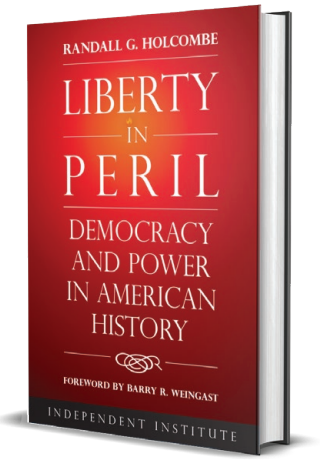
SUBSCRIBE NOW AND RECEIVE A FREE BOOK!

"***The Independent Review*** does not accept pronouncements of government officials nor the conventional wisdom at face value."
—**JOHN R. MACARTHUR**, Publisher, *Harper's*

"***The Independent Review*** is excellent."
—**GARY BECKER**, Nobel Laureate in Economic Sciences

Subscribe to ***The Independent Review*** and receive a free book of your choice such as ***Liberty in Peril: Democracy and Power in American History***, by Randall G. Holcombe.



Thought-provoking and educational, ***The Independent Review*** is blazing the way toward informed debate. This quarterly journal offers leading-edge insights on today's most critical issues in economics, healthcare, education, the environment, energy, defense, law, history, political science, philosophy, and sociology.

Student? Educator? Journalist? Business or civic leader? Engaged citizen? This journal is for YOU!

Order today for more *FREE* book options

SUBSCRIBE

The Independent Review is now available digitally on mobile devices and tablets via the Apple/Android App Stores and Magzter. Subscriptions and single issues start at $2.99. **Learn More.**

Download on the App Store | GET IT ON Google Play | Available on MAGZTER

INDEPENDENT INSTITUTE, 100 SWAN WAY, OAKLAND, CA 94621 • 1 (800) 927-8733 • ORDERS@INDEPENDENT.ORG

Covid-19, Public Policy, and Public Choice Theory

Panagiotis Karadimas

One of the central goals of almost all politicians in democracies is to get reelected. To achieve this, they generally try to keep track of the public's desires and expectations, and they enforce policies they expect will gain them as many votes as possible, even though the results of these policies may harm sizeable segments of the population. This is precisely what has happened during the Covid-19 pandemic. Governments implemented policies, especially lockdowns, that resulted in maximizing politicians' personal utility without addressing many virus-related problems and without considering the damage that these policies could cause to society. The public was pushed into mass hysteria and could not calmly assess the actual risks of the virus and the severe consequences of lockdowns and so initially considered lockdowns to be a life-saving policy. Politicians took advantage of this to maximize votes. The implementation of lockdowns signaled that the risk of dying from the virus was huge, and this further established in the minds of the already panicked individuals that lockdowns were the only way out. So most people commended politicians for shutting everything down and kept supporting them and these policies for a very long time.

The mainstream narrative is that public-interested politicians took heed of scientific advice and imposed lockdowns simply because that was the right thing to do from a scientific point of view. Therefore, because "the science" favored lockdowns as the only way to keep the virus at bay, the so-called common good was achieved by implementing lockdowns. Leaving the spread of the virus unchecked, it was claimed,

Panagiotis Karadimas obtained a Ph.D. in philosophy of science at the National and Kapodistrian University of Athens.

The Independent Review, v. 27, n. 2, Fall 2022, ISSN 1086–1653, Copyright © 2022, pp. 273–302.

would lead to unconscionably high death rates. Tackling the spread of the disease therefore became the foremost objective. Overall, it was assumed that should everyone adhere to mandatory behavioral changes, such as staying at home, working from home, and studying from home, the infection rates would be significantly reduced, and lives would be saved. Everyone would be better off because, notwithstanding possible side effects, people would have avoided serious disease and death. Thus, according to this view, politicians implement lockdowns because they care for public health.

Did politicians enforce lockdowns because they listened to scientists and acted in favor of the vast majority of people, or did they ignore science and simply act in favor of themselves? If the former is the case, then the following should hold: First, the data should show that the Covid-19 virus kills all people at nearly the same rate—independent of age and comorbidities so that lockdown policies that supposedly aim to protect everybody should be favored against a more targeted approach. Second, we should have reliable evidence that conclusively shows that lockdowns reduce infections and save lives. Third, it should be clear that policies that cause such a tremendous disturbance in social and economic life are worth their cost and do not cause more harm than good.

None of these three hypotheses has been verified, and in fact they all appear to be outright refuted by available evidence. If the second part of the question holds, then the scientific data should show that the virus is not as deadly as many claimed it would be, and that lockdowns do not benefit society by and large but do benefit the politicians who implemented them. By showing that the available data speak emphatically against the efficacy of lockdowns, and by stressing the failure of policy makers to consider trade-offs, I conclude that politicians acted as self-interested individuals and *not* as public-interested decision makers. To cut a long story short, lockdowns made almost everyone worse off. But politicians ended up better off.

The False Claims of the Lockdown Rationale

The main claim of lockdown advocates is that we should suppress the virus to save lives. This can be done, the argument goes, only by restricting movement so that people will not interact with each other and so transmission will be reduced, and thus fewer people will die. This was the scientific luster of lockdowns, which was based on the idea that because other diseases, such as AIDS, may be mitigated through behavioral changes, the same should be the case for a respiratory disease, even though most agreed that trying to mitigate respiratory flu-like illnesses is in vain.[1] Proponents of lockdowns tried to support their reasoning by asserting that all age groups face

1. The U.K. government in particular recognized "it will not be possible to halt the spread of a new pandemic influenza virus, and it would be a waste of public health resources and capacity to attempt to do so" (U.K. Government 2011, 28).

high risk of death and that asymptomatic transmission is ubiquitous and thus all people are to be treated as infected persons who can transmit the virus. Therefore the entire society should stay quarantined, despite the fact that asymptomatic transmission was considered, at least until early 2020, to be a minor and limited exception to the general rule, according to which transmission comes almost entirely from symptomatic individuals, and thus quarantine was always suggested only for those people (WHO 2019).[2] No reliable evidence indicated otherwise when SARS-CoV-2 appeared.

Moreover, the lockdown endgame was not very clear, and the goalposts shifted from "flattening the curve" to "zero-covid" and vice versa. The former turned out to be unattainable, and the latter was wishful thinking. Except for smallpox, no other infectious disease has ever been eradicated among humans (rinderpest has been eradicated from ruminants). And smallpox eradication was not the result of a lockdown but occurred after *centuries* of infections that induced lifetime immunity and after widespread vaccination programs that induced immunity among the vaccinated for decades (Taub et al. 2008). In the case of coronaviruses—apart from the fact that immunity against them is not lifelong, which on its own jeopardizes eradication plans—what renders eradication practically impossible is the fact that they become endemic and are controlled by herd immunity. Endemic diseases have numerous infective agents and are considered ineradicable (Barret 2004). SARS-CoV-2 had *already* spread across the globe when mitigation measures began, so the rational expectation ought to have been that it would eventually become endemic, as are all other coronaviruses (Lavine, Bjornstad, and Antia 2021), not that it would be eradicated. The idea of a zero-covid world therefore was never well-grounded.

