PUBLIC POLICY AND THE SWEDISH MODEL

SWEDEN AND THE VIRUS

WHAT WAS THE SWEDISH GOVERNMENT'S APPROACH TO THE PANDEMIC, AND HOW WAS IT RECEIVED IN SWEDEN?

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1. Introduction

At the time of writing, the end of May 2020, about 4,000 Swedish inhabitants have died from the coronavirus. Relative to population size, that number is about 7 times greater than the death tolls in Norway and Finland and about 4 times greater than in Denmark (see Figure 1).

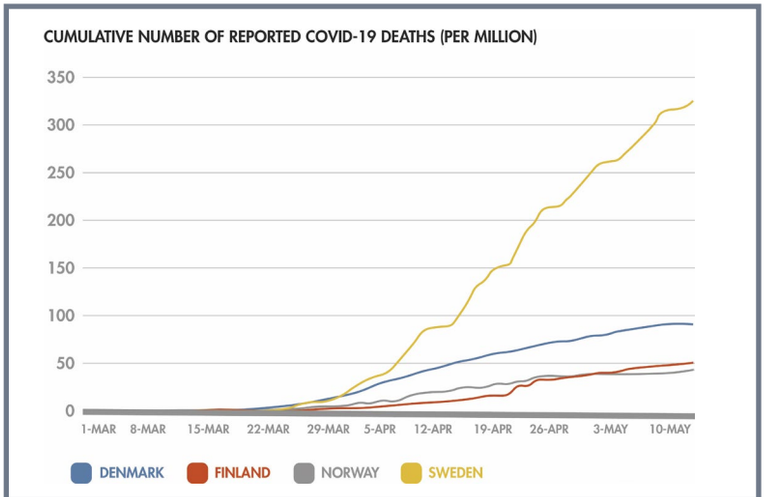

FIGURE 1: DEATHS

It is not yet clear to what extent these differences in outcomes are caused by differences in policy. They may partly be due to other factors, such as the timing of Stockholm's winter holiday and that many Stockholmers visited the Alps when the epidemic broke out there. But in view of recent increases in mortality outside of the Stockholm region, we find it is likely that Sweden's more liberal policy accounts for a sizable share of the cross-country difference.

Why did Swedish authorities choose a less restrictive path? A common view outside of Sweden is that the authorities were willing to sacrifice lives in return for other benefits. Another view, which we find more compelling, is that the health authorities feared that those lives would not be saved for very long. Instead, tight lockdowns might become unsustainable, and the country would run the risk of severe second or third waves of infection – with an even higher total death toll in the end. In other words, the main point of accepting many early deaths was to prevent more deaths later. Section 2 explains why we think that this consideration played a major part in justifying Sweden's strategy.

Section 3 describes Sweden's policy decisions and compares them to the decisions of Denmark, Finland, and Norway. We also briefly compare the behaviors and attitudes of people in the four countries. To some extent, policy differences seem to reflect different stances of the public health authorities. However, we also document cases in which decisions deviate from the advice of the officially appointed experts – but only outside of Sweden. The gap in policies is therefore greater than the gap in recommendations from public health authorities [1].

Section 4 asks the natural follow-up question: Why is it that the public health authorities' influence was larger in Sweden than in the other Nordic countries? By necessity, the answers to this question are speculative. Personalities, legal differences, and a Swedish culture of flexible consensus may all have mattered.

2. Sweden's strategy: How to flatten the curve?

Disregarding the alternative of not doing anything, there are roughly speaking two meaningful strategies for fighting a pandemic. One strategy seeks to suppress the virus until it disappears or at least until vaccines become available. The other strategy seeks to reduce the speed at which the virus spreads through the population, while accepting that a large fraction of the population will be infected before the epidemic ends. In the second case, the population is likely to reach "herd immunity" before vaccines or new cures arrive.

Herd immunity is reached when sufficiently many people have become immune to make the virus die out even if people live normally. It

[1] Of course, recommendations by public health authorities do not necessarily coincide with "recommendations from scientific experts". In many countries, and certainly in Sweden, expert opinions have diverged greatly, with many scientists calling for different strategies than those recommended by public health authorities.

remains unclear what infection rate is required before herd immunity sets in for COVID-19, but initial estimates suggested that herd immunity would be compatible with protecting about forty percent of the Swedish population from being infected.

The two approaches are usually referred to as suppress and mitigate, respectively. Like most countries, Sweden initially sought to suppress. Unlike most countries, Sweden made an early switch to mitigate. More precisely, it switched to a mitigation policy that accepted the virus spreading in a controlled fashion among the young and healthy, while protecting the old and sick, who were more vulnerable.

