

## Epilogue: COVID-19<sup>1</sup>

COVID-19 has exacerbated and accelerated some trends:

- In geopolitics—the decline of US leadership, rising US-China tensions and the “demise” of multilateralism and rules-based order.
- On economic globalization—the trend towards regionalization<sup>2</sup> and economic nationalism.

More specifically, it has, for both the short and long term, added implications for:

- Economic recovery—whether it will be V-shaped, U-shaped or L-shaped.
- Societal structure
- Technology and data

The health aspects have attracted a lot of interest. The most important one may be: Are we prepared for another pandemic?

### Geopolitics

American global leadership has been declining for some years. The US share of global GDP fell from 31.2 per cent in 2000 to 23.8 per cent in

2018.<sup>3</sup> The same trend is visible for manufacturing, with the United States accounting for 16.6 per cent in 2018 compared to not many decades ago when it was the leading manufacturing country in the world.<sup>4</sup> Debt is rising fast. It may still be the leading country for innovation and higher education, but the gap to challengers such as China is narrowing. There have been signs of an American strategic withdrawal for a decade or two in view of a mismatch between its capabilities and commitments.<sup>5</sup> While the United States is unquestionably still the most powerful nation, its global outreach, capability and willingness to continue as global leader are not at the same level they were at the turn of the century. A cornerstone of President Trump's foreign and security policies has been to realign the costs and benefits of the US global role by cutting commitments. In some cases this has been manifested in the withdrawal of troops, as was the case in June 2020 with the announcement of a cut by a third of US troops in Germany. Such reductions, often made without any warning to allies, raises doubts about US credibility, and they may give rise to suspicions that US guarantees may be subordinated to presidential whims.<sup>6</sup>

For several years many observers have seen China as the next global leader.<sup>7</sup> This conclusion may be too hasty. China's share of global GDP has risen from 7.2 per cent in 2000 to 15.8 per cent in 2018.<sup>8</sup> This is remarkable, but it still leaves China far behind the United States. Even with the trends seen over the last decade, it will take quite a while before China is on par with the United States, especially if compared on the basis of GDP per capita. Recently, Chinese growth has slackened. For the first time ever, China has not set a growth target for the year. Enormous sums of money have been poured into R&D, focused on data systems and artificial intelligence, but it is still far from certain that these investments will deliver as hoped. China faces a demographic challenge, with a falling labour force and a growing share of elderly people, an overdependence on outside energy sources, and a service sector that is far less developed than that of the United States or those in Europe. On top of that, we do not know whether the Chinese leadership plans such a role, with the political and economic burdens it entails. The US experience illustrates that the position of being a global leader does not only bring benefits.

The trade war between the United States and China shows how the two powers have been testing each other. At the same time, it

demonstrates how difficult it is to be a winner. The US dollar has been able to maintain its place as the only genuine global currency. The international monetary system is in reality a US dollar system, accounting for 90 per cent of all international transactions and with 60 per cent of all currency reserves being held in US dollars.<sup>9</sup> China is rolling out a digital currency, DCEP or e-RMB, which is the first of its kind to be backed by a country's central bank. It primarily has a domestic purpose—adding one more instrument to efforts to turn all money transactions in China into the digital sphere. It may also be seen as a Chinese attempt to undermine the role of the US dollar by offering this option to foreign countries that may be unhappy with the dominance of the dollar.<sup>10</sup>

When COVID-19 struck, both countries were found to be lacking in their attitude to the global picture. A global leader might have stepped in to shape an international, even a global, response to the challenge, possibly through the global institutions—the World Trade Organization, the International Monetary Fund and the World Bank. But neither of them did so.

They both struggled domestically when confronted with the crisis. The United States proved unable to cope with COVID-19. Despite the introduction of a health system under President Obama, it cannot be said to possess a genuine healthcare system covering the whole population. The fight between the president and state governors brought out in the open that the US Constitution is designed to weaken the federal government, making it difficult to implement nationwide policies. China's history gives ample evidence of the difficulties of keeping the nation together, which may explain why President Xi Jinping, since his election as president in 2012, has moved the country towards centralization. A more heavy-handed system and an even stronger role for the Communist Party of China (CPC) has emerged. Once the Chinese leadership decided to move on COVID-19, things went fast, and China was able to draw on nationwide resources to help Hubei province.

