DOI:10.6531/JFS.2016.20(3).E145

Concluding Comments: Developing a Strategy for Accelerating the Emergence of a Sustainable Global System

Graeme Taylor
Griffith University
Australia

Unacceptable global risks

Humanity is now facing multiple existential problems including increasing shortages of fresh water and arable land, climate change, the loss of biodiversity, nuclear war and pandemics (e.g. WEF, 2016). Without a major course correction there is little evidence that future generations will inherit a safe and sustainable planet.

For example, the International Energy Agency warns that not one field of clean energy technology is being developed quickly enough to meet the targets necessary to avert dangerous climate change (IEA, 2015). But there is hope: the IEA have consistently underestimated the speed at which renewable energies are being developed and deployed (SustainableBusiness, 2015).

In fact the world is getting both better and worse (Taylor, 2014). Most people are becoming healthier, wealthier and better educated at the same time as the environment is rapidly degrading. This means that many future scenarios are possible, ranging from catastrophic environmental collapse to the rapid emergence of a sustainable world order.

Nevertheless the number and scale of global risks are unacceptable. All of us have a responsibility to ensure that our children and their children can have safe, prosperous lives. To do this we must find ways to prevent destructive developments and accelerate the transformation to an environmentally and socially viable global system.

Raising the global game

But how can we manage risks and accelerate constructive change in a world where little consensus exists on the changes that need to be made, almost no plans exist for making these changes, and there is no global authority with the power to make them?

Humanity has the ability to mitigate major global problems. The most critical risks are well known and credible solutions have been proposed (Costanza et al., 2013). Decisive interventions could prevent catastrophes and accelerate the transformation to a sustainable world system (Gilding, 2012). However, at this time the political will is lacking. A massive international effort is needed, but it will not be possible to mobilize this without clear goals (what will be required to ensure safe, sustainable outcomes) and a viable strategy for achieving these goals.

As the Brazilian philosopher Roberto Unger observed: 'At every level the greatest obstacle to transforming the world is that we lack the clarity and the imagination that it could be different.' (qtd. in Anderson, 2014)

Where we need to go

The starting point is to recognize that in any situation there are only a limited range of viable solutions: a plane will only fly if it is configured to ensure that there is more lift than weight and thrust than drag. Similarly, the possible configurations of viable global systems are limited by the need to operate within sustainable biophysical and societal boundaries—humanity's safe operating space (Taylor, 2015).

Proactive safety-critical and mission assurance methodologies are used to design, build, and operate aircraft and other complex systems within wide safety margins that minimise the risk of catastrophic failure (e.g. Fowler, 2009). These methods can be modified and applied to first understanding the safe operating conditions of global socio-ecological systems and then backcasting to design and implement sustainable solutions.

In general, to become sustainable the current global system will have to be restructured to:

- Regulate and restrict resource use to ensure that the economy operates within sustainable environmental and social parameters.
- Ensure that all humans, species and ecosystems can access essential resources (those needed to maintain health and wholeness).
- Create an ethical, caring culture that recognizes the interdependence of individuals, society and nature; that focuses on meeting real needs rather than false greeds; that values quality over quantity, and health and happiness over wealth and status.

How we can get there

Clarifying the major systemic problems and solutions is only the first step. We then have to determine how we can implement the necessary changes. Here systems theory can help. The most effective way to tip developments in constructive directions will be to create a viable alternative to the status quo (an alternative system attractor). This will require:

Vision: positive, ethical narratives and visions for a peaceful, sustainable world which are both necessary and possible.
Strategy: practical strategies for global transformation.
Leadership: support for these visions and strategies from a coalition of credible leaders representing a wide spectrum of cultures, institutions, and political and religious views.
Empowerment: transformational media, social and technological tools designed to inform, catalyze and empower constructive change.
Organization: aligning the forces supporting sustainable outcomes, and facilitating the self-organization of an aligned but diverse global alliance.

It will be an enormous challenge to create a sustainable world, but one we must and can accomplish. Creating a sustainable culture and economy will require paradigm shifts in our views, values, behaviors and institutions. Although the process will be difficult, it is unavoidable and necessary. Every person, business and institution will be changed by the powerful forces transforming nature and society, and everyone will have to decide what role they will play in this critical stage in the evolution of our species.

What will the world look like in 2050? No-one knows for sure. The future is not fated—it is our choice.

Correspondence

Graeme Taylor
Environmental Futures Research Institute
Griffith University
23/12 Bryce Street, St Lucia, Qld. 4067, Australia
E-mail: graeme.taylor@griffith.edu.au

References

Anderson, K. (2014, December). Climate change — "The future is almost beyond what we can imagine". *Citizen Action Monitor*. Retrieved on February 15, 2016, from https://citizenactionmonitor.wordpress.com/2014/12/12/climate-change-the-future-is-almost-beyond-what-we-can-imagine/

Costanza, R., Alperovitz, G., Daly, H., Farley, J., Franco, C., Jackson, T., Kubiszewski, I., Schor, J., & Victor, P. (2013). Building a Sustainable and Desirable Economy-in-Society-in-Nature. Australia: ANU E Press.

Fowler, K. (2009). *Mission-Critical and Safety-Critical Systems Handbook*. Oxford: Newnes.

Gilding, P. (2012). *The Great Disruption: Why the Climate Crisis Will Bring On the End of Shopping and the Birth of a New World*. Sydney, Australia: Bloomsbury.

IEA. (2015). Tracking Clean Energy Process 2015. Paris: International Energy Agency. Retrieved on January 20, 2016, from http://www.iea.org/publications/freepublications/publication/Tracking_Clean_Energy_Progress_2015.pdf

Sustainable Business. (2015, November). Expect a Radical Shift Toward Renewables, Says IEA. *SustainableBusiness.com*. Retrieved on February 16, 2016, from http://www.sustainablebusiness.com/index.cfm/go/news.display/id/26469

Taylor, G. (2014). The Next 20 Years: A Time of Transformation. *Journal of Futures Studies*, *19*(2), 115-126.

Taylor, G. (2015). Viability: A priority criterion for the mitigation of climate change and other complex socio-ecological issues. *Journal of Futures Studies*, *19*(1), 77-96.

WEF. (2016). *The Global Risks Report 2016*. Geneva, Switzerland: World Economic Forum.