In Sweden, the Public Health Agency (FHM) is in charge of handling epidemics. The leading expert has the title of State Epidemiologist. The current holder of this position is Anders Tegnell. He succeeded Annika Linde in 2013, who succeeded Johan Giesecke in 2005. All three are medical doctors, and all have conducted research in epidemiology.

When did Sweden choose to mitigate rather than repress? The first clear announcement was made March 12, 2020. That day, Anders Tegnell explained at a press conference that Sweden had entered a phase where two objectives were to guide policy actions: (i) Do not let the number of severe cases exceed the hospitals' capacity to offer adequate care, and (ii) make sure to protect vulnerable groups. His predecessor as State Epidemiologist, Annika Linde, was more explicit in a Facebook post on March 14, 2020 where she both articulated and advocated the mitigation approach. Anders Tegnell refrained from being equally specific, and other representatives of FHM asserted that "herd immunity" was not the strategy but conceded that their expectation was that the epidemic would not be over before herd immunity was reached.

Our understanding is that Tegnell did not disagree with Linde's assessment. However, his official role necessitated his communication be more careful than hers. If authorities stress that a large fraction of the population will probably be infected within a few months, they undermine their most important message; namely, people need to be cautious. Healthy people below 60 years of age, who face low serious health

risks in case they are infected, may prefer to be infected early rather than engage in costly social distancing if this sacrifice merely delays the infection. After all, once their infection is over, they have a reasonable hope of immunity, in which case they may work and socialize with less need to protect others. If instead people hold hope that they will be able to avoid the infection altogether, they will be more careful. One of the greatest challenges of health authorities in such circumstances is to promote desirable behavior while at the same time being clear and truthful.

The mitigation message has also been amplified by Johan Giesecke, whose influence has remained considerable long after he left the post of State Epidemiologist. Unlike the Swedish Public Health Agency, which until very recently had been reluctant to predict the fatality of the virus, in interviews Giesecke repeatedly predicted that the infection-fatality rate, given that the capacity of the health care system was not exceeded, would be relatively low, on the order of 0.1-0.2 percent.

The mitigation messages from central Swedish experts contrasted starkly with a notable report by an Imperial College team only days after the announcements about the Swedish strategy (March 16)[2]. In the report, Neil Ferguson and co-authors claimed that suppression is the preferred strategy for Western countries, a perspective based, in part, on its estimate of the infection-fatality rate in the vicinity of 1 percent. The report is reckoned to have had great impact on policies in many countries around the world. For example, it is noteworthy that the UK's policy turned from mitigation to suppression soon after the release of the report.

Ferguson's influential report recommended strict lockdown measures in all countries that could afford them. The proposal included school closures, which Tegnell was particularly reluctant to endorse. Both Ferguson and Tegnell must be considered experts on the particular issue of school closures. In fact, Tegnell's most cited scientific publication is entitled "Closure of schools during an influenza pandemic".

[2] The report can be retrieved from https://www.imperial.ac.uk/media/imperial-college/medicine/sph/ide/gida-fellowships/Imperial-College-COVID19-NPI-modelling-16-03-2020.pdf

This article from 2009, which reviews evidence from previous school closures, is co-authored with Neil Ferguson.

In the popular debate, critics of the mitigation strategy often argue that it prioritizes material well-being over human lives. We think that this criticism is mistaken. The experts rarely mention differences in the value that they put on saved lives. They sometimes mention differences in their assessments of the infection's expected fatality rate. But most of all they differ in their beliefs about the feasibility of suppression. FHM clearly believed that it would be prohibitively costly to suppress the spread of the virus over a long enough period for vaccines and effective cures to be developed, at least given the available resources for testing and tracing available in Sweden in the early phase of the outbreak.

Under this assumption, stringent lockdowns are not only costly in themselves, but they risk costing a larger total number of lives than a good mitigation policy does. The reason is that the fraction of the population that is ultimately infected in the mitigation scenario depends on how many are infected when the epidemic starts to subside (the so-called herd immunity threshold): The more people are infected at that point, the more additional people will be infected before the epidemic is over. A suppression policy that fails or is surrendered causes a late spike in infections. Such a late spike is worse than the earlier spike associated with a successful mitigation scenario. This is a well-known implication of the most standard epidemiological model, the so-called SIR model.

