loaned but people visited. The library would run seminars, workshops, targeting the youth and the elderly. Libraries would become innovation centers where citizens could learn about new technologies. In the final scenario, libraries would move from being knowledge consumers to knowledge creators. They would do this by becoming publishing houses, using their membership system as a community of books buyers and sellers.<sup>xix</sup>

## DIRECTIONALITY

Once alternative futures are explored, insights into the range of directions are gained. But which direction to go toward? This is next crucial part of the foresight process. Scenarios help clarify alternatives, but once there is clarity of costs and benefits, of desires and fears, there needs to be a decision as to what is next? We need to decide on a vision, where do we wish to go. Personally and professionally where do we wish to be in a decade or two decades? The vision is crucial as it becomes the decisive indicator of what one should do in the present. Does a current decision align with where one individual or the institution wishes to be in a decade. Directionality is critical to harness personal and organizational energies.

Visioning is particularly valuable when participants understand their zone of control - what they can influence and what they cannot. This allows for the vision to become reality. Cities are perfect examples of this. They have budgets and influence, but generally of the size where policy and strategy can make a difference. In a number of Australian cities, we have embarked on 2030, 2040 projects.<sup>xx</sup> These have worked well when we included three parties: citizens through foresight workshops; political, business, and community leaders through visioning and strategy sessions; and academics and research organizations to collect data on the past, and emerging trends and indicators of the desired future. Without this triangulation, the vision can be overly utopian. Elected officials then lose interest as they need to gain re-election to ensure the success of the

implementation process. Without solid data, there is no benchmarking, to measure success and failures, and help "right the ship" when there are setbacks. Without deep citizen involvement, innovation is difficult since inclusion has not occurred. In successful projects, Toffler's anticipatory democracy<sup>xxi</sup> is created.<sup>xxii</sup> Vision and budget have become linked; risks mitigated, opportunities created, and civic energy is enhanced

Ultimately, visioning is a victory of agency over structure, of what can be over what is.

## MAKING THE VISION REAL

Visions without reality can reduce agency quickly. Visioning can be a direction, linked to the strategic plan. Visioning can be personalized, creative visualization, imagining a different future. Visioning can also be fantasy, a way of avoiding what is painful, what needs to be understood and discarded. Visioning as such hurts the futures process.<sup>xxiii</sup>

Thus to continue along the path of using the future to empower, we need to make the vision real, to allow the vision to enable and ennoble.

A number of processes help. Most significant are action learning, strategic plans, backcasting, and personal ownership of the future.

Action learning seeks to link the vision of the future with individuals using open space technology<sup>xxiv</sup> to design projects and processes to create a difference. In one project on rural health futures, over 50 CEOs met to design a new health system. Over two days, they imagined the 5P health model.<sup>xxv</sup> This consists of moving toward: (1) Prevention (exercise, meditation, early check ups); (2) Precision/personalized medicine; (3) Predictive health; (4) Participation (patients designing their health journey); and (5) Partnership (all agencies working together). Done well, this vision would dramatically reduce costs. It would do so by focusing on individuals in the context of their communities, use advanced genomics medicine to tailor health solutions for the individual, predict an individual's health pathway, work with patients so they could participate in their health decisions, and create health systems that work in partnership with each other. This challenges the generic, silo based, problem-solving hospital health model. While the vision was brilliant, there was concern that this was too far in the future. How could we move forward? Using open space technology, ten working groups were created. Group leaders pitched the project ideas they wished to embark on. Of those ten, there were no takers for three of them. Seven groups developed proposals for next steps, such as developing a home-hospital, articulating system wide measurements for prevention, creating a one-stop health centre, and so on. The director of health funded all seven projects. This created a quick planning cycle from vision to creation.

