COVID-19 and Climate Change: A Foretaste of Public Service in the 21st Century

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The challenges we now face are emerging from our complex interrelationships with the biological and physical world. To

meet them, societies will need to undertake collective efforts based on a broader common understanding and a shared sense of responsibility.

You have been leading the New Synthesis (NS) Initiative for the past 10 years. What is NS, and how might it be relevant to addressing issues like climate change and the COVID-19 pandemic?

The New Synthesis Initiative (NS) argues that the classic model of public administration which took shape during the industrial age has served us well, but is insufficient to invent solutions for the multi-dimensional, multi-faceted, dynamic and complex challenges of the 21st century. NS brings together government, society, and people in a co-evolving system of governance that nurtures resilience and adaptive capacities. It integrates past practices, lessons learned from recent public sector reforms and the reality of practice in a post-industrial era. NS recognises that there is not one right way nor even one option, but a broad range of possible choices to invent solutions to the problems that stem from living in society. In short, at the heart of NS is the idea that things are not separate, but interrelated—that the economic, social, civil, and environmental spheres of life are interconnected and interdependent.

To invent solutions to the complex problems governments face today, we need to see 'wholes' instead of approaching issues in terms of component parts or institutional silos. We need to engage with issues from a broader and expanding mental map. We need to bring together multiple elements interacting dynamically to generate the desired public outcomes.

Governments must be able to govern (compliance), the state apparatus must be able to get things done (performance), government must be able to invent solutions to problems of living in a society that cannot be solved without some form of public intervention (emergence) and we must build the capacity of society to absorb shocks and disturbances, prosper in unforeseen circumstances and co-evolve with the world we live in (resilience). Taken together, these functions map out a dynamic system of governance where an infinite number of permutations are possible. The challenge for government is to ensure that the overall balance of public, private, and civic actions serves the overall interest of society; this is the stewardship role of government.

Complex issues like climate change and pandemics require holistic and dynamic thinking. NS blends systems theory, adaptive system thinking and complexity theory to invent solutions to complex issues. It argues that the "way we think has a direct impact on the way we frame issues, the solutions that will be found and the results that will be achieved".[1] NS helps public practitioners to re-think, re-frame and invent solutions fit for the time.

Why is it so difficult to make progress on climate change?

Climate change remains one of the greatest challenges of our time. Despite scientific evidence, years of international negotiations and growing public concern, progress on climate change remains elusive. There are a few reasons why it has been difficult to make progress on climate change.

Human thinking is shaped by factors evolving on a human scale and unfolding along human timelines. But climate changes evolve on a totally different scale. The average lifetime of greenhouse gases in the atmosphere is in the hundreds of years. The half-life of carbon dioxide (CO_2) is 40 years while other emissions' half-life run up to 200 years. Climate changes require thinking along short, mid, long, extremely long, and even planetary timescales.

Thinking along short timelines has several consequences. The first is to give more weight to short-term costs over longer-term impacts. The second is unwarranted optimism about the human capacity to turn things around when it is needed. Humans tend to assume that when a problem reaches critical proportions, there will be time to take corrective actions. This is a dangerous assumption in the case of complex systems in general, and even more so in the case of events like a pandemic or climate changes.

The lack of appreciation of the long timelines of remediation measures lead to delayed actions. The lack of understanding of complex systems leads to underestimating the urgency of the climate crisis. This hinders progress.

Furthermore, progress on climate change has been difficult due to linear thinking. For instance, people and decision makers alike often find it difficult to understand the difference between the concepts of stocks and flow. Over the years, international negotiations on climate change have focused on reducing the rate of growth of CO_2 emissions (flow), but we forget that what matters is the stock of CO_2 in the atmosphere. The Kyoto Protocol adopted in 1997 aimed to cut CO_2 emissions around 5% by 2012 relative to 1990 levels. The Paris Agreement, adopted in 2015, aimed to keep the increase in global average temperature below 2 °C above pre-industrial levels; and to pursue efforts to limit the increase to 1.5 °C. These Agreements are important. However, reducing the rate of growth means that *the stock* of CO_2 in the atmosphere continues to increase and that *the planet continues to heat up*.

This may be our Copernicus moment. There was a time when people believed that the earth was at the centre of the universe, with the sun and stars circling around it. Copernicus's work led to a reordering of ideas and concepts. Our "Copernicus moment" requires a reordering of ideas about ecology, biology, economy and life in society in order to preserve the life-sustaining capacity of the planet.

What can we learn from complex issues such as COVID-19 and climate change?

