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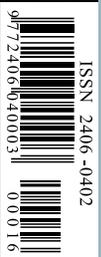
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COVID-19 AS NOT UNIQUE BUT NEW GENERIC PROBLEM

Branko Terzic

AFTER this coronavirus crisis passes it is likely that we will rediscover that our responses—successful and unsuccessful—to this global catastrophe can provide us with lessons for use in future similar crises. How we evaluate these lessons and create playbooks for dealing with future crises will be the result of individual and collective efforts of all segments of society including government, the private sector and non-governmental organizations coordinating at local, regional, and international levels.

The COVID-19 crisis follows a number of other national and global crisis of this and the last century. Here in the United States these recent past crisis include: 9/11, the oil price and supply shock of the 1970s, the December 1941 attack on Pearl Harbor, the Great Depression, and others. Remarkably all share the same single

factor in common. In each case the United States government—hardly alone in this regard—was unprepared for the catastrophe. This not only raises the evident ‘why?’ question but also the issue of whether and how lessons can be discerned during the aftermath of a catastrophe.

One possible answer to the question of why nations are unprepared for catastrophes was offered in 1990 by the philosopher Robert Grudin: “catastrophes [...] do now and then occur, not because of a lack of assorted data, but because of executive inability to evaluate the data properly.”

In addition, MIT professors Thomas H. Lee, Ben C. Ball Jr., and Richard D. Tabors described the U.S. government’s response to the 1970s oil shock catastrophe as one where the government “misinterpreted events, made inappropriate

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Photo: Flickr

Massive wildfires, like pandemics, represent the first appearance of a new generic problem, not a unique event category

assumptions and analysis, misused the laws of economics and commerce, failed to use our understanding of the relative roles of the public and private sectors.”

The common thread linking these two observations is that of failure of, or misinterpretation in, analysis of data which was available. Perhaps here the issue is one of the government’s failure to understand the nature of the problem and the type(s) of risk involved. Yet, governments and businesses deal with risk on a daily basis and have in place strategies to deal with risk and look at scenarios over longer horizons.

Indeed, the ability to do long-range and scenario planning is what elevated humans above other creatures on this planet, according to biologist and naturalist Edmund O. Wilson. “The elaboration of culture depends on long-term memory and [...] the experience of a lifetime and use them to create scenarios,” he wrote. “The great gift of the conscious human brain is the capacity and with it the irresistible inborn drive, to build scenarios.”

In looking for insight into how organizations deal with lessons learned in the context of figuring how these could be applied to the post

COVID-19 period, I found a short passage in the writings of business strategist Peter Drucker that might provide a useful structure for approaching the problems of “risk” understanding and analysis. Drucker surmised that executives, including government leaders and others in the public sector, understood that “executives face four basic types of problems,” namely:

- Generic events that are common to within the organization and throughout the industry.
- Generic events that are unique to the organization but common to the industry.
- Truly unique events.
- Events that appear to be unique but are really the first appearance of a new generic problem.
- All but the truly unique event requires a generic solution [...]. Truly unique events are quite rare [...]. Applying a standard rule of principle can solve most types of problems.

A main purpose of this article is to discuss further Drucker’s conclusions as they pertain to the problem at hand.

While Drucker wrote in terms of “problems,” a more comprehensive approach would be to look at how the current situation fits within the general concepts of risk affecting modern corporations and societies. Obtaining successful outcomes in an environment

that includes risk is, of course, the main function of corporate management. One definition of risk explains that “risk is either a condition or a measure of exposure to misfortune—more concretely a measure of exposure to unpredictable losses.”

The insurance industry is one place where risk is considered in terms of quantification of damages in three dimensions: chance, loss, and uncertainty. Of the three dimensions it is the “uncertainty” one that dominates the price of the premium. One thing to consider is that the insurance industry is based on the principle of “stationarity.” This is explained by Brown University geoscientist Laurence C. Smith thusly: “Stationarity—the notion that natural phenomena fluctuate within a fixed envelope of uncertainty—is the bedrock principle of risk assessment [...] rest[ing] on a core assumption that the statistics of past behavior will also apply to the future,” he writes. “A growing body of research is showing that our old statistics are starting to break down.”

The last sentence is of particular interest in that a variety of factors including global demographics, the growth of the global “middle class,” with its concurrent reduction in poverty, and climate change have all been cited as factors in the inapplicability of prior data.

The following list is an attempt to identify the kinds of problems which may fit within Drucker’s four problems typology. In reviewing the identified problems, one can also assign an associated “risk” for each of the four groupings or even individual events keeping in mind the differences in industries adjusted for the geographic reach of corporation in terms of national versus global organizations.