Some observers have used COVID-19 to debate whether democracy forms a better basis for combating an epidemic. It does not, however, appear to be the case. A study published at the end of May 2020—admittedly a little early—concluded that two things matter: the capacity of the state, and the degree of economic inequality. A strong state and governmental structures allow the authorities to act fast, and they serve

as bulwarks against other shortcomings. Economic inequality normally means malnutrition, no money to pay for healthcare and the need to continue working, which facilitated the spread of the virus.<sup>11</sup>

COVID-19 makes the United States and China feel less secure and less confident. It is anybody's guess what that will mean for their stance in the global power game. If history tells us anything, it is that insecurity increases the likelihood of confrontation.<sup>12</sup> Political leaders may be tempted to look outside to score points in view of domestic criticism and discontent.

If such a development would be to take place, the fault line could be around Taiwan, which did very well in its fight against COVID-19. It has gained greater self-confidence and it may use this to get more leverage vis-à-vis China by counting on support from friends and looking for sympathy from abroad, particularly among Western democracies. This will provoke China, which would perceive such moves as a weakening of commitment to the One-China policy.<sup>13</sup>

Events in Hong Kong may also play a role in this game. China's plan to introduce a national security law<sup>14</sup> reveals a lower threshold for what it classifies as permissible in Hong Kong. The tension between elements of the Hong Kong population and China over the "one country, two systems" has been escalating in recent years. It has now reached a point where wide-ranging decisions will be taken. China regards it as an internal question, and it regards any interference as intolerable and provocative. The United States and some European countries, in particular Britain, have taken the view that China has gone too far and has violated the basic law. Politically, the United States does not feel the need to avoid any steps that could be seen by China as provocative, and it may search for an opportunity to look strong. At the end of May, the United States decided to declare that Hong Kong no longer enjoys a high degree of autonomy from China,<sup>15</sup> to revoke Hong Kong's preferential treatment as a separate customs and travel territory from the rest of China, to consider action against Chinese companies listed on US equities markets and to scrutinize the role of Chinese researchers entering the United States.<sup>16</sup> These decisions fitted the pattern of US behaviour, but may be ill-conceived. No country can ignore being at the receiving end of such actions. China has to respond.

The combination of a more assertive US, deviating from policies maintained over decades, dishing out this kind of behaviour from a

weaker position, and with a more vulnerable China at the receiving end, looking to consolidate or even strengthen its role in Asia, is quite simply disquieting. There may be a genuine risk that a change in perceptions will push policymakers towards a confrontation. One of the things that carried the world through the Cold War was the ability of the United States and the Soviet Union to read each other's intentions. They were good at two things: at creating crises, but also at managing them. Misunderstandings were rare.<sup>17</sup> Both the United States and China seem determined *not* to work out such a common rule book.

## **Economic Globalization**

Economic globalization is losing its primogeniture. The new model will be a mixture of globalization, regionalization and nation-state behaviour (economic nationalism).

Nation-states have stopped seeing the global system and its institutional framework as suitable for solving their problems. Very little has been heard from the United Nations. The International Monetary Fund (IMF) has assisted a large number of member states, which is commendable, but it has not undertaken any effort to map out an agreed global economic policy, mainly because member states have not asked it to do so.<sup>18</sup>

The United States and China no longer see globalization as benefitting both of them and they no longer trust each other. They each fear dependence on the other. From being "friendly" competitors inside the system, they now accuse each other of abusing the system. What may be even more important is that they, as the two dominating economic powers with forty per cent of global gross domestic product (GDP) between them, shirk their responsibility of running the system.

Regionalization has become fashionable because trust among adjacent nation-states pursuing analogous policies has crowded out global trust. Regional integration efforts such as the European Union and the Association of Southeast Asian Nations (ASEAN) may get new wind in their sails. While they failed to rise to the occasion to coordinate national measures in the first phase—the fight against the virus—they now may get a second chance when the battleground shifts to economics.

The costs of getting the economies back on track are enormous, and the prospect of doing the heavy lifting in common is much more attractive than trying it alone, for two reasons. The first is that the United States and the global institutions such as the IMF are largely absent from the game. The second is that if one country stimulates its economy while adjacent countries do not, it will run up unsustainable deficits on the balance of payments as imports go up. Some of the stimulus will benefit adjacent countries through trade. To avoid a game of musical chairs, where everybody tries to shift the burden of providing stimulus, coordinated efforts will be required.

