

A NEW SYNTHESIS OF PUBLIC ADMINISTRATION

NS is an International Co-Operation Project Led by:
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A PGI Think Piece

PANDEMIC AND CLIMATE CHANGE: COMPLEXITY, RESILIENCE AND CATASTROPHIC EVENTS

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April 2020

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Published by Public Governance International (PGI)

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April, 2020

ISBN Digital: 978-1-989294-23-9

Pandemic and Climate Change: Complexity, Resilience and Catastrophic Events

The New Synthesis of Public Administration has argued that there is a growing gap between public policies, programs and institutions inherited from the industrial world and the increasing complexity of the challenges governments are facing in practice in a global, interdependent and hyperconnected world where the velocity of change is accelerating. It has argued that there is a greater need to focus on resilience, the adaptive capacity of government and society, and collective problem solving¹. The coronavirus (COVID19) pandemic is an important learning moment.

Pandemics and climate risks are good examples of the increasing complexity of the challenges ahead. They are shocks originating from the *physical world* even though humans may have much to do about the severity of the crisis. They unleash vast social, economic and environmental impacts. Other risks originate from the *human world and are caused by human behaviors*. For instance, financial shocks originate from the financial sectors. Market crashes are crisis of confidence.

Physical crises cannot be *addressed* by rebuilding confidence. They require an understanding of the underlying causes in the physical world. The current 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 transmission we are witnessing. Across the world, countries are battling the negative socio-economic impacts of the current pandemic.

Pandemics and climate risks are complex issues that have common characteristics:

- They are *systemic* in nature. Their effects propagate across our highly interconnected world and across interdependent systems.
- They display a high level of *uncertainty*. There is a low probability of a *cataclysmic event* occurring, 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 geomagnetic² storm, etc.

1 Bourgon, Jocelyne. 2017. “*The New Synthesis of Public Administration Fieldbook*”. Copenhagen, Dansk Psykologisk Forlag A/S.

2 A geomagnetic storm is commonly referred to as a ‘solar storm’. They are caused by sunspots and solar flares, and can result in significant calamities. In *Scientific American*, O’Callaghan (2019) notes that “Most experts regard the Carrington Event, a so-called superstorm that occurred in September 1859, as the most powerful geomagnetic storm on record. But new data suggest that a later storm in May 1921 may have equaled or even

- They are *non-linear*. Their socioeconomic impacts grow disproportionately and even 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 disproportionately affect the most vulnerable populations, regions, or sub-systems of the global ecosystems.

Catastrophic events like global pandemics and climate change risks *are not black swans* (they are not completely unexpected events or occurrences that are 'only predictable in hindsight'³). Epidemiologists have been consistently warning governments of the threat of pandemic for years. The SARS crisis, H1N1, MERS and EBOLA were early warning signs⁴. The same can be said about the risks of climate change. Every year, the scientific community documents rising temperatures around the globe, the number of species disappearing, rising water levels, the cubic feet of ice melting, etc. Low probability cataclysmic events are the *black elephants*⁵ in the room -we all know about the issue and the mounting evidence. These are the issues the world chooses to ignore even at the risks of millions of people dying or of permanently damaging the life sustaining capacity of the planet. The recent COVID19 outbreak clearly demonstrates the high cost of a lack of readiness in human life and socioeconomic costs.

Addressing low probability catastrophic events like pandemics and climate change requires a different way of thinking and big shifts such as:

- From a focus on short term results to optimizing resilience.
- From a disaggregated focus on individual elements to a comprehensive and holistic approach to collective problem solving.
- From hierarchical leadership to disaggregated leadership. Actions are needed at once around the world and in multiple spheres of activities in order to boost multi-scalar leadership and governance practices.

eclipsed the Carrington Event in intensity, causing at least three major fires in the U.S., Canada and Sweden—and highlighting the damaging effects these storms can have on Earth today”. See more at <https://www.scientificamerican.com/article/new-studies-warn-of-cataclysmic-solar-superstorms/>.

3 Taleb, Nassim Nicholas. 2007. *The black swan: The impact of the highly improbable*. New York: Random House.

4 Gardner, Dan. 2020. “Pandemics Are Low-Probability, High-Consequence Events. We Should Have Been Prepared.” <https://www.theglobeandmail.com/opinion/article-pandemics-are-low-probability-high-consequence-events-we-should-have/>.

5 Möller, Niklas. 2011. “*Black Elephants and Black Swans of Nuclear Safety*.” *Ethics, Policy & Environment* 14 (3): 273.

- From hard wired systems designed to operate within a narrow band of conditions to adaptive systems with a broader bandwidth⁶.

A more fulsome discussion of the necessary big shifts is available in a PGI Think Piece titled: ‘*Why Is It so Difficult to Make Progress on Climate Change?*’⁷. Complex issues suffer from the *tragedy of the commons*; individual actions run counter to the collective interest. Pandemics and climate change require global coordination and collaboration. They also suffer from the *tragedy of the horizon* when the risks are cumulative and materialize over very long timelines as is most evident in the case of climate change⁸.

The coronavirus pandemic has demonstrated how expensive it can be to fail to prepare. *The cost of failure vastly exceeds the cost of prevention*. Beyond the heavy human costs, governments are spending trillions of dollars reacting to a crisis many experts had repeatedly predicted.

The coming months and years ahead will reveal the extent to which we have learned from the COVID19 pandemic. The current realities also beg a number of questions. As time passes, will our memories fade or shall we say ‘never again’? Will we choose to live in the here and now and be oblivious to the fact that similar events are in the making and will inevitably occur? Will we learn to build the resilience and the adaptive capacity of society, and protect the life sustaining power of the planet?

The COVID19 pandemic is a foretaste of the next pandemic and of the potential catastrophic events to come. Considering the painful price the world has paid so far, there is a need for us to learn from our weaknesses and mistakes, and to do better in the future. More than ever before, we must future-proof our societies and set the world on a sustainable human trajectory. If “all the world’s is a stage” as Shakespeare put it, then there is no time for dress rehearsal. We must act now for a more resilient future.

6 Bourgon, Jocelyne. 2011. “*A New Synthesis of Public Administration*”. Kingston: McGill-Queen’s University Press. Bourgon, J, and C Gunter. 2019. “A PGI Working Paper: Resilience and the New Synthesis of Public Administration”. Public Governance International.

7 Bourgon, Jocelyne. 2019. “A Think Piece: Why is it so difficult to make progress on Climate Change”<http://www.pgionline.com/wp-content/uploads/2020/04/A-Think-Piece-Why-Is-It-so-Difficult-to-Make-Progress-on-Climate-Change-final.pdf>

8 Carney, Mark. 2015. “Breaking the tragedy of the horizon – climate change and financial stability” <https://www.bis.org/review/r151009a.pdf>



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