To reiterate, FHM's strategy did not result from putting wealth above health. Compared to Neil Ferguson's team, FHM was probably optimistic about the fatality rate and definitely pessimistic about the prospect of suppression.

Who made the most accurate guess? According to FHM's analysis, we will only know the answer several months from now.

3. Nordic policy differences

Let us now document how the Nordic countries (excluding Iceland) have responded to the spread of COVID-19.

By the end of January, only a month after the first reported case of "pneumonia of unknown cause" in Wuhan, China, the WHO declared the new coronavirus a "Public Health Emergency of International Concern". Around this time, the first case in the Nordic countries, a Chinese tourist from Wuhan visiting northern Finland, was registered. A few weeks later, the virus started to spread rapidly in Northern Italy in regions where many Scandinavians go for winter holidays. By the end of February, all Nordic countries had registered cases. In the first weeks of March, the number of cases escalated in all Nordic countries, many of them linked to people returning from holidays in Italy and Austria.

In the beginning of March, governments started to take action. The following timeline lists the main restrictions, recommendations and actions taken to limit the spread of COVID-19 in the respective countries [3].

March 6: Danish PM Mette Frederiksen announces that gatherings of more than 1000 individuals are forbidden. On this same day, the Public Health Agency in Sweden holds its first press conference. It makes the assessment that the risk of spreading in Sweden is moderate and that all cases at this point are people who have visited affected regions, in particular Italy.

The next day, March 7, Danish competition for Eurovision is held at a venue with no audience while the Swedish Eurovision is held, as planned, with 27,000 in the audience.

March 11: The Danish government announces that schools and preschools will close next week and also decides that all "non-essential" government personnel work from home. It urges everyone to start following this directive sooner if possible. It also recommends the private sector to act in a similar fashion. Gatherings of more than 100 people are forbidden. PM Mette Frederiksen also urges restaurants and

[3] The list is not extensive, nor is it precise. There are important details about exactly what is meant by "travel restrictions", "school closure", or "closing bars and restaurants", in the respective countries. The overview here is meant to give an indication of when actions were taken, and the extent of restrictions. For this purpose, we think the listing is adequate.

nightclubs to close the coming weekend.

Swedish government forbids public gatherings of more than 500 people. The Swedish government also loosens documentation requirements for sick leave and increases sick pay to encourage people to stay at home if they have even mild symptoms.

This is also the day that WHO labels the epidemic a pandemic.

March 12: Norway follows Denmark in closing schools and preschools. Norwegian universities also decide to close and instead to hold lectures on-line. All cafés, bars etc. are closed. Only restaurants are allowed to stay open but have to assure at least 1m distance between guests. In Sweden, Anders Tegnell announces that "we now enter a new phase, requiring new strategies" where reducing the speed at which the infection spreads while protecting the old and vulnerable are key. It is also emphasized that "we should not close down more than what is absolutely necessary"[4].

March 14: All Danish borders are closed except for foreigners leaving Denmark, Danish citizens and residents returning, and people with an essential reason for their visit.

March 16: Finnish prime minister Sanna Marin announces that the country faces an exceptional threat and invokes a state of emergency (for the first time since WW II). Emergency laws are proposed on March 17 and passed on March 18. Starting that day, all schools and universities are closed. Borders are to close the following day (except for Finnish citizens traveling home). The Finnish government invokes the Emergency Power Act to close its international borders (including for Åland).

The Norwegian government´s ban on visits to the country comes into effect. Norwegian citizens, residents and Nordic residents are still allowed to enter Norway.

March 17: Sweden recommends all universities and schools for children over the age of 16 (gymnasium students) to close. Schools up to the 9th grade, as well as preschools remain open.

March 27: Sweden lowers the number of people allowed in public gatherings to 50 (from the 500 allowed since March 11).

[4] Announcement made by Anders Tegnell at the press conference on March 12, 2020.

In addition to the various formal restrictions, authorities in all the Nordic countries issue recommendations regarding social distancing and travel. Since all Nordic countries share a culture of high trust in government, these recommendations carry considerable weight. As observed by Ann Linde, the Swedish Foreign Minister: "These are not voluntary measures. You are meant to follow them. We believe the best way for us is a combination of some binding regulations and clear advice to the public. As far as possible, we want to build on a strong, longstanding relationship of trust between authorities and the public."

To summarize, over less than two weeks, from March 9 to March 20, the governments in Denmark, Finland, Norway and Sweden all intervened to slow down the epidemic. Denmark was among the first countries in Europe to close its borders and to impose a number of other restrictions. It was the prime minister, Mette Frederiksen, who delivered the messages about the measures taken. At least some of the Danish government's decisions, such as the border closure, went beyond the recommendations from the Danish Health Authorities.