I. Generic events that are common to within the organization and throughout the industry:

- a. weather related events;
- b. national economic problems;
- c. cybersecurity attacks;
- d. labor relations problems;
- e. international conflicts;
- f. technological obsolescence.

II. Generic events that are unique to the organization but common to the industry:

- a. labor strikes;
- b. white collar crime;
- c. supply chain disruption;
- d. hostile takeover;
- e. business disruption by cyber attack;
- f. bankruptcy;
- g. geologic disruption, earthquakes;
- h. product liability;
- i. pollution;
- j. arson.

III. Truly unique events:

- a. the Yugoslav civil wars of the 1990s;
- b. the 2000 California electricity market collapse;

- c. the 2011 Fukushima tsunami impacts;
- d. the 1986 Chernobyl nuclear power plant accident;
- e. a solar storm.

IV. Events that appear to be unique but are really the first appearance of a new generic problem:

- a. 9/11;
- b. climate change-related catastrophes (e.g. wildfires in California and Australia);
- c. the 2020 COVID-19 pandemic;
- d. a nano-technology accident;
- e. a bio-accident.

The first group of risk events—those generic to both the industry and a company—would appear to have a low level of uncertainty. These types of problems or potential catastrophes have been modeled extensively by the insurance industry and thus in many instances financial loss from these events can be covered by insurance in capitalist economies. As a reminder, today’s modern insurance industry will cover three types of risk: physical damage to property, liability, and systemic risks such as economic failure, energy embargos, or failure of technology.

The second group of events—those common to industry and unique or rare to a company—would appear, for a specific organization, to have a higher level of uncertainty. Such events would likely

be affected by the quality of management, planning and optionality, and the uniqueness of the organization within its industry. An organization can go for years without experiencing any of these problems, but management would be aware every time the problem appears at a competitor or within the industry and should be able to query its own organization as to how the problem could be handled should it be necessary to do so.

A “black swan” event is now generally defined as one of low probability but high impact.

were characterized by a high level of uncertainty, may now be assigned a lower level of uncertainty.

Truly unique events would, almost by definition, be expected to have the highest degree of uncertainty. These would be in modern vernacular labeled “black swan” events. The notion of a “black swan” event was introduced in 2007—just prior to the financial crises of 2008—by finance professor and former Wall Street trader Nissam Nicholas Taleb. Thus many attributed to him a forecast of that financial meltdown, which in many ways made him into an overnight international celebrity.

A “black swan” event is now generally defined as one of low probability but high impact. A few years later Taleb wrote that “black swan effects are necessarily increasing, as a result of complexity, interdependence between parts, globalization, and the beastly thing called ‘efficiency’ that makes people now sail too close to the wind.”

Taleb’s most recent writing appear to suggest the possibly that “black swan” events may be more appropriate for Drucker’s fourth problem. Taleb’s quote suggests that such events, which once

Reviewing Drucker’s four types of problems one could position the COVID-19 pandemic as an example of the fourth type of problem: that it is an event that appears to be unique but is in truth the first appearance of a new generic problem.

This might be the appropriate positioning of COVID-19 for two reasons. Firstly because pandemics are not new global phenomena. A brief survey of pandemics of note would include the following, and possibly other, notable plagues:

- bubonic plague (“Black Death”), with three pandemics over the centuries, most recently in China in 1855, spreading worldwide;
- cholera, with its seven pandemics over four centuries, most recently 1961 in Africa;
- malaria, which has a recorded history going back at least 4000 years;
- smallpox, composed of both virulent and avirulent strains that devastated indigenous peoples in the Americas centuries ago;

- tuberculosis (“White Plague”), which is a respiratory spread pathogen with a long incubations period;
- influenza, with three pandemics in the twentieth century;
- and HIV/AIDS, recognized first in 1981.

Of course one can go back earlier in human recorded history. For example, American cultural critic Virginia Heffernan recently observed in a *WIRED* article that “pandemics are inexorable—and the canon of plague literature is a chronicle of nature senselessness and its indomitability.” Heffernan traces the literature as far back as Procopius of Caesarea’s chronicle of the 550 AD “Plague of Justinian” to modern times. She added a note of caution by observing that “no leader in history has ever responded ‘well’ to a plague—and many, including Pericles and the Roman emperor Hostilian, have died in them.”

The second reason for putting COVID-19 in this group of precursor catastrophes is because numerous observers have warned that the emergence of a new flu-based pandemic was a major danger to world health.