Neither is the idea that lockdowns reduce infection rates and save lives. Even if we take for granted that the pro-lockdown argument has some validity, and assume that lockdowns do reduce transmission, some fundamental problems appear that should make us reject it as a strategy. The standard lockdown strategy includes school closures, business shutdowns, and stay-at-home mandates. We should also consider tight border controls as a part of lockdown policies. Assume that country X identifies the first cases very early and imposes a very strict lockdown by implementing all these measures and manages to have very few cases and deaths. After a few months, policymakers face the dilemma: Are they to lift the lockdown, or should they keep it in place indefinitely? They know that even though the mitigation strategy was successful, the virus is still in the community and is not eradicated. If they lift the measures and people start interacting with each other, then cases and deaths will grow, and a new dilemma appears: Should they implement a second lockdown, or

2. Some clarifications on the abbreviations that are used throughout the paper may help the reader and should be done at the outset: "WHO" is the acronym for the *World Health Organization*. "OWD" stands for Oxford University's database *Our World in Data*. "ONS" is used for the U.K. government's *Office for National Statistics* while "U.K. Government" is the U.K. Government's Health Department. "BLS" is the U.S. *Bureau of Labor Statistics*, "FDA" is the *Food and Drug Administration* in the U.S., and CDC is the United States' *Center for Disease Control and Prevention*. Full citations are in the "References" section.

should they let the virus run its course? If they choose the second option, then it is as if the initial lockdown was never implemented, because it simply delayed the inevitable infections and deaths and did not offer a viable solution. If they choose the first option and manage to successfully restrict the spread one more time, then the first dilemma bounces back, and this vicious circle is likely to continue with no end in sight. Assume now that another country (X′) manages to control its borders prior to the advent of the virus and so X′ is covid-free. Indeed, there is some evidence that implies that, even though full lockdowns do not affect mortality, there may be some benefit from border controls (Chaudhry et al. 2020). However, similar problems appear. Borders should be kept closed forever and no one should enter or leave the country not only in the foreseeable but also in the distant future. But to keep strict border controls in place forever is not feasible. So, they will, almost inevitably, become less strict. Thus, the virus will probably enter the country and start to circulate, and so the border restrictions that were implemented in the first place turn out to be of no avail.

A lockdown advocate could reply that if we manage to halt transmission, as time passes we may have treatments or vaccines available, and so even if cases increase when the first lockdown is lifted, lives can be saved without a second lockdown because, at this stage, we can implement pharmaceutical interventions. This suggests that effective vaccines/drugs will be available for widespread use very soon and that policy makers know that in advance. Vaccines against Covid-19 were available in record time indeed (approximately ten months after the official declaration of the pandemic). However, no one can credibly claim that they can be rolled out as soon or sooner if another novel pathogen starts to circulate. Speaking of the treatments against Covid-19, although there is evidence suggesting that monoclonal antibodies are lifesaving (Dougan et al. 2021), no clear scientific consensus has emerged regarding the effectiveness of antiviral drugs such as hydroxychloroquine,[3] ivermectin,[4] and remdesivir,[5] which further muddied the waters. Whatever the case, it is clear that keeping a lockdown in place until all the scientific uncertainties are resolved is likely to prolong the lockdown for years. For the sake of simplicity, though, let us assume that policymakers knew that ten months after the initial outbreak, effective vaccines and drugs would be at our disposal and that we are confident that whenever another pandemic strikes we will be able to implement effective pharmaceutical interventions within ten months. The ten-month period that it took for Covid-19 vaccines to become available may be a miraculously short period of time when considered in the framework of vaccine development (it typically takes years or even decades to

3. Prodromos and Rumschlag (2020) favor hydroxychloroquine, whereas Axfors et al. (2021) do not.

4. Some studies say ivermectin may be helpful (Caly et al. 2020), but others draw the opposite conclusion (Popp et al. 2021).

5. The WHO recommends against remdesivir (WHO 2020c), whereas the FDA has approved it (FDA 2020).

develop vaccines), but it is a tremendously long period to keep in place lockdowns and similar restrictions. Large-scale quarantines were always considered extremely costly and devastating (Inglesby et al. 2006), and lockdown advocates failed to offer any cost-benefit analysis that would plausibly indicate that the cost is worth suffering it. This is what the authorities ought to have done prior to lockdown implementation. Nevertheless, no account indicates that even short-term lockdowns are worthwhile, let alone extended lockdowns that last for ten months.

The bottom line is that even an idealized version of lockdowns offers only temporary results, does not address the problem, and is an unbearable strategy if kept in place for months, let alone in perpetuity. In the real world, though, lockdowns appear not to reduce transmission, and they were based on flawed assumptions, as I show in the next section.

Poor Data at the Forefront

The case fatality rate (CFR) of a disease is the proportion of people who have died among people who have been identified as having the disease. Identified cases are the officially recorded ones. Back in March 2020 the WHO (2020a) announced a CFR estimate of 3.4 percent, an implausibly high number. For most respiratory diseases, like Covid-19, the number of people that have in fact contracted the virus that causes the disease is much higher than the number of recorded cases. This implies that the CFR misses a huge portion of people who have contracted the virus but did not realize it. That is, they developed no symptoms or very mild ones and recovered speedily without seeking medical care. A better measure is the infection fatality rate (IFR), which is the proportion of deaths among *all* the people who have had the virus, not just those who have been recorded officially as cases. In order to assess how dangerous a disease is, one needs to know the IFR with the greatest possible precision.

The best way to accurately estimate the IFR is to measure the seroprevalence—that is, the levels of antibodies in the society. The initial IFR estimate reported to the public was by the WHO, and it was very close to the CFR due to the assumption that there were very few, if any, asymptomatic carriers of the virus (WHO 2020b). Using mathematical modeling, researchers at Imperial College London reduced the infection fatality rate estimate to 0.9 percent (Ferguson et al. 2020) So, was the IFR 0.9 percent or was it 3.4 percent? Both numbers were seen as exceptionally high by the public. Panic began to set in.

These estimates were soon reduced, but the initial, inflated estimates lingered in the public consciousness. Data from Iceland significantly reduced the IFR to 0.3 percent (Gudbjartsson et al. 2020). A revealing study by Ioannidis (2021), showed that the median IFR was 0.15 percent—approximately one out of 670 infected people die, not the one in 33 estimated by WHO. More importantly, for people below seventy years old, the IFR was further reduced to 0.05 percent—only five out of 10,000 infected people die. However, the likelihood of serious disease and death

increases steeply among those above seventy years old, and it may reach 1.54 percent or higher due to comorbidities (Ioannidis 2020).[6] So, the appropriate answer to the above question is that the IFR of SARS-CoV-2 is not a constant and is related to the age group of the people who are getting infected.

The mistakes of the early predictions were thus, first, that everyone faces roughly the same danger from the virus regardless of age group and, second, that the asymptomatic carriers were very few. The data that emerged from serological studies showed that the virus was much more widespread than the initial predictions, and, hence, the disease was much less severe than it was initially reported. Moreover, people under seventy face little to no risk from the virus and, conversely, people above seventy face much higher risk. It follows from these data that we know whom to protect: septuagenarians and octogenarians. In the experts' terminology this is called "focused protection."[7] However, the measures taken imply that all people face equally serious danger from the disease. It is clear that the decision to enforce lockdowns was not backed up by strong evidence.[8] Sadly, politicians and policy makers largely ignored the new findings and their implications—discrediting the public interest theory—and the public took their actions as a signal that risks were much higher than they were in reality.