The future becomes more real - filled out - through the Causal Layered Analysis (CLA)<sup>xxvi</sup> process. In the CLA process, the current reality is deconstructed at four levels. The first is the litany, the current measurement of reality, the current discourse. The system or the causative variables that create the litany are then debated. From there the underlying worldview or worldviews are mapped. Finally, the underlying metaphor that supports the entire narrative is discovered. From here, the preferred future is developed through articulating the new metaphor, the new worldview, the new system (how reality - technology, society, regulations), and the new litany, the new preferred measurement system

## THE NARRATIVE

Once the vision starts to become real, we need to ensure that culture does not eat strategy for breakfast. In my experience here lies the power of story, particularly of metaphors that help support the new vision, personal or collective.

As developed elsewhere, we have argued that narrative is important.<sup>xxvii</sup>

"Indeed decisive in policymaking and strategy. It is based on metaphor. "The metaphor," Spanish philosopher, José Ortega y Gasset once wrote, "is perhaps one of man's most fruitful potentialities.... Its efficacy verges on magic."<sup>xxviii</sup> How one uses metaphor can define the results that are created.<sup>xxix</sup> As we know from many studies, if crime is described as a beast then there is greater likelihood of subjects arguing for jails and punishment. Presenting crime as a virus, then the intended policy result is more likely to be increased funding for education and poverty eradication.<sup>xxx</sup> In the USA, if one argues for welfare, then interest in the legislative bill drops dramatically.<sup>xxxi</sup> If one suggests charity for the poor, then it goes up. The welfare discourse creates the image of the person who does not work hard, indeed, games the system. The other of the innocent poor. "

I have described this process extensively elsewhere,<sup>xxxii</sup> particularly in work on CLA. With librarians, they understood that their old story of "the keepers of the collection" was now a used metaphor. They needed to tell a different story about who they were and could be. In one state, one group suggested, "Innovators of the new gardens." For them, this meant they were active, exploring, and defining the new spaces of learning, information, and knowledge.

A large energy utility sought to identify emerging risks and possibilities. However, when it came time to actually innovate, they were hesitant.. When we explored why, it became clear that their deep narrative held them back. " They saw themselves as a large ship, Queen Elizabeth, with very little need to change. They had a state monopoly. Even though rationally they knew they had to change, at the narrative level, they really did not believe they should or would. The Queen, the crown, does not change, others do. Given this reality, we articulated a metaphor that resonated." This was the Queen Elizabeth ship with patrol boats leaving it, to venture forth and bring back information about distant lands. The first patrol boat was a project on smart homes, how to ensure that each home had real time information on water-electricity and gas use. Another patrol went further, going beyond the horizon. It investigated homes as energy producers. A third patrol boat explored additive printing and energy? What would be the energy implications if each home or a group of homes, or a neighborhood, used three dimensional printers? These research projects were intended as action learning experiments giving the mother ship real time information on directional change. .<sup>xxxiii</sup>

The metaphor thus sets up the next phase of the strategy. It is decisive in setting direction, creating the new. The metaphor process is of use for groups and for individuals. With individuals, the CLA of the self process is used. We move from the litany of the problem, for example, "I feel anxious in my current role as a CEO", to the systemic causes, such as "the external world has changed dramatically." From systemic issues we shift to the worldview, that is, what are the origins of this challenge? Does this challenge feel like any other life challenge? In this case, this reminded the CEO of learning sports as a youth. In this real example, the CEO said his metaphor was "playing tennis, but being sure he the game was to be on hard, clay, or grass courts. The world had changed in ways

that his skill sets seemed out of touch. Once the old metaphor is discovered then a new one is created. In this case, it was the "the man who could play on multiple courts." From the metaphor the new strategy is created. For him, this meant learning new skills - foresight, and emotional intelligence. As he reflected on this process, he commented that in the long run, he wanted to go back to "playing the game - keeping the rally going." Eventually, he wanted to become a tennis coach - to give back what he had learned.

In this phase, the goal is to transform through depth, to create a new organizational or personal life story, to move from what does not work, to what works.

