



## Remarks on Visions of Sustainable Development: Theory and Action\*

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### Abstract

*Global agreements are getting harder to achieve. The current environmental agreements require a variable geometry that is still to be worked out and tested. A better role for the UN would be to demonstrate by example best sustainability practices, but that requires a lot of organizational re-engineering. Two major driving forces against sustainability must be addressed: population growth and changing consumer preferences. Major economic systems changes may be the right solution in theory but even if agreed cannot take place in the time frame needed to slow major climate change to barely acceptable levels. Plan B alternatives need to be developed, the only one now on offer being very risky is geoengineering the climate. So many social science issues confront achieving sustainability that a parallel to the IPCC to work through a range of social sciences/political issues is required. Could the World Academy of Art and Science take a lead in this?*

The crisis of sustainability, tied so closely to the climate changes now underway, is the most complex and far reaching existential crisis in human history. There are many aspects of sustainability, but almost all of them require a stable climate.

In facing our complex sustainability challenges, a good starting point is the proposal of Martin Landau of Berkeley University who posited in the 1960s that the more important the challenge, the more one needs parallel creative duplication (what he termed “redundancy”) to solve it. He cited the most severe security crisis the US had faced in the 1950s.

In the 1950s at the height of the Cold War, once Russia had the hydrogen bomb, the US felt vulnerable to nuclear annihilation. It designed a Triad of defense measures: Minutemen Missiles placed in hardened silos beneath the earth, B-52 bombers that could carry nuclear weapons, and submarines armed with nuclear missiles. The first two means of delivering nuclear missiles existed but were vulnerable to preemptive attack. The third means—missiles fired from submarines—was thought to be invulnerable to preemptive attack, but it was not yet fully designed. Indeed, it was engineered except for finding a reliable guidance system, since a floating take off could head a missile off to Paris as often as it could send one to Moscow. So finding a reliable navigational system for the missiles became the most critical need for the entire US defense strategy.

The Department of Defense identified 11 engineering laboratories it felt had the capability to design such a system, and it gave generous design contracts to all 11 of them to do the same

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task. The first institution to find a reliable solution would win a handsome bonus...and all the other institutions would then receive enough compensation to make it worth their while.

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In so many ways this illustration seems like a reflection of a quaint and simpler time. For now we have a far more complex, multi-faceted crisis. Yet many now propose a single solution, be it in socio-economic systems design, energy technology or legislative initiatives. The fact is that we need lots of simultaneous efforts—aimed at the long term, the medium term and the short term.

The World Academy of Art and Science is in the midst of an ambitious initiative to create a comprehensive vision of a much more peaceful and attractive society that would simultaneously solve many problems such as un- and underemployment, gross inequality, and environmental degradation. The Academy calls this a need for a paradigm shift. Surely, it is necessary to have a long term vision for human civilization. But we really know very little about how to bring about mass social and economic change on a global basis.

I do think we have to be careful in figuring out what are the relevant past paradigm shifts. It is often suggested that technologically driven systems changes are relevant, i.e., the shift to settled agriculture, the shift to a manufacturing based industrial revolution, and the ongoing shifts of an IT revolution.

It is also suggested that there are long-wave shifts in economic cycles that have key lessons. I am skeptical that either technology or purely economic paradigm shifts are relevant to the quest for sustainability. The paradigm shifts that seem most relevant for the shift towards sustainability being envisioned by the Academy are ones directed at socio-economic systems change.

In the last quarter of a millennium we have had three major experiences with mega systems changes involving political and economic behaviors. The first was the rise of democracies which went through both conceptual and experiential development, the latter often involving wars of liberation. The second was the rise (and fall) of communism as an organizing force. Needless to say the tolls exacted by Stalin and Mao are intolerable as a model for any future paradigm shift.

The third experience was not aimed at such major transformations and in fact came about incrementally both in concept and practice. But it has had enormous impact in the space of less than 60 years, and that is the creation and implementation of global norms for economic and social well-being: making not only a declaration but an expectation that all people will

have a decent standard of living involving economic gains and at least basic education and health, if not much more. This third change was truly revolutionary and may have lessons for the Academy in its current work.

Many things can happen to prevent any vision from being adopted. It is not a sure thing that the world will unify towards peaceful solutions to the climate crisis. It might be more likely that it will evolve in ever more disunited ways and that major intensifications of the ongoing rise of environmental refuges and deterioration of the world's water supplies could unleash a rash of violence and greed that would head the world in a different direction. So, any one blueprint for economic/social paradigm shift is bound to fail if it lacks open strategies, redundancies, buffers, and reactive capacities to deal with negative consequences and developments. And even with these safeguards, no one can predict the course of an attempted paradigm shift and this is extremely important as time is not in our favor. These are the decades in which climate sustainability will either succeed or fail.

Nonetheless, I believe that long term visions and strategies, difficult as they are, are both needed and must be supported by a whole range of short- and medium-term initiatives that gently push the world to better collective behavior. So the rest of this paper will focus on the short-term actions that might make long-term visions more possible and it will focus on the UN because I know it best, and because it can and should be a model behavior for various levels of governance.

First, I want to mention a fundamental current governance development regarding sustainability, that is the change in the nature of international agreements on climate and sustainability.

In the past, global agreements meant that all countries undertake the same performance in order to be in compliance with "universal" standards of behavior. No longer.