Norway also acted quickly and there too it was the government's decisions about what to do that were announced. The policy measures were tougher than those recommended by the Norwegian Public Health Authority (Folkehelseinstituttet, FHI).

Finland acted a little later, but more forcefully. The government declared a state of emergency, giving them special powers to take rapid decisions and legislate beyond their normal mandate. The Finnish Public Health Agency formulated its own role as a source and provider of scientific evidence but left policy decisions up to the government.

In Sweden, the approach was different not only in terms of what decisions were taken, but also in terms of who communicated what actions to take. Starting on March 6, the Public Health Agency held press conferences almost daily, outlining their assessment of the situation and their recommendations.

According to the Swedish government, the policy differences between the Nordic countries were not due to different assessments of the situation. As expressed by Swedish prime minister Stefan Lövén: "It is not the case that Sweden makes one assessment of the situation and other countries a different one." If we were to accept such statements at face value, there are three possible interpretations. The first interpretation is that Sweden somehow lacks the capacity to suppress the epidemic to the same extent as its neighbors. The second interpretation is that Sweden's values are different – that we place a different price tag on the saved lives. The third interpretation is that all governments might have preferred Sweden's strategy, but that the other governments anticipated greater problems with managing the pressure of public opinion. We are not convinced that any of these explanations are ultimately convincing. However, the third possibility is intriguing and we therefore return to it in Section 4.

Should we accept the Swedish prime minister's statements at face value? Do the four governments share the same assessment of the situation? Perhaps not. As we saw in Section 2, experts have been divided concerning the possibility and desirability of suppression versus mitigation. Even compared to its Nordic neighbors, Swedish Health Authority stands out as being relatively pessimistic concerning the possible success of a suppression strategy. Our reading of statements made by Norwegian health authorities is that they have been, if not optimistic, at least open to the possibility that suppression might be sustainable. For example, it seems clear that the Norwegian public health authority had somewhat revised its pessimistic assessments concerning suppression strategies by March 12, when the Norwegian prime minister opted for school closures and mobility restrictions.

To a considerable extent, we think the Swedish strategy reflects FHM's greater pessimism regarding the possibility to suppress the epidemic. Perhaps Sweden's policy measures also represented a somewhat greater optimism with respect to the ability to protect the most vulnerable so as to reduce the number of lives lost in the mitigation scenario,

but we have not seen public statements by officials to this effect.

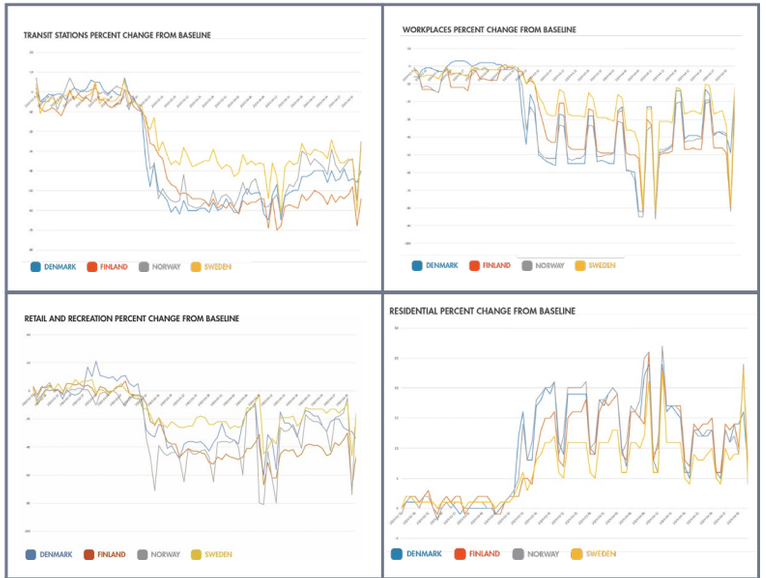

FIGURE 2: BEHAVIOR

While the policy differences are clear, it is also important to stress that, unlike the picture painted in some international media, Sweden did impose some restrictions and gave strong recommendations regarding social behavior. It has not been "business as usual" in Sweden either. Figure 2 displays changes in mobility during the first weeks of the epidemic. The four countries all display sharp drops in individual movement in mass transit stations, workplaces and in shops, museums, and theaters. Conversely, indicators that people stayed at home go up. The changes start during week 11, when Denmark and Norway both announced the majority of restrictions, with Sweden and Finland lagging slightly. Sweden's responses are smaller, but still large in absolute terms. (Of course, some of the behavioral change would also have come

about regardless of public policy, because individuals choose to protect their own health.)

