

The Fifth Element

Carlos Alvarez Pereira outlines a new approach to finally learning what we knew 50 years ago.

GRIDLOCKED AT HIGH SPEED

How do we open the space of possibilities for humanity to decide on its course? This was the main question addressed by the 1972 *The Limits to Growth* report to the Club of Rome. For the first time, a team of researchers led by Donella and Dennis Meadows created a computerised simulation of multiple scenarios for the future based on the global evolution of population, natural resources, food production, industrial output and pollution. Most though not all the scenarios showed a high probability of a collapse of human civilisations during the first half of the 21st century.

This result shocked the world and while millions of copies of the book were sold, the underlying message was not heard. The existence of scenarios in which human development would be redefined to fit within the boundaries of a finite planet was ignored. Even when the concept of sustainable development was coined in 1987, it did not depart from the logic of tying human development to the unlimited growth in consumption of energy and material resources. The negative effects of development are to this day considered by many as collateral issues to be addressed by more development of the same kind.

Fifty years later, are we navigating an appropriate course? United Nations (UN) Secretary General, António Guterres, said in 2020 that: 'Humanity is waging war on nature. This is suicidal.' In 2022, we seem to be in worse trouble than anyone related to *The Limits to Growth* would have liked to see. The 2008 financial crisis, the Covid-19 pandemic since 2020 and the many ongoing conflicts including the 2022 war in Ukraine are brutal signals that everyone understands. These crises emerge from a wider background of unfolding existential threats. Inequity and fractures within and between nations

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do nothing but grow; climate warming unfolds on a huge scale; the destruction of ecosystems and species is ongoing; and most of the uses of finance and technology increase the segregation and polarisation of people, hence accelerating the possibility of dystopian futures with deeper divisions between winners and losers.

At the same time, women are emancipating themselves everywhere and the whole of humanity is, slowly but surely, becoming more literate. In many places people are overcoming the helplessness derived from colonial and neo-colonial rules and mindsets. Young generations are more aware of the failures of economic and political systems that are restricting their options for the future. Achievements in science and technology also increase our knowledge and capacity to act. Change is all around, and it comes at high speed and in unexpected ways.

All in all, it seems that humanity is thriving and committing suicide at the same time. We could be living in the brightest moment of humanity and simultaneously be closest to the abyss of our self-induced extinction.

How can we deal with this fundamental contradiction? We seem to be stuck, gridlocked in a high-speed turmoil leading to nowhere. How can we overcome that?

A DIFFERENT APPROACH

The Club of Rome was founded in 1968 by Aurelio Peccei as a space for open debate among personalities from business, science, politics and civil society equally committed to inquiring about the future of humanity with a systemic, long-term, global lens. At the time no other organisation dared ask some essential questions,

among them one which is critical: can we achieve equitable wellbeing for all within a healthy planet? That was the key motivation for commissioning *The Limits to Growth* report, and the Club of Rome took note of the ambiguity of its success – widely known, it did not change our course.

This led Peccei to examine the existence of a 'human gap': the difference between our capacity to act and our ability to understand the consequences of our actions. At the same time Gregory Bateson was saying that: 'The major problems in the world are the result of the difference between how nature works and the way people think.' Bridging the Human Gap was the subtitle and purpose of *No Limits to Learning*, another report to the Club of Rome. In its foreword, Peccei formulated our challenge as a riddle: 'What we all need at this point in human evolution is to learn what it takes to learn what we should learn – and learn it.' In a later work he even claimed the need of a human revolution to address the human gap.⁵

One strategy for dealing with the cracks in today's society is to apply the analyses we already have to redirect public policies and human behaviours towards a more intentional goal. The path followed by the UN's sustainable development goals agenda pertains to that kind of strategic top-down perspective. While comprehensive in its formulation, it is also reductionistic in its way of splitting a whole into many goals and a myriad indicators yet barely addressing the interdependencies between them. It can easily lead to piecemeal solutions, which do not necessarily compose a systemic response to the challenges we face.

A different approach considers that the issues we are dealing with are linked to the limitations of our ways of thinking and understanding our place in the world. Today's existential challenges are signs of a growing divorce between human logic and the dynamic balance and richness of how Life (with a capital L) works. We humans do not have an objective access to reality; instead, we give meaning to our perceptions through frameworks of interpretation that are always present and most of the time subconsciously. The dominant frameworks of Modernity - which originated in the scientific, industrial and geopolitical revolutions of the 17th-19th centuries - ignore most of what we already know about how Life works. It is more than time to learn it. And learning is not the conscious understanding of something; it is the change in our patterns of behaviour that are necessary to deal with the consequences of what we know.