The False Postulate and Prolonged Mass Hysteria

When policy makers contradicted the data by postulating that everybody was in danger and everybody must be protected, societies were increasingly gripped by mass hysteria. In mass hysteria people start to believe that they will be exposed to something dangerous because someone else says so, or because this fits their experience. During the Covid-19 pandemic people were constantly under the delusion of an exaggerated threat (Bagus, Peña-Ramos, and Sánchez-Bayón 2021). When SARS-CoV-2 started circulating, mass hysteria was ignited, and the irrational fear that everybody faces a high likelihood of death was taken as gospel by many. The exaggerated IFRs that became known may have played a part in this, but they were not the only factors that contributed to mass hysteria. After all, it is not the first time—and certainly it won't be the last—that faulty scientific projections have been used. Neither was the declaration of a pandemic by the WHO enough to cause mass hysteria on its own.

6. The Centers for Disease Control and Prevention gives similar IFRs (CDC 2020b).

7. Leading epidemiologists and public health scientists such as Jay Bhattacharya, Sunetra Gupta, and Martin Kulldorf took the bull by the horns and signed the Great Barrington Declaration, proposing the "focused protection" policy as an exit strategy from the pandemic (Bhattacharya, Gupta, and Kulldorf 2020).

8. One may argue that despite the fact that the data speak against lockdowns, it was still appropriate to implement them and showcase some ethical or other reasons for doing so. As things are, though, the main argument given in favor of lockdowns is that science clearly supports them. So, to demolish this argument one should reply with the available scientific evidence, not with value judgments.

Several times in the past a pandemic has been declared, such as the H1N1 pandemic in 2009 (WHO 2009), but no mass hysteria and no lockdowns ensued.

Breathless reporting on the dangers of SARS-CoV-2 established the fear and acted as an amplifier of mass hysteria. The public was inundated by warnings that serious disease and death was around the corner, and these reports did not respond to changes in the scientific developments. So even when scientists offered evidence that the actual risk of death was much lower than it was initially assumed or that schools were fully safe for reopening, the media coverage did not change, politicians did not reverse their actions, and mass hysteria did not recede. Researchers have shown that negative news on Covid-19 far outnumbers positive news (Sacerdote, Sehgal, and Cook 2020), and it is known overall that bad news has a stronger impact than good news (Baumeister et al. 2001). Findings from psychology on risk perception indicate that biased media coverage, incomplete information, and personal experience can lead to distorted risk estimates (Slovic 1987). These three strands of social life became dominant during the pandemic and thus the false postulate that all age groups face very high risk of death was consolidated (Rothwell and Desai 2020). The final nail in the coffin is that mass hysteria turns out to be contagious and spreads pretty much like microbes (Le Bon 2002). So, when a group of people behaves in an irrational way, it is possible that this will be established as a norm, and then the majority of people start to behave in the same way. Psychologists and social scientists call it the *phenomenon of emergent norms*, which is a pattern that helps spread the hysteria even faster (Freedman 1982). As the Covid-19 mass hysteria was becoming more intense, emergent norms included behaviors that treated healthy people as potentially asymptomatic super-spreaders of the virus, and so people were trying to protect themselves from each other. Staying six feet apart and avoiding handshakes can be characterized as instances of this attitude. As a result, people ended up terrified by SARS-CoV-2, and saving themselves from this virus became their first priority. Hence politicians decided to make it the first priority for public policy too. Their actions made mass hysteria orders of magnitude worse than it already was. As Philipp Bagus and colleagues (2021) rightly stress, governmental interventions may be enough by themselves to lead to mass hysteria. In the Covid crisis, lockdowns came in when the public was already panicked, and so it is as if politicians implied that an untold catastrophe was to be expected in the absence of lockdowns. We were therefore led to a novel kind of mass hysteria: *prolonged mass hysteria*.

If politicians had not intervened, mass hysteria would have faded away, and the emergent norms would not have been prevalent for very long. People often hold beliefs that do not follow from the available evidence, but because acting on (false) beliefs usually bears a personal cost (often in terms of material well-being), people estimate trade-offs between sticking to their own mistaken beliefs and their everyday interests. However, there is a setting in which the cost of practicing one's own preexisting biases is effectively zero: voting. As public choice theorists argue, people have no strong incentive to revise their biases on public policy issues when new evidence

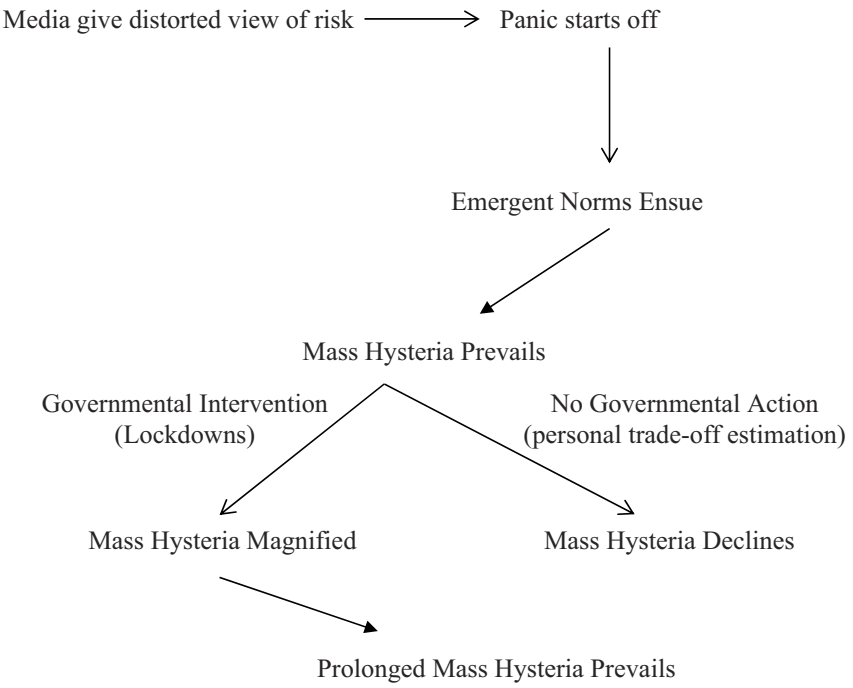
appears, because the probability that one single vote will influence the election outcome is nearly zero. Thus, people can collectively choose bad policies by making an individually rational choice during voting. On the contrary, they do have incentives to take new evidence into account when making personal decisions in order to minimize the possible cost they will likely suffer otherwise (Caplan 2001; 2007). During the Covid-19 pandemic many people falsely believed that all age groups face high risk of death and that asymptomatic transmission is common. In no-lockdown settings, people initially follow the emergent norms, but because no lockdowns are implemented, they realize that acting on these beliefs bears a remarkable personal cost and makes them worse off. As in the case of voting, with lockdowns in place, people aren't forced to reassess their beliefs. But if no lockdown is in place, they must examine trade-offs. So, for example, not going out with friends bears the cost of loneliness, and meeting them at a restaurant carries the risk of catching the virus. Dining out with friends and remaining healthy makes a person realize that one is better off by going to a restaurant with friends than staying at home. Contracting the virus and experiencing only mild symptoms has the same effect. Similar trade-offs on several aspects of everyday life estimated by many people at an individual level lead to a gradual decline of mass hysteria in countries that did not lock down. Data from Sweden show that although the Swedish people were not immune to mass hysteria, the absence of lockdowns made life return to almost normal rather quickly, despite the fact that SARS-CoV-2 continued to circulate. From mid-March 2020 to early April 2020 people in Sweden avoided public transportation and visiting shops, but since schools and businesses remained open and people had the chance to estimate personal trade-offs, they gradually returned to their old habits (OWD 2021a), and mass hysteria was almost entirely defeated. Figure 1 summarizes the case.

