

Editorial

Does COVID-19 teach us anything for our future?

It is perhaps only the most hard-hearted stoic that can see much good coming from the deadly visitation by this virus, but there are one or two immediately positive outcomes.

There have been many reports of selfless, caring, and brave acts in the succour for others who have been badly hurt physically or psychologically. There have also been stories of inventiveness and originality in dealing with the outcomes of the pandemic as well as the disease itself.

Unfortunately, we are conversely fed reports of cruelty, robbery, thoughtless behaviours, incompetence at all levels, blame, contention and even violence, related to the effects of COVID-19 on global society.

Now we are asking ourselves what should happen next? What have we learnt? [1–3]

Nassim Nicholas Taleb wrote a couple of important books: *The Black Swan* and *Antifragility* (and more). They are about unpredictable risk and the issue of fragile systems and organisations (and people). In his general arguments on fragility and the more important antifragility, he says, “...Antifragility is beyond resilience or robustness. The resilient resists shocks and stays the same; the antifragile gets better”. By being exposed to both risk and actual harm the antifragile gains experience in coping with a variety of challenges, learns survival strategies and overcomes. The comfortable existence led by so many, combined with a tendency to avoid risk-taking and an inability to cope with uncertainties, have lured people into placidly ignoring the possibility that one might have to face a calamity that can place us in grave dangers and result in exceptional fragility. *How will we tackle the triad of ecological challenges, overpopulation and the lack of true equality of opportunity in societies? And how will we prevent the next global disaster?*

It is very clear that most medical services were unprepared for this level of pressure on the health systems; in some countries the health services were already fragile. Similarly, many companies and services had no reserve funding or apparently any plans for coping with shutdown for more than a week or so.

So, some interesting points we have observed:

- (1) Globalisation of essentials is a vulnerable area in a catastrophe. Transportation and logistics are not the only problems, lack of global leadership and coordination is also a major issue.
- (2) Modern capitalism, now funded by debt rather than profits, is very challenged by global emergencies, needing government survival funding which creates confusions and conflicts over who has it and for how long.
- (3) The data looked at seems to have been inadequate for the challenge. The whole use of predictive modeling is a shambles: the problems of heterogeneous data and information that is not necessarily transferable make interpretations difficult. Any errors are magnified by projections from small numbers in studies whilst scaling up to populations (without confidence intervals, or some understanding of them, being reported in the press).

- (4) The political climate seems to be more combative than cooperative: blame is the current game, where there needs to be just the reverse.
- (5) The UN and WHO have not shown strong leadership. Their structures and remits need to be reconsidered to allow them both to be more useful and active in global emergencies.
- (6) Consistent expert opinion and explanations of reasons for actions taken seem lacking and there is indeed contradictory information, poorly explained which has confused many people, even those who have more than passing knowledge in the same areas of interest.
- (7) Multiple 'expert' information sources with different interpretations conflated as 'the science' have been quoted somehow suggesting 'the truth' by politicians to hide the obvious uncertainties which must accompany a new crisis like COVID-19.
- (8) The need for decisions in the absence of reliable data seems to have caused an unreserved acceptance of a proposed interpretation, rather than a strategy to manage a progressive and transparent 'decision – review – new decision....' (Bayesian) approach. Why not explain the plans and say that we make changes as new data is available and provide clear reasons for change?
- (9) Apparent reliance on epidemiological data with little reference to the known coronavirus dispositions found by other scientific methods. What do we know about coronaviruses in general? In what ways do they behave similarly: in mutation rates? Periodicity? Strengths and weaknesses? [4]
- (10) The above bullets 6–9 seems to reflect more detailed and focused concerns than 1–5, but do they? The reliance on collected observed situations is notoriously dependent on the gatherers of information and how they have defined what their data consists in, the circumstances in which they collected it, what is included and excluded, how they have managed the data, and finally how they interpreted it in the context in which it is finally used. There is more, but we rarely know about all of the key factors. There must be a general change to the uncritical ways we use data at all levels in society, otherwise our decisions on anything may be badly flawed.

Apart from learning from the above examples and trying to do better with the specific challenge of COVID-19, there are many general lessons to be learnt, which have an impact on medicine, and on the world population's reactions to future catastrophes.

It seems as though initial care, cooperation and accomplishment have been the successes made by willing people so long as there is strong but transparent leadership that explains its actions. Lacking that there is quick reversal to blame, selfishness, anarchy, menace and strife. None of this is surprising when there seems to have developed real confusions in knowledge and purpose amongst experts as they deal with unravelling uncertainties, covered up inadequacies by political groups and a plethora of confusing data and suppositions thrust at us daily by an unthinking media.

It is a relief to voice one's own concerns and frustrations in a diatribe, as in the previous paragraph. The danger with diatribes, like all generalisations, is that they have a bias to missing out the good and concentrating on what the ranter thinks *might be* wrong: there are many exceptions where careful, critical thinking and appropriate actions have been taken in dealing with COVID-19. The bullet points above it were more considered criticisms: we hope readers will think about them and, if they agree, become active with new ideas to make improvements for our future. Rants only help the ranter for a time. In the important consideration of the future of humanity we must act, and consistently well for the greater good of everyone!

Finally, at the time of writing we hear a BBC release [5] about 20,000 tonnes of diesel oil released into a river from a fuel tank which collapsed, with a suggestion that the collapse was due to thawing of the

permafrost in turn due to much higher temperatures than average. If this is so there is an urgent need for taking measures that will make a more noticeable difference to global warming.

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References

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- [5] BBC Newscast. Arctic Circle oil spill prompts Putin to declare state of emergency. Available from: <https://www.bbc.com/news/world-europe-52915807>.