Pandemics and climate risks are good examples of the increasing complexity of the challenges ahead. Unlike the financial crises or rising inequalities, these are shocks originating from the biological and physical world even though humans have much to do about the severity of the crisis.

The COVID-19 pandemic and climate change share several characteristics:
• They are *systemic*. Their effects propagate across our highly interconnected world and across interdependent systems.
• They are *low probability cataclysmic events*. There is a low probability event but their occurrence is "inevitable" over time. For instance, if there is a 1% probability of a catastrophic event occurring this year, or next year or the year after; it will inevitably happen one day. Since no one can predict when and how, it is tempting not to pay the cost of preparing. As a result, low probability catastrophic events consistently receive insufficient attention. It is the case for pandemic, climate change or other similar events such as a catastrophic geomagnetic storm, etc.
• They are *non-linear*. Their socioeconomic impacts grow disproportionally or exponentially once a threshold is reached.
• They trigger *cascading failures*. They reveal the vulnerabilities across systems (health systems' lack of resilience, fragmented social systems, chain of production weaknesses, etc.). The failures in one system trigger failures in other systems. They are risks multipliers.
• They are *regressive*. They disproportionally affect the most vulnerable populations, regions, or sub-systems of the global ecosystems.

Complex issues like COVID-19 and climate change are not *black swans*; they are not unexpected events.

Experts and scientists have been warning governments of the impacts of these catastrophic events for years. We chose to ignore them at the risks of millions of people dying or of permanently damaging the life sustaining capacity of the planet. Low probability cataclysmic events like COVID-19 pandemic or climate change are the *black elephants* in the room—we know about the issues, but we keep ignoring the mounting evidence.

We need a different way of thinking, and openness to different ways of generating solutions. A key ingredient for accelerating the pace of change is to reach a *critical level of public awareness and collective consciousness*. This is needed to overcome the single interests that favour the status quo, and to generate conditions that provide government with the legitimacy to take action. Public awareness and collective consciousness help to lift the veil of "willful blindness" that affects society.

These complex challenges require big shifts, such as moving:
• From a focus on short-term results to *building resilience*.
• From a disaggregated focus on individual elements to a more comprehensive approach and *collective problem solving*.
• From hierarchical leadership to *disaggregated leadership* requiring actions in multiple spheres of activities that are commensurate to the capabilities and awareness of public, private and civic sector leaders.
• From systems and practices able to operate within a narrow band of conditions to *adaptive systems* resilient in a broader bandwidth.

Issues such as climate change and the COVID-19 pandemic call for distributed leadership, increased collective consciousness, and thinking across systems and multiple timelines.

What can we learn from COVID-19 to make progress on climate change?

The current COVID-19 pandemic provides a foretaste of what a climate crisis may look like. Multiple exogenous shocks and disturbances are occurring at once, which are provoking disruptions of global chains. There is rapid global transmission, and amplification mechanisms are accelerating the velocity of change.

A crisis on the scale of the coronavirus pandemic is an important event with significant transformative potential. It reveals the weaknesses in governing systems to respond to unforeseen or unexpected circumstances. It makes visible the lack of resilience and adaptive capacity of public infrastructures and services. It also offers the possibility to accelerate changes that were needed but that would have taken place over much longer periods of time.

COVID-19 provides an unprecedented opportunity to imagine a new balance to reconcile public, private, and civic interests in creative ways and to craft a coherent set of policies to better position countries in the future.

The thinking about challenges emerging from the biological and physical world, including climate changes, must catch up to the holistic nature of the ecological systems we belong to. This is an opportunity to rediscover the "oneness" of life and nature. For instance, NASA images taken on February 10 to 25, 2020, showed a significant reduction in greenhouse gas emission in China where carbon monoxide dropped by 35% to 40% compared to the previous year. As the world stood still and individuals played their parts to contain the spread of the virus, similar reductions were seen in New York, Seattle, and Los Angeles. We could breathe again!

COVID-19 has illustrated powerfully the inextricable interrelationships between ecology, economics, and life in society on the only planet known to support human life.

Complex issues cannot be understood in isolation and they cannot be solved through disaggregated interventions. They require a collective effort and entail a shared responsibility.

We know enough to act if there is a will. We know how and have the capabilities to make progress towards a better future, improved human conditions and a more sustainable human trajectory.

This is our *Copernicus* moment.

NOTE

1. Jocelyne Bourgon, *The New Synthesis of Public Administration Fieldbook* (Kopenhagen: Dansk Psykologisk Forlag, 2017).