Under such circumstances, lockdowns are to be seen as a policy that politicians enforced to show that they share the public's concerns, and in this respect they may have been successful—and may have helped themselves get reelected. But if we examine whether they were effective in controlling the disease, as public interest theorizing assumes, we will see that they did not reduce mortality from Covid-19 and they caused avoidable serious side effects in the society.

Lockdown Failure

Lockdowns are not a mechanism for disease eradication, because the virus still circulates even if the society is locked down. Since the same rules apply to everyone, a serious methodological problem shows up: all become equally exposable. So, younger people, who face almost zero risk from the virus, have equal chances to contract the virus as those over seventy, who face much higher likelihood of death. To reduce

Figure 1
Pathways to (Prolonged) Mass Hysteria



the likelihood of the elderly catching the virus, young people should be exposed to the virus and the elderly should take special precautions.

Consider the following scenario: Person A is twenty years old, and person B is eighty-five years old. Both are required to stay at home and leave only to go to the grocery store or to take a walk near their home. Both take the same risks, and so both have the same probability of being exposed to the virus, despite the fact that for person B the IFR is very high (well above 1 percent) and for person A it is very low (nearly 0 percent). In this respect, lockdowns, instead of protecting them, in fact expose septuagenarians and octogenarians to the virus because if these people are to be protected, they should take fewer risks than the younger population and vice versa: the younger people should go on with their lives so that the virus circulates mostly among them, leading to the development of robust population immunity and thus making it more difficult to infect the elderly. Naturally acquired immunity against SARS-CoV-2 is strong and long-lasting, and it protects against serious cases of reinfection (Cohen et al. 2021; Pape et al. 2021; Turner et al. 2021). So if people who have nearly zero risk of dying live their normal lives and one way or another contract the virus, they will typically recover quickly and they will gradually build

up population immunity, which will protect the vulnerable. But if the vulnerable and young people are equally exposed, then the former will be more easily infected and because they face a much higher risk of dying, the death rates will probably increase, and the levels of population immunity are likely to be lower. The more that low-to-zero-risk groups contract the virus, the more the high-risk groups are protected, and, conversely, the more that low-to-zero-risk groups are protected, the higher the chances of the elderly getting infected. So, Person B would have been safer if individuals under seventy were allowed to live their lives and the government implemented some targeted measures for B's age-group such that people at their age would avoid—at least for a period of time—some risky activities (such as going to the grocery store).[9] Thus lockdowns do not provide special protection for those at risk, which is what the data imply should have been the case.

The counterargument to this is that by letting young people go about their lives, older people will be more easily infected because cases will increase and young people will transmit the virus to older ones, especially if they share a common household. However, the available theoretical knowledge and sound empirical data from several countries across the globe suggest that if no lockdowns are enforced, the chances of the elderly becoming infected are *not* increased, and we cannot rule out the possibility that these chances are in fact reduced.

Firstly, the objection seems to hinge upon the claim that in the absence of lockdowns, people will not by themselves take commonsense preemptive measures. That is simply not true. When older people know that a virus that poses high risk to them is circulating, they voluntarily adjust their behavior, in order to protect themselves. In the early stages of mass hysteria most people follow the emergent norms, but if no lockdowns are imposed and a data-driven public-health message is conveyed, then mass hysteria will gradually weaken and young people can live normally, while the older remain more cautious.

Secondly, policy makers failed to take into account that household transmission is the main setting of transmission (Luo et al. 2020). When all the members of a family stay at home, they can infect each other. Therefore, the likelihood of older people getting infected if they live with youngsters can increase, not if life goes on as normally as possible (which typically includes most members of the family spending many hours of the day away from home) but under lockdown, since all members of the family are stuck at home.

Thirdly, we know that a particular group of young people, schoolchildren, do not cause infections to spiral out of control (Munro et al. 2020), which implies that

9. The so-called essential workers, such as grocery store workers, were exposed to the virus much more often than other people during lockdowns. But because they are typically under seventy years old, they faced little to no risk from the virus. However, from a pro-lockdown viewpoint, this is a glaring inconsistency. Either all people face serious risk and all should be protected, or we should protect only those at really high risk. But to expose certain groups of blue-collar workers to the virus while protecting the elites and simultaneously claiming that the virus is a real threat to everyone is not a coherent strategy.

closing schools does not necessarily reduce the risk of infection for the vulnerable population.

Fourthly, it is often not taken under serious consideration that asymptomatic transmission is extremely rare, if it ever happens at all (Cao et al. 2020). Therefore, it is simply mistaken to claim that every single person is likely to spread the disease and that each individual would, unbeknownst to him, pass it on to a vulnerable person. Thus, by quarantining those without symptoms (i.e., healthy people), transmission is not reduced. In fact, this is the normal assumption. The WHO suggested, at least until 2019, that in order to mitigate respiratory diseases, *only* those with symptoms are to be isolated, not those that were exposed to an infected person (WHO 2019), let alone those who did not even come into close contact with symptomatic individuals. Thus, quarantining everyone is a strategy aberration with unclear, benefits, to say the least. Even fomite transmission—that is, transmission via items like clothing and utensils—has been seriously questioned, because the detected viral fragments on fomites are dead and are not able to cause infections (Mondelli et al. 2020; Onakpoya et al. 2021), which casts further doubt on the pro-lockdown worldview of an omnipresent virus that can be transmitted in every conceivable way.

So, because household transmission drives the pandemic, and because closing schools and restricting the movement of healthy people does not necessarily reduce infections, and because fomite transmission is yet to be proved, there is no theoretical reason to believe that if no lockdowns are in place, transmission rates would increase dramatically, and older people would face higher risk of being infected than they face under lockdowns where they are much more exposed to the possibility of household transmission. If the theory doesn't support lockdowns, what does empirical evidence show about the impact of lockdowns?

Data from countries that locked down, and countries that did not, provide strong empirical reasons to *reject* the claim that lockdowns reduce transmission and deaths by verifying that the viral trajectory is irrespective of nonpharmaceutical interventions.[10] Most empirical studies find that full lockdowns and other strict mitigation measures are *not* associated with mortality levels and that less severe interventions lead to pretty much the same results (Chaudhry et al. 2020; Haug et al. 2020; Larochelambert et al. 2020). Researchers compared data from countries like Sweden and South Korea that did not shut everything down with countries that have had a very strict lockdown—such as the United Kingdom, Belgium, and France—and found no significant differences in case growth and decline (Bendavid et al. 2021), which puts paid to lockdown strategy since the purpose of its imposition was exactly

10. The idea that lockdowns prevent hospitals from being overwhelmed, a belief commonly suggested by lockdown proponents, is based on zero empirical evidence. Data released by the CDC from the early days of the pandemic suggest that, by and large, the hospitalization rate is comparable to the rate of hospitalization from influenza (CDC 2020a). Those who pursue the hypothesis that hospitals were overcrowded or under more strain in countries that did not lock down whereas in countries under lockdown they were not, bear the burden of proving it, which is an unlikely prospect; given that lockdowns do not reduce transmission and mortality rates, it is hard to see how they can reduce hospitalization rates.

to stop the virus and to save lives. Belgium, Italy, the U.K., Peru, and France all had very strict lockdowns and all suffered a higher death toll (per million of the population) than Sweden, which had a no-lockdown strategy (OWD 2021b). This seems to fit the description of lockdowns as a setting under which all age groups are equally exposed to the virus. The cases may follow a similar pathway (in the sense that the epidemic wave peaks for two weeks or so and then it goes away irrespective of the nonpharmaceutical interventions that are implemented), but in no-lockdown settings (such as in Sweden), it is likely that younger people are exposed much more than the elderly, and so the number of deaths turns out to be lower, because the subpopulation that is at high risk of death is, either intentionally or inadvertently, protected because the virus circulates mainly among the low-to-zero-risk groups, and strong population immunity is developed, something that is not happening when lockdowns are implemented and all follow the same rules, such as in Belgium, Italy, the U.K., Peru, and France.[11]

Collateral Damage

Apart from not tackling the pandemic, lockdowns caused severe side effects. Lockdown strategies include school closures, shutting down businesses, and curfews for the general population. This wreaks havoc in society and reduces the longevity of people who would not have died from the virus. The years of life lost (YLL) and the hazard ratios (HRs) help us estimate the consequences of this policy.