Living systems (individuals, organisations, ecosystems) do not change their course under the injunction of purposeful and straightforward planning. Or to be more precise, intentional change in a certain direction always brings unexpected responses and small and large feedback loops. Living systems evolve all the time and occasionally enter critical zones from which they might emerge having learnt new patterns that replace older ones. But *might* is not the same as *will*. At those critical points, the future is truly unknown. Jorge Luis Borges claimed that: 'Time forks perpetually towards innumerable futures.' Erich Jantsch (co-founder of the Club of Rome) and Ilya Prigogine (member of the Club in the 1970s and Nobel laureate)

would have agreed with Borges's insight, so well aligned with their own investigations on the self-organising nature of the universe.⁶

Criticality might lead to emergence, but the process cannot be planned beforehand, and natural creativity plays the leading role in giving birth to new harmonies within the larger web of Life. This is where the expansion of the space of possibilities comes in. The Limits to Growth disrupted the conviction that conventional development, as a programme of modernisation under western hegemony, was necessary and legitimate for the sake of humanity. But the book was also an optimistic bet on collective intelligence's ability to learn from the exploration of possible futures. Nowadays, the situation is even more critical. Humanity is at a threshold, fluctuating dangerously between self-destruction and new pathways of wellbeing in the biosphere. Like little Alice, we do not know what will happen when we go through the looking glass. And the unknown cannot be taught; it requires exploration.

THE FIFTH ELEMENT

In the face of the magnitude, scale and extreme complexity of the challenges we face, we are all learners in need of better ways to address the questions that will unveil our blind spots and co-create new responses in endless, iterative processes. This requires new attitudes, skills and knowledge to take leaps in sense-making and practise collaborative design towards human wellbeing within a healthy biosphere. Our relationships with



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▲ Figure 1. The cycle of T5E transformative exploration. (© Carlos Alvarez Pereira)

others, with nature and with time are at stake here. The path forward does not consist of the implementation of existing piecemeal solutions and leaving unchanged the fundamentals of our culture, so many of them built on separation, competition and exploitation. We need to understand what we already know and explore what we do not. And in order to do that, we need to bet on the humanity and capacity of everybody to create the conditions for a collective emergence from emergency.

In the process, all kinds of capacities and sources of knowledge – individual and collective, traditional and modern, artistic and scientific, verbal and embodied – are required to 'dance with systems' and face the challenges in contextual settings, often in communities where belonging can be revitalised. For all those sources to be useful, they need to be brought together in a manner transcending the separation and hierarchy of disciplines. This also means that we need to be engaged as whole humans, not only as experts and stakeholders. In the end it means that the transformations towards equitable wellbeing within a healthy biosphere would be the

outcome of a challenging (and exciting) journey into uncharted territories to remember old wisdom and learn new ways of becoming human.⁸

This is why the Emerging New Civilisation(s) Initiative (ENCI) of the Club of Rome is launching the concept of The Fifth Element (T5E). It is an open invitation to all individuals and organisations to share the excitement of such a learning adventure, for our own sake and for that of generations to come. The name is a tribute to ancient traditions in which the four elements of matter - air, water, earth and fire - are combined to create life, but only together with the quintessential fifth element, the life force, 'aether', 'spirit' or 'prana', itself very close to the Chinese concept of Qi. It is a call to weave together the central value of interdependency, so present in Ubuntu, Tao and many other cultures, with an abundance of traditional ecological knowledge being rediscovered and with the best of contemporary science and culture. Ecology, epistemology, complexity thinking, evolutionary biology, cybernetics, and others already provide decisive contributions for us to explore.

BOX 1. THE FIFTH ELEMENT INITIATIVE

Life (the fifth element) inspires both a better understanding of today's complex challenges and the competences people need to act on them. The T5E initiative intends to enable people of all ages and under any conditions to learn and act by themselves, in their own contexts. It does so by facilitating the engagement of learners, wherever they are, in collaborative inquiries and mutual processes relevant to their contexts, and by co-creating the most supportive methods and tools. Through this approach, T5E aspires to accelerate the change of perceptions and cultural transformations required to meet the challenges described in the UN's Agenda 2030. The ultimate goal is to promote the right conditions for the emergence of new balances of equitable human wellbeing within a healthy biosphere through an infinite richness of pathways specific to local contexts.