Nation-states need to re-emerge as the guarantors of citizens' security and welfare—a role that was undermined during economic globalization. COVID-19 unmasked the non-economic costs of dependency on the global system, opening the door for autarchy, albeit watered down in most cases. The search for medical equipment, which in some cases turned into a scramble, served as an eye opener. The United States discovered that 30 per cent of generic drugs, accounting for the large majority of prescriptions, are imported from India, which in turn imports 68 per cent of the raw materials necessary to manufacture them from China.<sup>19</sup> In another sector, data systems, the world has for some time seen the United States on a major offensive to block the Chinese company Huawei from entering markets outside China.

The rising importance of regionalization poses a stronger challenge for China than for the United States. China was the big winner of economic globalization; it may be the big loser when regionalization and economic nationalism begin to have an effect. The global supply chain and the global value chain benefitted China, with its large, cheap and reasonably good labour force. But now with its falling labour force, wages are going to eat into its competitive advantage.

Outsourcing made countries dependent on one another. This was not fully digested, or perhaps it was and the price was deemed worth paying. In the future, nations will be more aware of how much goods and services they buy from outside, and how dependent they are on other countries. This turn around has hit China as the main global manufacturing hub. For some time, voices in the United States and Europe have been heard about the risks of relying on China and/or surrendering the technological edge to China by investing in foreign

high-tech companies. In the future, the net will be cast much wider, and it will also focus on basic things like food and health.

The way out of this for China will be a greater emphasis on economic regionalization, in particular with the Belt and Road Initiative (BRI). COVID-19 has sowed or enhanced suspicion about China in the United States and Europe. It will push China to favour closer economic integration among Asian countries. It is possible that China will also use the BRI to boost manufacturing in Africa, for two reasons: to escape the rising Chinese labour costs, and as an alternative way to enter the European market.<sup>20</sup> It cannot, however, be taken for granted that such a strategy will succeed. Firstly, the Europeans will see it as it is—a way to circumvent the European barriers directed at China. Secondly, Africa may look promising but there is no certainty yet that it can live up to Chinese expectations. China also has its eyes on Latin America. The nexus may be that in the short term American and European markets will be indispensable, but in the long run what matters will be Africa and Latin America, plus possibly the Middle East and Iran.

The United States is less dependent on economic globalization than China. Its amount of trade as a share of GDP is 28 per cent compared to 38 per cent for China.<sup>21</sup> It is much less dependent on outside sources for basics such as food and energy. In the late 1990s, the then secretary of state Madeleine Albright often invoked the idea of the United States as the indispensable nation, conveying the calculation that all other countries needed the United States more than the United States needed them. As the largest economy in the world, and as the only nation with a genuine global capital market, this may still be true, although less so. But the fact is that China may scramble to seek outlets for its production abroad and sources for food and energy, while the United States enjoys the luxury of not having to put foreign markets at the top of its priorities.

It has recently become clearer that China not only envisages an economic network around Asia, Africa and Latin America through the BRI, but also a kind of technological, energy and possibly cultural co-operation. The thinking may be that such a network will encompass around 80 per cent of the global population, all the growing economies and around two thirds of global GDP. The potential mass of purchasing power is stunning. The Chinese offensive to sell technology to these

countries may be part of this strategy, creating its own internet able to compete with the American one.

The US response has been curiously devoid of long-term strategic thinking. The purpose is apparently to stop China, trying to convince or even bully Western countries to follow suit, and to neglect alliances and partnerships outside the “Western” caucus. But the Western countries will not do well with regard to economic growth, and possibly also technology, because of the limited markets and the lack of funds in the wake of funding COVID-19 measures. It goes without saying that US policy during the Trump administration vis-à-vis its Western allies has not enhanced trust in the United States as a leader of the alliance. The United States looks increasingly to favour going it alone—and, in an analysis of global trends, without much promise of success in the long term.

It looks increasingly like a divided world.

## **Economic Outlook**

With a few exceptions, countries have gone through the preceding decade trying to repair the damage done by the global financial crisis (2008–9). The hope was that gradually the economy would improve. COVID-19 torpedoed this prospect. The drive towards consolidation was stopped, and further COVID-19 stimulus measures have thrown an already unsteady economy into turmoil.