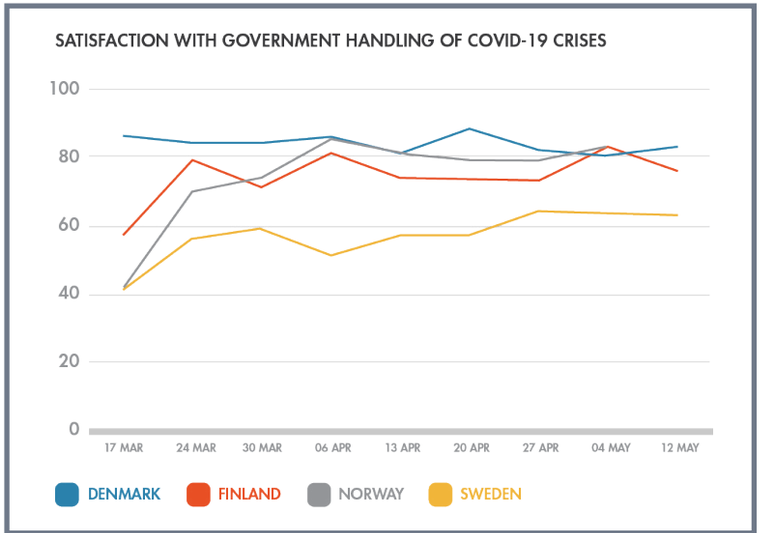

FIGURE 3: PERCENT OF POPULATION WHO SAY THEY THINK THE GOVERNMENT IS HANDLING THE ISSUE OF COVID-19 "VERY" OR "SOMEWHAT" WELL.
SOURCE: YOUGOV.SE

Popular support of government actions has been universally high and also increasing over time across all Nordic countries. Support is lowest in Sweden, presumably reflecting concern about the higher death toll.

4. Why was Sweden's response different?

Compared to its Nordic neighbours, we have established that Sweden stands out in two respects. First, Swedish health authorities were more pessimistic about suppressing the epidemic. Second, the government was more prone to follow its experts' advice. As a result,

[5] Angner and Arrhenius (2020) also discuss these points in relation to the COVID-19 crises https://bppblog.com/2020/04/23/the-swedish-exception/

Sweden kept schools and preschools open and did not impose mobility restrictions. Why did Swedish politicians not overrule the Public Health Agency?

One reason is constitutional. Swedish public agencies have more legal autonomy [5]. The following information taken from the Swedish government's own home page highlights the point (our emphasis added):

"Every year the Government issues appropriation directions for the government agencies. These set out the objectives of the agencies' activities and how much money they have available to them. The Government therefore has quite substantial scope for directing the activities of government agencies, *but it has no powers to interfere with how an agency applies the law or decides in a specific case. The government agencies take these decisions independently and report to the ministries. In many other countries, a minister has the power to intervene directly in an agency's day-to-day operations. This possibility does not exist in Sweden, as 'ministerial rule' is prohibited."* [6]

Accordingly, political scientists sometimes divide the Nordic administrative traditions between the "West" (Norway and Denmark) and "East" (Sweden and Finland). In Denmark and Norway, the vertical relation between ministers and government authorities allows politicians to be more directly in charge [7].

Other differences are cultural. In Finland, which like Sweden has a tradition of more autonomous government agencies, an important difference may have been a higher degree of "emergency preparedness" due to a more turbulent 20th century. In great emergencies, centralizing power is closer at hand. Thus, when Finland's government responded to the epidemic, it did so by swiftly passing emergency laws that bypassed administrative traditions. In Sweden, opposition parties were initially reluctant to pass such laws, and even if the government eventually got the extra powers it sought, it would probably hesitate to use them to go

[6] https://www.regeringen.se/other-languages/english--how-sweden-is-governed/

[7] See, e.g. Petersson (2004)

[8] See Wengström (2020) based on unpublished work by Andersson et al (2020). https://theconversation.com/coronavirus-survey-reveals-what-swedish-people-really-think-of-countrys-relaxed-approach-137275

against its own experts.