T5E bets on everyone's capacity to learn in the exploratory and pattern-changing sense mentioned above. People anywhere can experience the knowledge relevant to the challenges they face in their everyday lives. Most importantly, if allowed to do so, they can collectively build new responses to those challenges and start developing new pathways to a sustainable way of living in their own contexts. New questions can lead to new responses, in turn leading to fresh questions in an endless process of learning more attuned to how Life works.

THE DYNAMICS OF TRANSFORMATIVE EXPLORATION

The logic followed by T5E to create a transformative process is represented here (see **Figure 1**). It starts by changing the questions addressed by learning processes and the ways in which they are addressed to complete a whole cycle of self-reinforcing transformations. This ultimately leads to a greater capacity for people to reflect on existential challenges like climate change and, in particular, to act on them in their own contexts.

This representation emphasises the cyclical nature of the dynamics found in all living systems. The different elements in each cycle should not be interpreted as steps in a straight path forward, but rather as elements whose presence is required to open the space of possibilities. Asking new questions is often the starting point and a powerful catalyst to engage in new levels of learning. For instance, energy transition can be considered solely from a technical and economic point of view, without questioning why we need to consume energy and, ultimately, what drives human health and wellbeing. Both ancient knowledge and modern science respond that the quality of our relationships to other humans and to nature is critical.⁹ This enables completely different ways of addressing the topic of energy transition, by which a dramatic reduction in consumption could be made compatible with high levels of wellbeing.

The T5E approach is based on leading-edge research on learning competences and initiatives of ongoing

reflection and practice, especially in the domain of innovative pedagogies, and is designed to face the challenges of sustainability. It does not pretend to replace what others already do, but instead give them visibility and support and hopefully catalyse the emergence of a human revolution, one in which we make peace with the Earth, and with ourselves.

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https://www.clubofrome.org/impact-hubs/emergingnew-civilization

FURTHER READING

To find out more about what we have learnt 50 years on from *The Limits to Growth* and what's next, please see:

Bardi, U. and Alvarez Pereira, C. (Eds.) (2022) *Limits and Beyond: 50 years on from The Limits to Growth, what did we learn and what's next?* A Report to the Club of Rome. Exapt Press.

REFERENCES

- Meadows, D.H., Meadows, D., Randers, J. and Behrens, W.W. III. (1972) The Limits to Growth. https://www.donellameadows. org/wp-content/userfiles/Limits-to-Growth-digital-scan-version.pdf (Accessed: 28 April 2022).
- . Guterres, A. (2020) Secretary-General's address at Columbia University: 'The state of the planet'. https://www.un.org/ sg/en/content/sg/speeches/2020-12-02/address-columbiauniversity-the-state-of-the-planet (Accessed: 28 April 2022).
- Bateson, N. (2011) An Ecology of Mind. A Daughter's Portrait of Gregory Bateson. www.anecologyofmind.com (Accessed: 19 May 2022).
- Botkin, J.W., Elmandjra, M. and Malitza, M. (1979) No Limits to Learning. Bridging the Human Gap: The Report to the Club of Rome. Oxford: Pergamon International Library.
- 5. Peccei, A. and Ikeda, D. (2008) Before It Is Too Late. A Dialogue (Echoes and Reflections). London: I.B. Tauris.
- Jantsch, E. (1980) The Self-Organizing Universe. Scientific and Human Implications of the Emerging Paradigm of Evolution. Oxford: Pergamon Press.
- Meadows, D.H. (2002) Dancing with systems. https:// thesystemsthinker.com/dancing-with-systems (Accessed: 17 May 2022).
- Alvarez Pereira, C. (2021) Learning New Ways of Becoming Human. http://www.clubofrome.org/wp-content/ uploads/2021/12/COR-ENCI_Learning_new-ways.pdf (Accessed: 20 April 2022).
- Mineo, L. (2017) Good genes are nice, but joy is better. Harvard Gazette. https://news.harvard.edu/gazette/story/2017/04/ over-nearly-80-years-harvard-study-has-been-showing-how-tolive-a-healthy-and-happy-life (Accessed: 20 April 2022).

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