The economic outlook for the biggest economy in the world, the United States, is dismal. For the second quarter of 2020, the Federal Reserve System anticipates an economic contraction of up to 30 per cent, and an unemployment rate close to 25 per cent.<sup>22</sup> The Department of Labor has registered up to thirty million jobs lost. Figures like that have not been seen since the Great Depression of the 1930s.<sup>23</sup>

The European Central Bank has presented three scenarios that indicate that GDP for 2020 will plummet to between 5 and 12 per cent for the eurozone.<sup>24</sup>

China has lowered its economic growth target. For the first quarter of 2020, the economy contracted 6.8 per cent. The common view is that growth for 2020 may not be more than about 3 per cent.<sup>25</sup>

Japan is expected to go through a contraction of 5.2 per cent for 2020.<sup>26</sup>

Most analysts predict an economic upswing in 2021, but it cannot be taken for granted. Economic models tend to disregard social and behavioural repercussions. After COVID-19, people—consumers and businesses—may not go back to “as usual”. The pandemic may have scared them, making it possible they will be reluctant to spend.

All countries have launched massive stimulus through budget deficits. This is understandable and in conformity with economic theory. If not, the economy would shrink even more than the figures given above. While it is good, indeed imperative, to do so in the short run, a number of problems arise for the future.

Governments need to consider how to rein in deficits, and in many cases how to repair the unavoidable damage done to national budgets. Where is the money to be found? From savings on other public policies such as transport, social security and education? From tax increases? From further borrowing? There are no easy solutions at hand. Most of those available point to tightening the economy, and running counter to the stimulus that has been launched.

Even before COVID-19, global total debt—including governments, households, non-financial corporates and the financial sector—was following an alarming trend. From the third quarter of 2018 to the third quarter of 2019, it rose by approximately US\$10 trillion, bringing it to US\$253 trillion, which is 322 per cent of global GDP.<sup>27</sup> Remember, this increase took place when the economic global climate was benign. COVID-19 will propel global debt to an even higher level, while economic growth shifts downwards from 2.9 per cent in 2019 to a contraction of 3 per cent in 2020.<sup>28</sup> Higher debt needs to be financed by lower national incomes!

The Organization for Economic Co-operation and Development (OECD) calculates that the richest nations face a US\$17 trillion government debt burden from COVID-19. For the thirty-seven member states, the average government financial liabilities will rise from 109 per cent of GDP to 137 per cent.<sup>29</sup>

In the United States, the Congressional Budget Office estimates that COVID-19 will hike the deficit on the federal budget from 4.9 per cent of GDP in 2019 to 17.9 per cent in 2020. An economic recovery will make the figure look somewhat better, but only reduce it to 9.8 per cent of GDP in 2021.<sup>30</sup> The total debt (government, households, non-financial corporates and the financial sector) in 2018 amounted to 265 per cent for the US GDP and 258 per cent for China.<sup>31</sup> The two biggest

economies in the world were heavily indebted before the COVID-19 crisis, but have now escalated their borrowing. Such debt and deficits will cast a shadow over the economy in the years to come, narrowing the room of manoeuvre for economic policy.

The interest rate defines the sustainability of debt levels. Before the financial crisis, debt was on an upward curve. This trend accelerated during and after the financial crisis. Countries printed money to bail out the banking system and stimulate the economy. The dilemma was that rising debt would be incompatible with a stable economy. The answer policymakers came up with was a lax monetary policy delivering low interest rates. Debt levels that were not sustainable with interest at 5–6 per cent in 2000 became sustainable with interest at 0.6 per cent in 2019.<sup>32</sup> The following calculation shows how it works. In 2000 the US federal debt was US\$5.6 trillion; with an interest rate of say 5.5 per cent, the net interest burden could roughly be calculated at US\$308 billion. In 2019 the federal debt was US\$22.7 trillion (about four times higher) and the net interest burden can be calculated to US\$136 billion<sup>33</sup> (less than half).

The world has caught itself in a bind. Debt levels, after the explosive increase in the wake of COVID-19, will require interest rates close to zero. In reality, countries have committed themselves to maintaining monetary policies that history has shown cannot last more than a relatively short period. The interest rate is a price for borrowing and lending money. It plays an important role when banks calculate the ranking of investment projects. How can banks choose which investment projects to finance when the price for lending is close to zero?

The hitherto unanswered question is how countries will manage to return to a more balanced economy? How will it be possible to maintain a growth pattern, to roll back deficits and debt and to allow the interest rate to find a level in conformity with what can be termed “normal”—all at the same time? And what happens if they cannot do so? What will be done with the excess money? There is a considerable risk of a major financial crisis waiting in the wings.

Economists have often discussed whether the recovery after the COVID-19 crisis will be:

- V-shaped: fast and without much delay in getting back to the growth pattern of before the crisis;

- U-shaped: Some delay in the recovery, but returning within a reasonable period to the same growth pattern; or
- L-shaped: A fairly long stagnation or slow growth, without any certainty that the economy will return to what used to be normal growth.