Non-Nordic observers are often especially surprised by the fact that Sweden's mitigation strategy is pursued under a Social Democratic Prime Minister. Elsewhere, anti-lockdown sentiments are usually associated with pro-business interests. Even in Sweden, support for the mitigation strategy is higher among people who put large weight on "the economy" relative to "health and safety" [8]. However, we suspect that "the economy" is where Swedish culture involves less conflict than almost everywhere else. After three conflict ridden decades at the start of the 20th century, Sweden now has a long tradition of close cooperation between Social Democrats and business owners. The so-called "spirit of Saltsjöbaden" refers to an agreement in 1938 between the Swedish Trade Union Federation and the Swedish Employers' Association, determining a new framework for labor negotiations. The framework served to reduce costly conflict and created the preconditions for mutual benefits over the next decades. There remains a strong culture of trust and cooperation in Swedish economic affairs.

Relatedly, in Swedish party politics, *representativeness* is the central norm, and consensus is the basic value (see Lewin, 1998). Sweden has a long history of minority governments. Despite temptations to benefit while in power, these minority governments have managed to acquire representativeness by garnering broader support in the Parliament. The current minority government is a typical example. Since it comprises parties both left and right of the political center, it is if anything even more representative than usual. As long as such a representative government pursues policies that are well-grounded in expert opinion, it is likely to have great legitimacy even if short-run costs are large.

Thus, our hypothesis is this: Sweden's culture of trust and cooperation remains strong enough for a majority of the citizens to support policies that incur large short-run sacrifices. They are willing to trust expert opinion that this sacrifice is worthwhile [9]. And if the majority

[9] Indeed, Andersson et al (2020) find that trust in the government's corona-policy is strongly related to general measures of trusting attitudes.

supports the policy, the culture of consensus puts limits on the pressure that the minority is prepared to exert. By contrast, countries with more competitive political cultures find it harder both to build a majority for short-run sacrifice and to subdue minority pressure.

In this sense, the present situation is reminiscent of other crossroads where Swedes have made difficult compromises, in which some groups have suffered significant losses. One example is the labor market reforms in the 1960s, where low-skilled workers gained higher wages in return for being willing to move to more productive jobs, often quite far from where they initially lived. Another example is the pension reforms in the 1990s, where the pay-as-you-go system was phased out in favor of a fully funded system after an agreement by all the major political parties except the Left Party.

5. Final remarks

Around March 10-15, the public health agencies in the Nordic countries developed somewhat different views regarding how to address the spread of COVID-19. The Swedish Public Health Authority was most pessimistic about the possibility to suppress the pandemic. These differences in assessment translated into larger differences in policies, as the governments in Denmark, Finland, and Norway were more prone than the Swedish government to impose lockdown policies. It is also possible that these differences have remained, or even grown over time, due to *motivated reasoning* on the part of decision makers. It is well known that once a path has been chosen or a guess has been made, most people are reluctant to change their minds.

At the time of writing, there is still substantial uncertainty about the ultimate outcome of the pandemic. The Swedish strategy may yield a much better or a much worse final outcome than the strategies of our Nordic neighbors. It seems safe to predict that the Swedish Public Health Agency and their allies will be heroes in the former case and villains in the latter. Both outcomes are unfortunate. The quality of a strategy should be judged according to its expected performance, given

what is known at the time it is decided, not its realized performance. Even a terrible shooter sometimes hit the target and a stellar shooter occasionally misses. Blame is due only to the extent that the missed shot was caused by foreseeable circumstances. Praise is due only to the extent that the bull's eye was not a fluke.

But making such balanced judgements of skill and luck is difficult. Psychologists have established that most people suffer from cognitive biases. One is known as *hindsight bias:* We tend to believe that what has happened was inevitable, and therefore foreseeable. "I knew that the shooter would miss the target." Another is known as the *fundamental attribution error:* We tend to ascribe to people's actions many of the outcomes that are due to circumstances. "The shooter missed the target because she made a poor shot, not because of the wind." Together, these biases drive us to appoint heroes and scapegoats. Our experts' performance is impeccable if Sweden does well relative to other countries. If Sweden does worse, our experts' performance is poor.

Sweden's culture of trust and consensus offers some protection against these biases. Just as we are all able to recognize our own bad luck, we recognize that our trusted representatives can be unlucky too. However, such protection is rarely complete. If Sweden's strategy causes many more deaths than Norway's strategy, there will be criticism of the policy, including criticism based on cognitive biases. Given the scale of the issue, there could even be some erosion of trust.

With our backgrounds from Finland and Norway, our hopes are as strong as anybody's that our Nordic neighbors' suppression strategies shall succeed. But if they do, we also hope that good news about fighting a virus will not be bad news for the Swedish culture of trust and consensus.

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