The YLL measure gives information about premature deaths. Contrary to the absolute number of deaths from each specific cause, which assigns the same weight to each death regardless of age, YLL considers both the frequency of deaths and the age at which it occurs. To estimate the burden of a disease and the impact of public health policies, YLL should be taken into account. To calculate YLL, we set an upper limit as a reference age, and sum the number of deaths at each age and multiply it by the number of years remaining to the reference age (Gardner and Sanborn 1990). The calculation is done for deaths from each particular cause in each age group, and the results are summed. The average lifespan in the Western world is in the region of seventy-eight to eighty-five years old (Human Development Report 2020, Table 1, 343), so let us set eighty-five as the reference age. If someone dies when he or she is eighty years old, the YLL is five. If someone dies at age fifty, the YLL is thirty-five. In the U.K., the median age of deaths involving or due to Covid-19 is eighty-three years old, and the mean age is 80.4 years old, while the average lifespan is eighty-one years old (ONS 2021). Thus there are hardly any years of life lost due to Covid-19 in the U.K.

11. Preexisting immunity is also a key finding that determines Covid-19 mortality and further undercuts lockdowns. People with no detectable antibodies in their blood had robust T-cell immunity. This reflects immunity from previous exposure to other coronaviruses, which protects people from SARS-CoV-2 as well (Le Bert et al. 2020). The levels of preexisting immunity in various societies seem to vary from 20 percent to 50 percent (Doshi 2020), and it is commonly estimated that Asian countries faced low death rates from Covid-19 due to the high levels of preexisting immunity in these populations (Bolourian and Mojtahedi 2021) and not due to the strict lockdowns.

The side effects of lockdowns can severely reduce the life span of young people and thus cause serious damage in the society in terms of YLL whereas Covid-19 does not.

Another key measure to understand lockdown-induced damage is hazard ratios (HRs). HRs are the ratios of death probabilities. For example, an HR of three means that the one group has a threefold increase in the chances of dying in comparison to the second group. Unemployment is linked to reduced longevity and is a common consequence of lockdown policies too. Thus among those who suffer unemployment and those who do not, we try to estimate the extent to which the first group has a considerably higher probability of dying prematurely. The side effects of school closures and the damage caused in the economy by the lockdowns are likely to result in many YLL and in higher HRs for young people. Policy makers ought to have considered this prior to implementing lockdowns.

School Closures

Keeping children away from school can cost lives. In particular, reduced educational attainment leads to reduced life expectancy. Virtual learning is not as effective as in-person learning, especially for schoolchildren in primary school, and low levels of attendance make matters worse. According to estimates from the United States, a total of 24.2 million children aged five to eleven years attended public schools that were closed during the 2020 pandemic, losing a median of fifty-four days of instruction (interquartile range, 48–62.5). Missed instruction was associated with a mean loss of 0.31 years of final educational attainment for boys and 0.21 for girls. Summed across the population, 5.53 million YLL may be associated with these school closures alone (Christakis et al. 2020). Lockdowns forced schoolchildren not only out of classes but also into isolation; evidence suggests that this significantly reduced their lifespan, a plight that appears to have been avoidable in view of the minimal risk they face from the virus. Data from Sweden—a country that kept its schools open—show that there were *zero* deaths among schoolchildren from Covid-19 (Carlson 2020; Ludvigson 2021). There will hardly be zero deaths in the long-run as a result of school closures, however.

The toll may be even higher due to the mental damage caused to children by the isolation, given that social relationships are a key factor to mortality. Social scientists provide evidence indicating that those with stronger social relationships have a 50 percent increased likelihood of survival than those that live isolated (Holt-Lunstad et al. 2010).

Economic Carnage

Shutting down businesses causes serious economic damage. This damage is not only to be viewed in terms of lost production—a rather innocuous outcome in developed countries—but also in terms of YLL. As lockdown policies were implemented during the year 2020, recession, mass unemployment, and reduced income became the norm. Across the world, the sharp rise in global poverty was unprecedented.

To mention but a few results, a survey investigating the economic impact of the lockdown in Uganda found a decline in total household income of 60 percent (Mahmud and Riley 2020). Reduced income in developing countries amounts to a shocking 67 percent, and the negative effects are experienced by households across the socioeconomic spectrum (Egger et al. 2021). On top of that, the World Food Program (WFP) of the United Nations warned that up to 270 million people were pushed to the brink of starvation during the pandemic (WFP 2020).

The empirical relationship between income and life expectancy is not new in economics and neither is the strong correlation between employment rates and lifespan. Samuel Preston's famous curve illustrates that countries with higher average income have longer life expectancy than countries with lower average income, and people within a country with higher income generally live longer than poorer ones (Preston 1975). So economic suppression diminishes the income of many people and hence reduces the likelihood of living longer. The converse also holds. Economic growth is likely to increase the average lifespan by offering chances for higher income. There is moreover a clear correlation between employment rates and mortality. Data from the deep Swedish recession of 1992 to 1996 show that mass unemployment imposes mortality risk on a sizeable segment of the population. In particular, exposure to unemployment during recessions poses a higher mortality risk in post-recession periods. Post-recession all-cause mortality rose and gave hazard ratios (HRs) of 1.46 for men and 1.12 for women. Unemployment is especially linked with alcohol-related health problems, ischemic episodes, and circulatory diseases. Excess deaths from circulatory diseases were recorded among men who experienced unemployment: from heart attacks HR = 1.32 and from ischemic episodes HR = 1.11. Young men experienced higher likelihood of death from stroke: HR = 2.53. Alcohol-related mortality rose significantly too, among both men and women. Among those in their thirties—that is, people born from 1956 to 1965, these ratios were very high: for males HR = 4.44 and for females HR = 5.73. For men, but not for women, suicide and cancer mortality rose also among those who had suffered unemployment (suicide HR = 1.43; cancer HR = 1.14). A significant result of this study is that mortality consequences are larger among the young, among unmarried men and women, and among men and women of low education or income (Vagero and Garcy 2016).[12]

In a similar vein, economists project that lockdown policies are likely to result in excess deaths in the future. Covid-19-related unemployment was two and five times larger than the typical unemployment shock, depending on race/sex, which correlates with a 3.0 percent increase in mortality rate and a 0.5 percent drop in life expectancy over the next fifteen years for the overall American population. Francesco Bianchi and colleagues predict that the shock will disproportionately affect African Americans

12. Although the correlation between economic development and mortality may not be equally strong for all causes of death—cardiovascular-related deaths are strongly procyclical but cancer-induced deaths may be unrelated to economic downturns or may even be countercyclical (Ruhm 2013)—the association between higher income and longer life expectancy remains robust (Chetty et al. 2016).

and women over a short horizon, whereas white men might suffer large consequences over longer horizons. These figures translate to a staggering 0.89 million additional deaths over the next fifteen years (Bianchi et al. 2020). Bearing in mind that people who face unemployment are usually under seventy years old, we arrive at the following results: for those under seventy the Covid-19 infection fatality rate = 0.05 percent and the mortality risk due to unemployment = 3 percent, which is very high both in comparison to the low risk these age groups face from the virus and on its own terms.[13] A 3 percent mortality rate that would impact, say, 100,000 people could lead to 3,000 deaths, whereas Covid-19's death toll per 100,000 people for individuals below seventy years old amounts to about 50 deaths. Countries with higher average income are likely to suffer fewer excess deaths per million of the population in comparison to developing countries, but this does not alter the central conclusion: for people under seventy, recession and unemployment are both far more dangerous than Covid-19.