The contraction in 2020 will be considerable. A fast recovery may be possible for some countries that had a robust economy before COVID-19. The picture is more worrying for already fragile economies. They may be further weakened. The most likely scenario for most countries is, unfortunately, a combination of U-shaped and L-shaped recovery.

Add to this the repercussion on prospects for the business sector—especially small and medium sized businesses—and the picture augurs an economic and social crisis. Many family businesses do not have the financial buffer to survive such a crisis. A large number of people stand to lose not only their income but also their identity, self-respect, self-worth and independence. Many of them will be in their fifties or sixties, with little opportunity of jumping into other sectors or acquiring new skills. Just think of tourism, which is one of the hardest-hit sectors.

## Structural Changes

The business sector, and probably also the public sector, will perceive online work as a unique opportunity to save money. Facebook announced on 21 August 2020 that as many as half of its forty-five thousand employees will be working from home within ten years.<sup>34</sup>

Large office buildings are expensive, not least because they are normally located in high-rent business districts. The number of staff will be reduced, and many of those who are retained will be employed on short-term contracts. This will diminish the pension and welfare burdens for companies. The need for such benefits, however, does not go away, so the burden will be transferred to the public sector, which is already struggling to finance the existing programmes. Another question for public policy is what to do about a city infrastructure that has been built for commuters when less people actually commute?

The societal and cultural effect of more online work looks to be gigantic. Communication is a mixture of words, facial expression and

body language. Personal experience tells us that there are certain things we only want to say to a person directly, face-to-face, in order to be able to see the reaction. Management cannot continue as usual. How will they be able to motivate staff? How can they determine who is qualified for promotion? How will they decide the wage structure? What happens to loyalty when staff never meet their colleagues or management and never come to a place that they associate with the company?

Outside the business sector, similar upheavals are visible. What does it mean for citizens' trust in the government and the public service if the personal contact, so vital for humans forming an opinion of others and their own situation, is increasingly replaced by digital contact?

Education is highly dependent on pedagogy, but how can teacher-student contact be maintained with the increase in digital contact at the expense of time spent in the classroom? When teaching in a classroom environment, the reaction and body language of the class provides a teacher with feedback as to how effective their message is being received by the students.

Societal life will see a reduction in human relations and an increase in digital contact. The next step may well be the introduction of artificial intelligence, gradually removing the human element in decision making. It is terrifying to ponder on the possible subjugation of decision making by a "machine" without the option to call on a human being as a last resort. It seems unavoidable that such a society will be steered by less solidarity, less empathy and less love for one's neighbour—a digital system cannot be programmed to incorporate these elements.

## **Technology and Data**

Technology has developed to the point where the main theme of George Orwell's novel *1984* (a surveillance society) may be feasible, and COVID-19 has given this technology a *raison d'être*. It can alert people should they come too near to other human beings, in particular those suspected of being sick. This is attractive as an instrument in the fight against COVID-19. But it also means that the authorities have technology on hand to track citizens. It remains to be seen how far and how fast countries will move to introduce such technology, and whether it will be mandatory, introduced by incentives or voluntary.

As things stand, citizens of the large majority of countries need not fear surveillance motivated by political reasons, but no one knows the stance of those who will be in power a couple of decades from now. Perhaps they will be governed by a different set of values, making such surveillance perfectly legitimate. Perhaps not; we do not know. In another area, digital payments make it possible to monitor what each individual is buying and how citizens spend their money.

The big winners of this technology may not be governments, but rather the big data companies. They all give assurances that data about citizens and businesses are safe, but only they themselves know how they handle this data. The transfer of power in this regard—or, let us say, potential power—is of a size and impact not seen in human history since the feudal societies gave way to the industrial societies 250 years ago.

Governments, citizens and businesses may be left in the dark, not knowing exactly what kind of data the big companies have amassed, how it is stored and, most importantly, how it may be used by those who possess it. The possession of data in the future may come to be the most important power vector.