## THE MANTRA

However, the earlier process assumes that we know our future best, that our rational mind, the choosing self is wise. In the final stage, done exclusively with individuals, we move from the rational to the post-rational or the intuitive. Developed by the mystic, Dada Pranakrsnananda,<sup>xxxiv</sup> this process uses mantra -or the sound that transforms - to intuit the new metaphor.<sup>xxxv</sup> Mantra becomes therapeutic, argues Dada.<sup>xxxvi</sup>

One CEO, a cancer survivor, wished to leave her husband. She felt he had not been supportive during her health ordeal. Moreover, she now wished to travel the world while he preferred watching television all day. They had two different visions of the future. In the inner CLA process, she noted that not all her selves were aligned. Her "dutiful wife" self wanted to stay with him. Her explorer self wished to see the world, having seen how precious life was. Her current metaphor was "living life in a straight-jacket." In the metaphor process, she saw herself departing in a Ferrari. However, as she visualized that, she noted her dutiful self was upset. As she sat quietly to reflect, a new image emerged. This was the open-door carriage. She was still to leave, but the door to the carriage was wide open. She hoped he would join her. If not, she was set to go alone.

The mantra process integrates and creates a new story for the participant. The technical aspects of the process are quite simple. First, the CLA of the self process is undertaken. Then, using either the old or new metaphor, the participants listen to a sacred sound - a mantra contextual to his or her life experience. For those challenged by the notion of the sacred, then the sound of "breathe in, breathe out" can be used. Once metaphor and mantra are juxtaposed, a new image, a new metaphor can often emerge. This then becomes the pull of the future, the new way forward. We then seek to develop systemic suggestions to support the new story.

A leadership consultant used the process with these results. Her effort was to link her three passions: (1) leadership for all, the masses, (2) leadership for activists who wished to transform the world, not just optimize performance, and (3) leadership for women in science, technology, engineering and management. In the first, her metaphor was "behind the curtain". In the second, it was the "harbinger". In the third, it was the "mirror". These three strategies reflected her three selves as well. When she imagined these metaphors and connected them to mantra - the new metaphor that emerged was the "walking stick." For her, this was the "tool through which grace could flow." It was a tool she could use to support her three narrative strategies.

The mantra process helps imagine a new future, an authentic future. It adds a feeling dimension to the rational act of creating alternative and preferred futures. It moves the participant to see and act



differently in the present. The process can take time. One senior executive of a global beverage company was using foresight to help reduce the risks to their supply chain. In the mantra-metaphor process, he saw a different future for himself. Three years later, we had contact and he commented that he was now finally beginning to live the vision he had created for himself during the futures course.<sup>xxxvii</sup>

## CONCLUSION: BE THE FUTURE YOU WISH TO SEE

The futures journey has an external and internal process. It certainly has stages and states, phases and realizations. In my experience, a person or community experiencing injustice - it's not fair - would find visioning and metaphor interesting, but one of their core selves, core identities would ultimately not find it relevant. An external systemic shift to reduce unfairness is required or theories that suggest that is possible. Or it needs a narrowing of the grand vision to one's zone of control, otherwise visioning or scenarios would be fanciful, out-of-the-box thinking that leads nowhere.

Once there is some progress - the world is, or is perceived as fairer - then they often wish to reduce risk to the new system they have created. Once risk is mitigated, there is a desire to grow, to enhance possibilities. As Dada Pranakrsnananda has suggested, "the mind wants more, indeed, more is the metaphor of the mind."<sup>xxxviii</sup> With this comes the need to explore alternative futures, to test each future for robustness, to get out of the single solution box. From here, we can empower using the preferred future. Communities and individuals believe they can create a desired future. They can imagine a world they wish to live in. The vision imagined, however, without a process to create the new reality can lead to despair, cynicism. Our task as futurists is then to help link the vision to day-to-day. The vision can become meaningful real - meaningful and powerful - through action learning, backcasting and the CLA process of external and internal change, of metaphor and system. However, as individuals and groups begin the task of system change, it is critical that the narrative also shifts, otherwise culture will eat strategy for breakfast. The narrative explains, gives insights, opens up new worlds, makes the complicated, complex, and allows seeds of change to flourish. However, ultimately, the collective is but individuals. It is we that must change. We are the culture. Metaphor and mantra can play a crucial role in helping individuals become the future they wish to see.

These methods and tools, this step approach to using the future, is all designed with Toffler in the background. Done well, future shock is transformed to futures literacy and finally to futures empowerment.