It is often said that people would shelter in place even in the absence of governmental interventions, so that the economic outcome would be pretty much the same either with or without a lockdown. Although it is true that due to mass hysteria people behaved absurdly and voluntarily restricted their movements, the thesis that the economic devastation would be in the same ballpark in the absence of lockdowns cannot be supported. Unemployment rates in the United States verify that economies with no lockdowns perform far better than economies with lockdowns. In December 2021 South Dakota had among the lowest unemployment rates in the United States (2.6 percent), and it is the only state in the country that did not shut down businesses. On the contrary, New York, where very harsh lockdowns were in place, had during the same period more than double the unemployment rates of South Dakota (6.6 percent). The situation was similar in California, which had the highest unemployment rates in the country (6.9 percent) and also implemented strict repeated lockdowns (BLS 2021). These gaps were even higher in spring 2020: unemployment rates in South Dakota were 9.2 percent, in New York 16.2 percent and in California 16 percent (BLS 2022). Thus mass hysteria may be linked with some hesitancy in consumption, and it perhaps delays some investments, but it does not cause deep recession and mass unemployment. Lockdowns do.

Public Interest Explanation Rejected

We have seen that the data that were used to justify lockdowns were mistaken and that only people above seventy face high risk of dying from Covid-19. We also have

13. The spike in lockdown-induced unemployment rates lasted approximately from March 2020 until summer-fall 2021 (the period of time in which repeated lockdowns were mostly implemented), whereas the unemployment mortality risk in Sweden lasted four years. This suggests that individuals were exposed to the 3 percent unemployment mortality risk for a shorter period of time than people who suffered the Swedish recession, which could lead to fewer excess deaths in the period after the lockdown-induced recession than the ones recorded after the recession in Sweden. However, the case remains that they have been exposed to higher mortality risk than the risk posed by the virus.

seen that lockdowns do not make older people better off (they do not save them from the virus), and it appears they make them worse off (lockdowns likely expose them to the virus). We moreover saw that the YLL and the very high HRs due to reduced income and unemployment as well as the concerning effects of isolation show that lockdowns do make young and middle-aged people worse off. These results refute all the assumptions upon which the public-interest theorizing on lockdowns was based.

Missing Trade-offs and Public Choice Theory

By implementing lockdown strategies, politicians paid attention solely to the short-term implications of their policy and failed to take into account the long-run consequences of their actions. In other words, they did not estimate trade-offs. Such trade-offs would require a thorough examination of the pros and cons of lockdown policy—that is, to consider who is vulnerable from the virus and who is vulnerable from the lockdowns and act accordingly. We saw that schoolchildren face almost zero risk from the virus but are exposed to the danger of reduced lifespan from school closures. It is therefore the lockdowns that threaten their lives, not the virus. The case is similar for policies that drive millions into unemployment. Unemployment and reduced income are likely to reduce the longevity of people under seventy much more than the risk of contracting SARS-CoV-2 does. The harm caused by the virus and by the lockdowns would have been minimized if harsh lockdown measures had been avoided and a nuanced, targeted approach had been implemented.

The failure to consider trade-offs cannot be attributed to ignorance. Politicians did what they thought would keep them popular in the short-term—that is, in order to get reelected. The many YLL, the increased HRs to be expected, as well as deaths due to delayed diagnoses of serious diseases (Bakouny et al. 2021; Friedman et al. 2021), will occur later in time, when the politicians who implemented lockdowns will probably be out of office and thus the premature deaths will hardly be directly attributed to their policies. Even if the politicians who imposed lockdowns are still in office when these side effects take place, few would directly attribute the deaths to lockdowns. But if politicians did not lock down and old people died of Covid-19, then politicians would be truly lambasted for failing to protect the population from the virus. So lockdowns made almost everyone worse off, but the politicians better off.

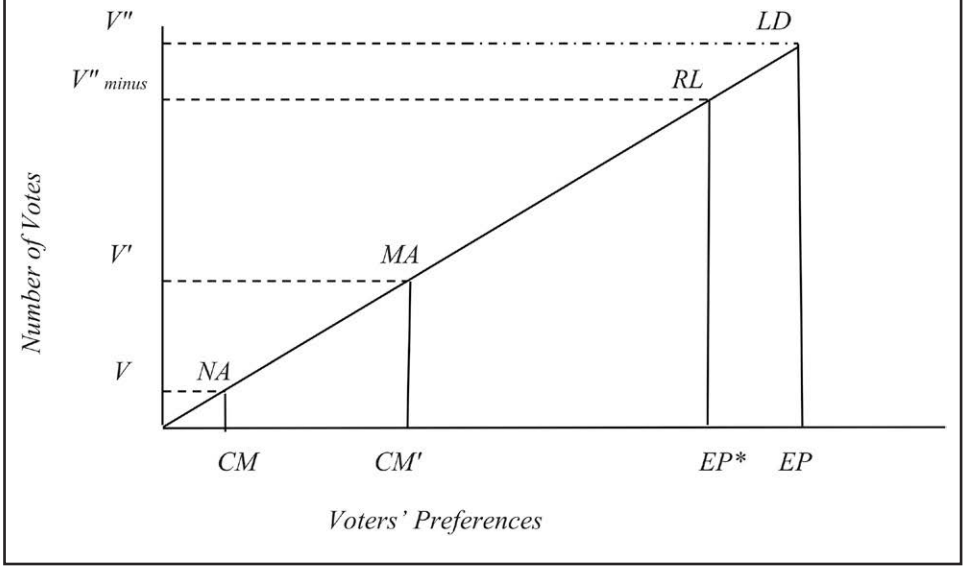
Public choice theory gives the theoretical grounding to explain this decision making. Public choice theory casts doubt on the view of politicians as public servants who strain every nerve to promote the common good and describes them as individuals who simply act like everyone else: maximizing their personal utility. Thus, private and public choices differ, not because there are different motivations, but because there are different incentives and constraints that shape the decision-making process in each case (Buchanan and Tullock 1962; Arrow 1963; Buchanan 1987; Shughart and Razzolini 2001; Buchanan 2003). Mueller's probabilistic-voting analysis helps illustrate politicians' decision making during the Covid-19 crisis. Mueller shows that

the number of expected votes is the sum of the probabilities that each voter will vote for the candidate. Voters choose the candidate who is closest to their ideal point, and politicians tend to adjust their decisions accordingly (Mueller 2003, 252). Because tackling Covid-19 at all costs became the foremost objective for most of the voters, policies that would meet this demand have become their ideal point of reference. Voters' ideal points were solidified by herd behavior whereby one government followed the example set by others. This herd behavior of policymakers was first observed in the European Union, where Italy followed the example of China and Iran, and then other countries (including the U.K.) followed the example of Italy (Sebhatu et al. 2020). The public in countries that had not already locked down therefore were expecting politicians to take sweeping measures as the only appropriate approach.