A crucial question is whether social media companies should be regarded as publishers or platforms? In other words, should they be obligated to host what people post, or can they perform edits? Currently, the United States protects social media from being responsible for the content posted by their users.<sup>35</sup> But that presupposes that they refrain from editing or removing posts unless they violate the law (for example, blasphemy). The companies have long maintained that they are platforms only, but the rising concern over fake news and abuse of the internet have forced them closer to editing. And if they engage in this, the rationale for their protection laid down in Section 230 of the 1996 Communications Decency Act becomes questionable, and the future of social networks as we know them today will be up in the air. Who is responsible for what we read on social networks, and who has the right to block or edit content? Recently, President Trump put his finger on the sore point of trying to limit the protection for social media. He did so after Twitter added a fact-checking tag to one of his tweets. It will take a while for the legislative system to chew on this. But the interesting point is that the role of social media has now been challenged.<sup>36</sup>

The data companies—or to be more exact, one of them, Facebook—have entered a completely new arena, which had hitherto been the sole privilege of governments: printing money. In the summer of 2019, Facebook announced it was planning a new global digital currency—Libra.<sup>37</sup> Governments did not hesitate long before expressing their dissatisfaction, saying that Libra would disrupt the financial system, facilitate money laundering and compete with fiat money like the US dollar.<sup>38</sup> There is little doubt that governments are scared. One comment about China's introduction of the e-RMB is that it was launched as a kind of counter attack on the Libra.<sup>39</sup>

COVID-19 provides an excuse for introducing new technology designed to register what citizens and businesses are doing. It ups the ante in the power game between the state and the data companies.

This also represents a treasure trove for criminals, terrorists and even foreign “unfriendly” countries. The hacking of private and public databases is a well-known phenomenon. Even if well protected, it has been seen over and over again that firewalls have been penetrated, opening the door for outsiders, whoever they may be.

In 2014, attackers got access to Yahoo databanks holding the personal data of up to a billion users.<sup>40</sup> In 2019, the American Medical Collection Agency system was attacked, and as a result the health data of about twenty-five million individuals was compromised.<sup>41</sup> In May 2020, EasyJet reported a highly sophisticated cyberattack that affected approximately nine million of its customers.<sup>42</sup>

Not only may COVID-19 accelerate a power shift of a colossal character, but is also demonstrates that new technology questions hitherto sacrosanct perceptions about privacy and security for citizens and businesses.

## Health

This is not the first time in the last fifty years that we have seen how modern societies are vulnerable to a new virus. The progress in science and our knowledge have helped us to reduce but not to remove the danger of epidemics. The focus on COVID-19 has largely been on how to prevent it from spreading in communities, and the choice between a lock-down model or herd immunity. The strategy was to contain

the virus, giving science time to find a vaccine. As far as can be seen, this strategy was successful, but we cannot be sure of the same good fortune when the next pandemic strikes. Vaccines are of course good, but mankind needs to be aware of the long-term risks of overdependence on medicine. Less biodiversity and less contact with nature makes our immune systems weaker, which undermines this first line of defence. And we may need it next time!

Four things look likely to happen.

The first one is a kind of screening to find and uncover where and how pandemics may start. In the case of COVID-19, there does not seem to be full agreement among experts, but the prevailing view is that it originated in bats and reached humans through an intermediary animal at a market for animals. Pangolins are often mentioned, but there is no certainty about this. Nor can it be ruled out that another route was taken by the virus to reach a vulnerable human being.

To uncover how COVID-19 originated and how it made the jump to humans is not only an academic question but is one vital for protecting us in the future. It is to be expected that a lot of money will be devoted to virology, immunology and similar disciplines.

The second step is to look into why there is no uniform pattern that can tell us whether a virus will spread, how contagious it will be, how many of the infected will die, and whether a second wave is likely. Policies need to be carefully calibrated to the potential danger, which is not always so easy to discern. Experience gained from earlier pandemics can be useful.

The SARS epidemic in 2003 hit twenty-three countries, with 8,422 cases globally, of which 7,665 were found in China, Taiwan and Hong Kong.<sup>43</sup> Even if it spread around the globe, it could not be rated as a full-scale pandemic.

In 2009 the world saw the appearance of H1N1, which, according to the US Centers for Disease Control and Prevention (CDC), claimed the lives of more than 150,000 people worldwide. Some 80 per cent of deaths were of people younger than sixty-five years of age.<sup>44</sup> This was almost the exact opposite of what happens in a “normal” flu epidemic—and indeed for COVID-19—with the large majority of deaths found among elderly people. The interpretation is that the H1N1 virus may have been around at an earlier date, possibly as another version, allowing the elderly people who would have been young at the time to

build immunity, protecting them against the new version that occurred in 2009. This observation underlines the importance of the immune system, and represents a case where herd immunity apparently worked in the long run.

In 2012 the Middle East Respiratory Syndrome (MERS) arose in Saudi Arabia. It saw 2,521 cases, with 866 deaths reported, of which about 80 per cent occurred in Saudi Arabia.<sup>45</sup> Seen from outside the country, this epidemic was largely a local or regional phenomenon.