---

<sup>i</sup> Professor Sohail Inayatullah is the UNESCO Chair in Futures Studies, USIM, Malaysia. He is an adjunct professor at the University of the Sunshine Coast, Professor at Tamkang University, Taiwan; and Associate, Melbourne school. sinayatullah@gmail.com. This article is based on a presentation June 26, 2019 at UNESCO. A longer version has appeared in the UNESCO Publication series edited by Riel Miller.

<sup>ii</sup> Sohail Inayatullah, "Power, wealth, prestige, and control: Review of Alvin's Toffler's The Adaptive Corporation," *Futures*, February 1988, 102-105.

<sup>iii</sup> Elise Boulding and Kenneth Boulding, *The Future: Images and Processes*, London, Sage, 1995.

<sup>iv</sup> Michel Foucault, *The Foucault Reader*, ed. Paul Rabinow, New York, Pantheon Books, 1984.

<sup>v</sup> P..R. Sarkar, *The Human Society*, Kolkata AMPS, 1984.

<sup>vi</sup> Graham Molitor, *The Power to Change the World: The Art of Forecasting*, Potomac, MD, Public Policy Forecasting, 2004.

<sup>vii</sup> Ivana Milojević, *Educational Futures: Dominant and Contesting Visions*, London, Routledge, 2005.

<sup>viii</sup> Rene' Rohrbeck and Menes Etingue Kum, Corporate foresight and its impact on firm performance: a longitudinal analysis, "Journal of Technological Forecasting and Social Change. Vol. 129, 2018, 105-116. For more recent quantitative work, see: Jeanne Hoffman. "Imagining 2060: A Cross-Cultural Comparison of University Students' Perspectives", *Journal of Futures Studies*, Vol. 23, No. 4, 2019, 63-78; Kuo-hua Chen, "Transforming Environmental Values for a Younger Generation in Taiwan: A Participatory Action Approach to Curriculum Design", *Journal of Futures Studies*, Vol. 23, No. 4, 2019, 79-96. Also the qualitative research by Patricia Kelly. See her book, *Towards Globo Sapiens: Transforming learners in higher education*, Rotterdam, Sense Publishers, 2008. Also see: Iris Pauw et al, "Students's Ability to Envision Scenarios of Urban Futures", *Journal of Futures Studies*, Vol. 23, No. 2, 2018, 45-65.

<sup>ix</sup> Sohail Inayatullah, "Rethinking Science: P.R. Sarkar's Reconstruction of Science and Society", IFDA. April/June 1991, 5-16.

<sup>x</sup> At Melbourne Business School, the University of Melbourne; Tamkang University, Taiwan; the University of the Sunshine Coast; the Metafuture.org network; the Asia-Pacific Futures Network, for example.

<sup>xi</sup> For more on macrohistory, see Johan Galtung and Sohail Inayatullah, *Macrohistory and Macrohistorians*, Westport, Ct. Praeger, 1997.

<sup>xii</sup> Pitirim Sorokin, *Social and Cultural Dynamics*, Boston, Porter Sargent, 1957.

<sup>xiii</sup> Fred Polak, *The Image of the future*, translated by Elise Boulding, London, Elsevier, 1973.

<sup>xiv</sup> Arnold Toynbee, *The Study of History*, London, Oxford University Press, 1972.

<sup>xv</sup> Graham Molitor, "Molitor Forecasting Model," *Journal of Futures Studies*, Vol. 8, No. 1, 61-72.

<sup>xvi</sup> <https://www.theguardian.com/lifeandstyle/2018/apr/01/vegans-are-coming-millennials-health-climate-change-animal-welfare>. Accessed 13 July 2019.

<sup>xvii</sup> For example, see: <https://www.beefcentral.com/news/what-does-the-future-hold-for-livestock-production-in-australia/>. Accessed 13 July 2019. Also see the latest for milk replacement: <https://thespoon.tech/perfect-day-launches-ice-cream-made-from-cow-free-milk-and-we-tried-it/>. Accessed 13 July 2019.