It appears that there are three main public policy alternatives in times of pandemic: First, take no action and let the virus circulate. Second, take moderate action, such as the "focused protection" plan sketched above. Third, implement lockdown policies. If mass hysteria prevails, as happened during the Covid-19 pandemic, then the more active the politicians are, the more they maximize their utility. We can represent the impact each one of the three alternatives has on politicians' utility maximization, using the following diagram.

Figure 2 shows the votes politicians would gain in each case. The public's concern level is represented by the horizontal line (x-axis), and the number of votes politicians gain by the vertical line (y-axis). Politicians pick their policies based on how many votes they will receive. As it is shown in figure 2, point V represents a number of votes lower than V', which in turn represents a number of votes that are

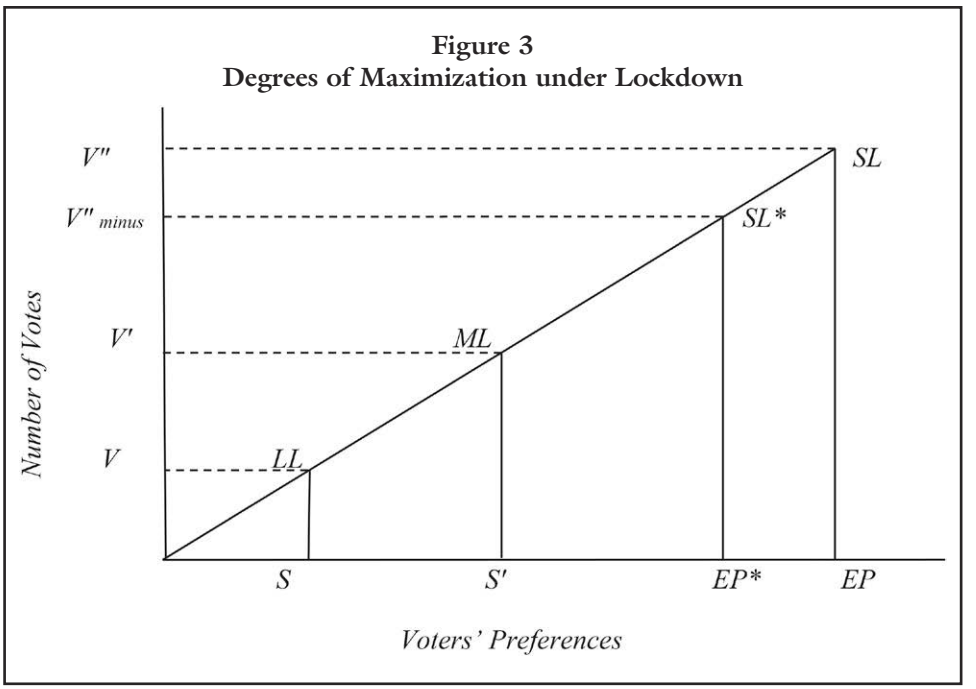
Figure 2
Politicians' Utility Maximization



fewer than *V″*. Because the public's main concern is Covid-19 and their ideal point is based on the belief that all face serious risk from the virus and all are in need of equal protection (*EP*), politicians gain few votes by taking no action (*NA*). In that scenario the politician receives only *V* votes because the public believes the politician cares little for public health—only a handful of voters who have other priorities, such as issues germane to the economic impact of the measures or to school closures, or concerns about excessive governmental intervention, vote for the politician. Since even the long-lasting lockdowns faced little to no backlash, I categorize possible pushbacks as concerns of the minority—that is, of the voters who would prefer no action or moderate action (*CM* and *CM′* respectively). So, if politicians took moderate action (*MA*), they would not receive many votes, though they would have been better off than by taking no action. Moderate action falls short of meeting the public's ideal point, because it proposes targeted measures for the elderly and not for the entire population and thus it reaches point *V′*. By implementing lockdowns (*LD*) and offering equal protection to all, they are on a par with the public's ideal point and they remarkably maximize their utility (*V″*).

In the same mode, we can represent the levels of severity of lockdown policies and the respective gains for politicians in each case. Let the first lockdown level include business shutdowns and work-from-home mandates while schools remain open and no stay-at-home mandates are imposed. Name it *Light Lockdown* (*LL*). Let the second level include school closures, business shutdowns, and work-from-home mandates, but again no curfews or twenty-four-hour stay-at-home

Figure 3
Degrees of Maximization under Lockdown



mandates are ordered. Name it *Moderate Lockdown* (*ML*). The third level encompasses all the contents of a lockdown strategy: schools and businesses are closed, almost everybody works from home, and twenty-four-hour stay-at-home orders are imposed. Call it *Strict Lockdown* (*SL*).

Figure 3 represents the utility politicians would gain in each of these cases. The *x*-axis shows voters' preferences under such circumstances, and the *y*-axis represents the number of votes politicians would gain (as in figure 2, $V<V'<V''$). In view of the postulate that all are in danger and all should be protected, if a light lockdown was in place, politicians would be laid open to the accusation that they fail to protect schoolchildren and teachers. They would gain some voters, who would perhaps have realized that schools are not to be closed (*S*), but the majority would condemn this, and teachers' unions would claim that teachers are terrified to go to their classrooms. So, again, the public's ideal point is to equally protect everyone (*EP*), and hence even though they would gain more votes (*V*) in comparison to a politician who did not impose any kind of lockdown, they would gain fewer than someone who implemented a moderate lockdown (*V′*). Moderate lockdowns may gain some supporters among people who would like to go outdoors for some time on a daily basis (*S′*), but this would be perceived as a threat to public health and so the majority would regard this as an inadequate approach. If cases spike under a moderate lockdown setting, then politicians would face criticism from the majority of people that they did not do their best and failed to order strict stay-at-home mandates in order to further minimize human contact. So a strict lockdown almost dovetails with the public's demands and brings many votes to politicians (*V″*). Even if cases and deaths increase under such circumstances, politicians can get away with it without much of a pushback, because the public would recognize that their leaders took as many measures as possible.

Some politicians may consider that keeping businesses closed for a very long time may harm some voters (for example the finance minister may wish to maximize votes from restaurant owners), so they favor some easing of restrictions for a short period of time and then they argue for the reimposition of a lockdown. This leads to repeated lockdowns (*RL*, in figure 2), and although some may be disappointed and think that the government gives priority to the economy instead of caring for public health,[14] it is Pareto-efficient for most members of the government and large groups of the population (*EP**), because it reconciles two tasks that are at first sight mutually exclusive: to satisfy the majority who requires equal protection for all and at the same time to maximize the probability of receiving votes from groups who would take issue with the lockdown approach if, for example, instead of lifting some restrictions and reimposing them after a few weeks, a lockdown was in place continuously for a year or more. So they maximize less than they did when they imposed the initial

14. It is thus less intense than an endless lockdown.

lockdown, but again they do keep their popularity at quite high levels (*V″ minus*) and definitely maximize much more than they would if they took no action or if they took moderate action. In the same mode, a government may meander between strict and moderate lockdown (figure 3). Stay-at-home mandates may be lifted and then reimposed from time to time (*SL**), because some members of the government may think that among the population some may consider twenty-four-hour stay-at-home mandates or even curfews as an overreaction (*EP**), and so governments try to retain their popularity in this subgroup too. The Pareto-efficient point in this setting is *SL**.