The third step will be for countries to build a comprehensive defence system around:

- Beefing up the horizon scan to enhance the ability to catch signs of a new virus.
- Contingency planning has worked well for many countries. However, COVID-19 may have disclosed some weak links and/or indicated where improvements might be useful.
- COVID-19 regrettably but understandably revealed that countries tend to protect themselves, which in some cases led to a scramble for medical equipment. It might be useful to fund an international stockpile of equipment. In the case of some outbreaks, MERS for example, only a few countries needed equipment, so there was no impetus for other countries to sit on the same equipment. An international effort will lower the cost of being prepared.
- Strengthen education and information about how an epidemic can be avoided or its impact lessened if it cannot be kept at bay or contained.
- A consultation and coordinating system among adjacent countries, preparing the ground for common policies if possible, instead of each country fending for itself.
- It has been depressing to watch the chaos in air traffic, with countries, airports and airlines acting with little or no coordination. Next time hopefully some kind of global coordination may ensure that a limited number of routes are kept open.

The onus will be on detecting future viruses, taking preventive measures as early as possible and calibrating the measures carefully.

Doing too much is as costly as doing too little, too late. It may be a tough balance to strike, but the advantages and savings in human lives and money of nipping a virus in the bud are enormous.

The fourth step will follow in one or two years' time, when it is known whether there was a second wave. Until that is behind us, it is difficult to judge which strategy proved to be the most successful one. More so, it will be crucial in determining strategies for in the event of future pandemics.

Some scientists link the severity of a second wave to the strength of immunity seen in the first wave. The line of thinking is that the populations of some countries will be less likely to become infected and to succumb to the virus than will be the case in other countries. But the reasons behind this will be difficult to pinpoint. One study has compared Germany and Britain and concluded that the average German has more immunological "dark matter" than the average Briton. Scientists have likened this factor to dark matter because they know it is there—statistics have demonstrated it—but it is not known what it is. If it can be uncovered, and quickly, the knowledge can be used to protect people in the event of a second wave, as the defence can be targeted at those most likely to become infected, instead of targeting the whole population.<sup>46</sup>

The question of a second wave is one of the most intriguing things connected to COVID-19, and it will disclose one of the biggest gaps in our knowledge. As long as a second wave is still a risk, governments will tend to move cautiously, giving the economy lower priority. That also explains why a considerable amount of money devoted to future research will go towards this question.

## Conclusion

Our societies face brutal, profound and opaque radical changes that can be compared to what happened in the aftermath of the industrial revolution. These changes would have taken place anyway, but COVID-19 has served as a catalyst. Perhaps history a hundred or two hundred years from now will conclude that these changes were more important than the epidemic itself.

## Notes

1. Parts of this epilogue appeared on 12 May 2020 in *Berlingske Tidende* and on 31 May 2020 on the website of *The National Interest*.
2. For an assessment of the impact on ASEAN+3, see Jayant Menon, "Covid-19 and ASEAN+3: Impacts and Responses", *ISEAS Perspective* no. 2020/54, 28 May 2020.
3. <https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?locations=CN>.
4. <https://www.statista.com/chart/20858/top-10-countries-by-share-of-global-manufacturing-output/>.
5. In 2011, Secretary of Defense Robert Gates warned European allies that they would have to pay more for their defence. <https://www.reuters.com/article/us-usa-nato/gates-parting-shot-warns-nato-risks-irrelevance-idUSTRE7591JK20110610>.
6. <https://www.nytimes.com/2020/06/06/world/europe/germany-troop-withdrawal-america.html>.
7. See, for example, Martin Jacques, *When China Rules the World* (Penguin Books, 2009).
8. <https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?locations=CN>.
9. <https://www.voanews.com/economy-business/chinas-digital-currency-takes-shape-will-it-challenge-dollar>.
10. <https://www.forbes.com/sites/rogerhuang/2020/05/25/china-will-use-its-digital-currency-to-compete-with-the-usd/#39055e9c31e8>.
11. [https://knowledge.wharton.upenn.edu/article/politics-pandemics-countries-respond-better-others/?utm\\_source=kw\\_newsletter&utm\\_medium=email&utm\\_campaign=2020-05-26](https://knowledge.wharton.upenn.edu/article/politics-pandemics-countries-respond-better-others/?utm_source=kw_newsletter&utm_medium=email&utm_campaign=2020-05-26).
12. There is a saying that two wounded royal tigers are more likely to fight each other than two fiery ones.
13. See an analysis of this by Wen-Ti Sung, "Taiwan's Covid-19 Diplomacy and WHO Participation: Losing the Battle but Winning the War?", *The Diplomat*, 2 June 2020, <https://thediplomat.com/2020/06/taiwans-covid-19-diplomacy-and-who-participation-losing-the-battle-but-winning-the-war/>.
14. <https://www.ft.com/content/27f4c7d0-ef5c-409c-b7b1-6c8108b8d128>.
15. <https://edition.cnn.com/2020/05/27/politics/hong-kong-pompeo-certification/index.html>.
16. <https://www.scmp.com/news/world/united-states-canada/article/3086788/donald-trump-says-us-end-hong-kong-trade-privileges>.
17. The Cuban missile crisis of 1962 is an exception.
18. The US decision to withdraw from the WHO and its sniping at the WTO are cases in point.