The late Swedish epidemiologist and statistician Hans Rosling is his 2018 book *Factfulness* identified the danger

of a global pandemic, based on a new virus, as the most important of his “Five Global Risks We Should Worry About.” Rosling identified the five risks as: (i) global pandemic, (ii) financial collapse, (iii) World War III, (iv) climate change, and (v) world poverty.

The COVID-19 pandemic is an event that appears to be unique but is in truth the first appearance of a new generic problem.

With respect to a global pandemic, Rosling wrote that “serious experts on infectious diseases agree that a new nasty kind of virus is still the most dangerous threat to global health.” He added that “an airborne disease like flu, with the ability to spread very fast, constitutes a greater threat to humanity than diseases like Ebola or HIV/AIDS.”

Other commentators, many not medically trained, had also observed prior to onset of the COVID-19 outbreak that a flu-based pandemic would constitute a global threat for a variety of reasons. A few years ago, citing the “networked” basis of global society, historian Niall Ferguson observed that

the speed with which an infectious disease spreads has a much to do with the network structure of the exposed society as the virulence of the disease itself. [...] The existence of a few highly connected hubs causes spread of the disease to increase exponentially after an initial phase of slow growth.

It is not clear whether COVID-19 presents us with a crisis which, while now unique, could become a generic problem in the future. The warnings of a “second wave” of infections in the winter of 2020-1 may satisfy that criteria. Even a cure or a vaccine would not eliminate the possibility of a new flu strain appearing in the future.

As an aside, many are wondering whether our national and international collective repose to the COVID-19 pandemic may ease the way for national and international coordination on what Rosling indicated was the fourth global risk, namely climate change. This is especially interesting if one considers a recent article by Simon Kuper that appeared in *The Financial Times* in which he noted that “climate change makes pandemics more likely.”

However that may be, once we place COVID-19 in the fourth grouping, the solutions will be found in newly developed “standard rules and practices where the executive will adopt the principle to the concrete circumstances of the specific problem,” as Drucker reminds us.

To that end, it would be useful to consider what American scientist and

virologist Edwin Dennis Kilbourne advised. Namely, that “in dealing with the novel and unforeseen, [...] we must be guided by the lessons of that past, so it is essential that we reach a consensus on what these lessons are. Of these, prompt

and continued epidemiological surveillance for the odd and unexpected and use of techniques of molecular biology are of paramount importance.”

It is too early today to reach any consensus on what the lessons are. Indeed, the world is still in the middle of the COVID-19 pandemic. However we can postulate what will be needed to write the manual of “standard rules and practices” for dealing with future pandemics.

A list of guidelines based on some of the works to which I have referred above, as well as my own experience with management of infrastructure risk, yields the following non-exclusive list of considerations with regards to dealing with a pandemic like COVID-19:

- Bring in and use the experts;
- Establish prompt and epidemiological surveillance;
- Get the right data;
- Expose myths and misinterpretation;
- Task the experts/analysts to lay out options, not make policy;

- Governments move first to establish laws, regulations, and national priorities;
- Private enterprises establish benchmarks and best practices;
- Make decisions based on appropriate medical and economic assessments;
- Decisions should conform with societal values.

Finally, as the world emerges from this crisis, our publics will be likely bombarded with conflicting versions of what happened, why it happened, and how it happened. Some will be susceptible to, or seek, simple answers to complex problems and questions of ‘who knew what and when did they know it.’ There may be pressure to rush to solutions and programs not well-reviewed or appropriately vetted.

In that regard, Rosling can again serve as a useful guide, whose advice was to take “four small steps” and

take a breath, when your urgency instinct is triggered, your own instincts kick in and your analysis shuts down; insist on data: if something is urgent and important, it should be measured; beware of fortune-tellers: any prediction about the future is uncertain; and

be wary of drastic action and ask what the side effects will be.

During the past two hundred years the industrial revolution, with its concomitant expanded use of energy, has improved standards of living for the greatest number and highest percent-

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age of people in world history. This success has come at lately realized cost in terms of our environment and the climate change which we now must face.

The COVID-19 pandemic has already set

back not just the health but also the economic conditions of a great portion of humanity. No one doubts that this virus will be controlled and ultimately defeated in the time ahead. The lessons will need to be learned and put into practice. These lessons will not just be about how to control an epidemic or manage a health care system, there will also be lessons that will need to be learned about how to effectively govern, how to cooperate internationally, and how private enterprise can serve its customers while being considerate of its valuable human work forces. In the end we may look back as this as a time of great stress but also great human advancement. ●