<sup>xviii</sup> Richard MacGeorge, "The Case of the Unemployed Power Station. <https://jfsdigital.org/2019/05/20/disrupted-infrastructure-the-case-of-the-unemployed-power-station/>. Accessed 10 July 2019.

<sup>xix</sup> For more on this, see: "From Knowledge Keeper to Knowledge Creators," in *Public Library Quarterly* (Vol. 34, No. 4, 2015), 1-8.

<sup>xx</sup> Colin Russo, "Mapping outcomes of four Queensland City Futures Initiatives", *Foresight*. Vol. 18 No. 6, 2016, pp. 561-585

<sup>xxi</sup> Clem Bezold, "The History and Future of Anticipatory Democracy and Foresight", *World Futures Review*. <https://doi.org/10.1177/1946756718810768>

<sup>xxii</sup> See Clement Bezold, "Anticipatory Democracy and Aspirational Futures," the *Journal of Futures Studies*, Vol. 15, No 2., 2010, 167-170.

<sup>xxiii</sup> In conversation with Ivana Milojević. May 10, 2019.

<sup>xxiv</sup> Harrison Owen, *Open-Space Technology*. Oakland, Berret Koehler, 2008.

<sup>xxv</sup> <https://tech.cornell.edu/news/the-4-ps-of-health-tech/>. Accessed 8 July 2019.

<sup>xxvi</sup> Sohail Inayatullah and Ivana Milojević, *CLA 2.0: Transformative research in Theory and Practice*, Tamsui, Tamkang University, 2015.

<sup>xxvii</sup> Ivana Milojević and Sohail Inayatullah, *Narrative Foresight*, In process. 2020.

---

<sup>xxviii</sup> <http://www.quotehd.com/quotes/jose-ortega-y-gasset-philosopher-quote-the-metaphor-is-perhaps-one-of-mans-most>. Accessed 10 November 2018.

<sup>xxix</sup> P. H. Thibodeau, L. Boroditsky, "Metaphors We Think With: The Role of Metaphor in Reasoning", PLoS One, Vol. 6, No. 2, e16782 DOI: 10.1371/journal.pone.0016782. Accessed 10 November 2018.

<sup>xxx</sup> See, for example, George L. Kelling, "Crime and metaphor: toward a new concept of policing", City Journal Autumn, 1991, <http://www.city-journal.org/article01.php?aid=1577>. Accessed 10 November 2018.

<sup>xxxi</sup> Deborah Stone, *Policy Paradox*, W.W. New York, Norton and Company, 2012, 25. Also see, Ann Cammett, "Deadbeat Dads and Welfare Queens: How Metaphor Shapes Poverty Law", 34B.C.J.L. & Soc. Just. 233, 2014, <https://lawdigitalcommons.bc.edu/jlsj/vol34/iss2/3>

<sup>xxxii</sup> Ivana Milojević and Sohail Inayatullah, "Narrative Foresight, Futures, Vol. 73, 2015, 151–162.

<sup>xxxiii</sup> Sohail Inayatullah: "Foresight in challenging environments," Journal of Futures Studies, Vol. 22, No. 4, 2018, 18.

<sup>xxxiv</sup> <http://dadaprana.com/heart-circle.html>. Accessed 8 July 2019.

<sup>xxxv</sup> For more on the epistemological framework of this argument, see Sohail Inayatullah, *Understanding Sarkar: The Indian Episteme, Macrohistory and Transformative Knowledge*, Leiden, Brill, 2002.

<sup>xxxvi</sup> Dada Pranakrsnananda, "Therapeutic meditation", Privates notes. Available from [sinayatullah@gmail.com](mailto:sinayatullah@gmail.com).

<sup>xxxvii</sup> While vision to reality is a powerful indicator of success, Riel Miller goes further. He comments: "The vindication of a planning use of the future is one strong rationale. Equally important is the fact that they have imagined different futures. This alters what they see and do, and how they appreciate the future present when it arrives." Comments on an earlier draft of this paper. 18 July 2019.

<sup>xxxviii</sup> In personal conversation, January 2005.