19. <https://edition.cnn.com/2020/05/16/business-india/india-pharma-us-china-supply-china-intl-hnk/index.html>.
20. <https://www.scmp.com/news/china/diplomacy/article/3086968/china-finds-manufacturing-opportunities-low-wage-africa>.
21. <https://data.worldbank.org/indicator/NE.TRD.GNFS.ZS>.
22. <https://www.cnbc.com/2020/05/17/powell-says-jobless-rate-could-top-30percent-but-he-doesnt-see-another-depression.html>.
23. <https://www.cnbc.com/2020/04/30/us-weekly-jobless-claims.html>.
24. [https://www.ecb.europa.eu/pub/economic-bulletin/focus/2020/html/ecb.ebbox202003\\_01~767f86ae95.en.html](https://www.ecb.europa.eu/pub/economic-bulletin/focus/2020/html/ecb.ebbox202003_01~767f86ae95.en.html).
25. <https://www.ft.com/content/4c2c6642-04c4-4fc5-bf80-12591975c215>.
26. <https://country.eiu.com/japan>.
27. [https://www.iif.com/Portals/0/Files/content/Global%20Debt%20Monitor\\_January2020\\_vf.pdf](https://www.iif.com/Portals/0/Files/content/Global%20Debt%20Monitor_January2020_vf.pdf).
28. <https://www.imf.org/en/Publications/WEO/Issues/2020/04/14/weo-april-2020>; <https://www.imf.org/en/Publications/WEO/Issues/2020/01/20/weo-update-january2020>.
29. <https://www.ft.com/content/66164bbc-40c7-4d91-a318-a0b4dbe4193e>.
30. <https://www.crfb.org/blogs/cbo-updates-budget-projections-wake-covid-19> + <https://www.cfr.org/background/national-debt-dilemma>.
31. <https://blogs.imf.org/2019/12/17/new-data-on-world-debt-a-dive-into-country-numbers/>.
32. <https://www.macrotrends.net/2016/10-year-treasury-bond-rate-yield-chart>.
33. The figures used do not fully reflect the current debt burden of the federal government, as the overwhelming part of the debt goes back to times when the interest rate was much higher than 0.6 per cent, but they illustrate the future impact of the interest rate on the net interest burden.
34. <https://www.washingtonpost.com/technology/2020/05/21/facebook-permanent-remote-work/>; <https://www.theverge.com/facebook/2020/5/21/21265699/facebook-remote-work-shift-workforce-permanent-covid-19-mark-zuckerberg-interview>.
35. The European Union and many other countries do not have exactly the same legal provisions as the United States, but they go some way towards offering protection to the data companies. <https://in.reuters.com/article/twitter-trump-executive-order-explainer/whats-in-the-law-protecting-internet-companies-and-can-trump-change-it-idINKBN235094?il=0>.
36. <https://www.wsj.com/articles/trump-to-sign-executive-order-targeting-social-media-11590681930?mod=djemalertNEWS>.
37. <https://libra.org/en-US/>; <https://www.ft.com/content/af6b1d48-90cc-11e9-aea1-2b1d33ac3271>.

38. <https://www.cnn.com/2020/04/28/checkout-joins-facebook-backed-digital-currency-project-libra.html>.
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45. [https://en.wikipedia.org/wiki/Middle\\_East\\_respiratory\\_syndrome](https://en.wikipedia.org/wiki/Middle_East_respiratory_syndrome).
46. <https://www.theguardian.com/world/2020/may/31/covid-19-expert-karl-friston-germany-may-have-more-immunological-dark-matter>.