The US-China agreement on climate change announced last Fall was a significant departure from the norm. Indeed, it was two side-by-side agreements. The Chinese said they would undertake a list of improvements to attain sustainability at a 2 degree rise of temperature. The US said they would undertake a different list of such improvements. There was no bridging agreement, and indeed there was no joint announcement. Reading the two agreements one must conclude that it is beyond comparing apples and oranges, but it is more like apples and zucchini. The only thing that the two national statements have in common is that neither will achieve national climate stability at 2 degrees additional average temperature.

In the face of this "agreement" the United Nations has called for the remaining 191 countries to submit their national commitments. Each is bound to differ from the others. So we can look forward to some bridging language covering apples, zucchini, bricks, wine and so forth.

Indeed, there is a major amount of analytical work to be done to develop what I call "variable geometry" to try to find consistent ways of telling whether national plans add up to significant actions and whether the world will in fact progress towards achieving agreed global climate change limits. This is uncharted territory and reminds me that the Millennium Development Goals, a much simpler set of goals, were adopted and then the (in)famous structural adjustment economist, Jeffrey Sachs, was made an advisor to the UN Secretary General so that he could orchestrate an effort to cast the goals as intellectually coherent.

The notion of variable geometry is also one that is apt to be applied in practice to the successor UN economic and social goals, the Sustainable Development Goals, which involve so many targets and indicators that already countries are choosing which ones to take seriously and which ones not to. How will we be able to tell, for example, that those countries that choose the odd numbered goals are moving their societies more progressively than those who choose the other goals?

*“Global governance authorities are few and all are flawed.”*

Whatever climate and development goals are adopted in 2015 it is worth being aware that, alas, countries cheat in reporting their accomplishments. So, if we have a new system of variable geometry to measure goal performance, untested ways of measuring overall accomplishment, and a traditional inclination to cheat, how will sustainability be governed?

Some call for a new global authority on climate and sustainability. This is highly unlikely in the foreseeable future. We can keep blueprints for this (drawn up by France and supported by 47 countries) on reserve until there is some major climate emergency that might drive the global community into bolder action. Even then, global governance authorities are few and all are flawed. (That is no reason not to have them. But we need to be aware they are not panaceas.)

It is better to understand how global governance works in practice. We do not have top down authorities. Even Ban Ki-moon is far from an empowered central executive. There is little hard power in the UN.

But the UN has outstanding soft powers and if these were turned to serve sustainability, they would both make welcome differences and would model for national and sub-national governance how they should govern for sustainability.

Let me illustrate the doable in the greater UN family.

1. Symbolism is important. What if the UN said that Sustainability would be added to Peace, Development and Human Rights as one of the UN's top priorities? (In a perfect world “sustainability” would replace “development,” but we don't have that world.)

And what if the World Bank would group all its climate and sustainability work under an Executive Vice President for Sustainability, parallel to the only other executive vice president, the one, in essence, for Profit that embraces the International Finance Corporation? Thus the Bank would show that it sees Sustainability to be at least as important as Profit.

2. What if UNDP became totally devoted to governance for sustainability in a real sense since they already claim to do this, but they really don't know the difference between general good governance (transparency, accountability, etc.) and governance for sustainability?
3. What if UNEP, now forlornly dwelling in suburban Nairobi and about as isolated as most ministers of environment are within their governments, deployed its staff to work with each major UN program around the world to bend those programs to serve sustainability?
4. What if at each regional and global ministerial meeting convened by the United Nations, a standing agenda item would be on sustainability to include best cases, peer reviews, indexing updates and new proposals?

5. What if this approach were also instituted at the annual heads of state sessions of the UN General Assembly?

These are all organizational doables.

There are three other issues that require tremendous ingenuity. They are currently neglected and need the strengths of mass marketing, political leadership, psychology and public policy... admittedly strange bedfellows.

The first is population growth. The cold fact is that the global community was far more active on and receptive towards population programs when we were five billion people than we are now when we are over seven billion, moving rapidly to what seems likely to be an unsustainable level of 12.5 billion. Population planning has become conflated with Western imperial plots. It is regularly attacked and has no effective response. Simply put, there will be no sustainability without solid population planning.

Second is the need to effectively govern the global commons. Areas beyond national borders are subject to very substantial abuse without effective policing of ocean and air standards and agreements. This needs to be remedied.

And third is the massive challenge of changing consumer preferences so people want to live a more sustainable lifestyle.

If we attended to all the doable governance actions and the above three neglected issues, the world would still require a failsafe. The climate is such a complex system that no one can predict its tipping points and interactions with full reliability. Changing social and economic norms and behaviors is also very complex and uncertain. With so much uncertainty, the world should be prepared with a failsafe. And, unfortunately, the only failsafe that seems possible is to geoengineer the world's climate to a lower temperature regime. No matter how much we fear geoengineering (and there is plenty to fear), we still must be sure it is there if we need it.

My final point is so unrealistic that you may think I have come from another planet. My proposal is that the humanities—the social sciences—cooperate on solutions.

I know that the most dangerous places on earth are faculty meetings in the social sciences. But to my mind, the greatest sustainability issues require first class social science, behavioral science, public policy, marketing and more.

The hard sciences have had a longer history of interdisciplinary cooperation, guided as they are by stricter adherence to the scientific method. So it was wonderful but not completely unexpected for the Intergovernmental Panel on Climate Change (IPCC) to be created to combine hard science knowledge on great climate issues.

Do you think it possible to organize the leading lights of the soft sciences in a parallel group and if so, how could this best be done? Currently, the questions economists, psychologists and public administration experts (among others) need to answer are, to me, exceptionally important. Are we brave enough to cross a number of long standing disciplinary lines to answer these challenges with imagination and compelling reasoning? I certainly hope so.

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