Public Choice Theory Fiscalwise

Politicians allocate resources to serve their personal interests, and public health decisions are no exception (Leeson and Thompson 2021). The interests of diverse pressure groups and the political clout of each must be taken into account during decision making. When SARS-CoV-2 started circulating and mass hysteria struck, politicians tried to find a way to take advantage of it. Lockdowns satisfied the vast majority of voters by promising protection to all people. Lockdowns were expensive but low interest rates allowed politicians to borrow money and increase public expenditures by offering handouts to closed businesses and to furloughed workers or to people who were on the verge of unemployment. These solutions serve politicians' self-interest, albeit without minimizing the economic damage.

Politicians in the Western world exponentially increased public expenditures as lockdowns were implemented. This obviously leads to deficits and in most of the situations to higher public and private debts (Statista 2021b), but it proved to be not enough to halt recession, unemployment, and the life-threatening consequences that are likely to follow in the long run. In the United States, the government spent over 3.5 trillion additional dollars during the pandemic (USA Spending 2021) while the national U.S. debt climbed to $30 trillion (U.S. Debt Clock 2022). Similar spending spree policies, resulting in huge debts, were followed by the E.U. politicians (Statista 2021a). In the United Kingdom, the public sector net debt (excluding public sector banks) was around 96 percent of GDP at the end of December 2021, which is the highest ratio since the 98.3 percent recorded in March 1963 (ONS 2022). This decision making comes at no personal cost. The huge debts and deficits will be paid off by taxpayers and not by politicians. Governments impose huge burdens on others, typically on future generations, in order to satisfy interest groups (Buchanan and Wagner 1977). Again, politicians end up better off.

Not Ill-Informed Politicians

There is information that implies that politicians were fully aware from the very beginning of the pandemic that the actual death-rate of Covid-19 is quite low. For

example, the U.S. chief health expert Dr. Anthony Fauci claimed in March 2020 that Covid-19 appears to be no more deadly than a severe seasonal influenza (Fauci, Lane, and Redfield 2020). Because the head of the National Institute of Allergy and Infectious Diseases and the chief medical advisor to the president made such an assessment, we can legitimately assume that the administration had access to these estimates. However, former U.S. president Donald Trump recommended lockdowns, and governors of almost every state instituted them, and some continued lockdown policies into 2021. Similar is the case with the U.K. government, which *officially* downgraded Covid-19 on March 19, 2020, and no longer took it to be a high-consequence infectious disease, and it retains this status (U.K. Government 2021), which is on a par with the serological studies that followed a few months later. Notwithstanding this, just a few days later, on March 23, 2020, the U.K. government imposed one of the harshest lockdowns in the world.

There is no reason to believe that the other governments across the globe were in the dark, but since some prominent flawed estimates gained attention in March 2020, we should take into account the possibility that they may have impacted politicians' decisions. However, even if some politicians were genuinely panicked in March 2020 in view of the exaggerated IFRs, they ought to have substantially revised their approach soon thereafter. Although there are some notable examples of this sort, such as the state of Florida (State of Florida 2020), in most cases lockdowns persisted. Repeated lockdowns became the norm. Public choice analysis applies both to politicians who implemented lockdowns in the first place despite the fact that they knew that the virus does not pose an unprecedented threat to public health (U.S. and U.K. politicians) and to those who insisted on lockdowns even when it became clear that only a segment of the population needed to be protected (U.S., U.K., much of the E.U., and the rest of the world).

Maximizing Votes at a Lower Scale

The actions of the very few politicians who did not impose lockdowns at all even though mass hysteria was prevalent in their jurisdictions, such as in Sweden or in South Dakota, can also be explained by public choice theory, at least to a degree. As for Sweden, it seems that explicit constitutional restrictions prohibit the government from interfering with agencies, such as the Public Health Agency. Any possible governmental intervention must be based on solid evidence and proven expertise. Because there were no available data that would favor lockdowns, and there is still lack thereof, the Swedish health authorities did not recommend lockdown policies. However, even if the health authorities did recommend lockdowns, strict constitutional constraints limit the scope of possible interventions and leave no room for excessive restrictions on people's movements and other draconian lockdown-like measures (Bylund and Packard 2020, 1308–9). If the Swedish politicians had fully followed the guidance provided by the health agencies, this would be consistent with a public

interest explanation. However, the Swedish parliament passed a law on January 8, 2021, that gives the government permission to enforce lockdown policies (Euronews 2021). This law gives the prime minister the ability to overrule the health agencies and close businesses, regardless of the available evidence the health agencies have at their disposal. Given the failures of lockdowns we have already documented, this suggests that Swedish politicians responded to incentives created by voter demand for politicians to take drastic action against the pandemic, regardless of its effectiveness. Notwithstanding this constitutional amendment, no lockdown has taken place in Sweden. Because mass hysteria had declined long before this law was passed, politicians had no incentive to shut the country down. However, it may bring some gain to the government since, first, it is a sort of virtue signaling, and so some voters who would criticize the government for some Covid deaths now may change their attitude, and, second, it paves the way for future lockdowns in case mass hysteria strikes again.

South Dakota's governor largely took a principled stance by repeatedly claiming that people should make their own risk assessments with respect to the virus and that the government has no jurisdiction to intervene. However, during the early days of the pandemic she wrongly enforced school closures from mid-March 2020 through the end of that school year (Ballotpedia 2021), though she never ordered business shutdowns or curfews. In my view, school closures came in response to mass hysteria, which resulted in many people believing that pupils have high chances of dying from the virus. By closing schools, Governor Kristi Noem showed she intended to protect the younger population and thus save many YLL and also perhaps aimed to supposedly reduce transmission in the society. However, because this action was not accompanied by further restrictions, because schools remained open during the 2020–2021 school year, and because there were practically no restrictions in place for the best part of the pandemic, it seems an overstatement to claim that she acted entirely as a self-interested individual, as most politicians across the globe did. She did so only for a limited period during the pandemic.

Public choice theory very well explains lockdowns and any type of restrictions for people below seventy years old in no-lockdown settings, such as constitutional amendments in Sweden and school closures in South Dakota. It also explains the absence of lockdowns later on in the pandemic in these states by ascribing it to the decline of mass hysteria, which made lockdown-like interventions redundant from a vote-maximizing perspective. On the contrary, public-interest theory does not explain lockdowns and neither does the absence of such policies. As for its purported explanation of lockdowns, we saw that its predictions vis-à-vis the efficacy and the unintended consequences of lockdowns were rejected. As for its possible application to politicians' decision making that did not involve lockdowns, public-interest theory also fails to explain it, for it erroneously regards lockdowns to be an evidence-based policy that is worth the cost. The absence of lockdowns is simply not within this theory's repertoire unless it considers a no-lockdown strategy to be compatible with science, but, at least so far, it does not do so.

Lockdown Popularity

Lockdown strategies are popular, and many citizens happily discarded liberty for the sake of safety (Zweifel 2020). The fact that mass hysteria has not ebbed away in some places makes lockdowns popular even two years after their initial implementation. Election results from the United States, the Netherlands and France appear to support this claim. In the U.S., although former president Trump endorsed lockdowns in March and April 2020, by May 2020 he took a more moderate stance. This may have contributed to his loss in November 2020, because the Democratic Party consistently and repeatedly emphasized the need for strict lockdowns. Other things being equal, Joe Biden's pro-lockdown rhetoric may have been the key to achieving the Democrats' victory. This argument is bolstered by the fact that in November 2020 lockdowns were widely supported in the U.S., even among Republican voters. Overall, 64 percent of adults in U.S. favored lockdowns during that period of time. Among the Democrats this number increased to 87 percent whereas 30 percent of Republicans and 58 percent of Independents also endorsed lockdown policies (Statista 2020).

Speaking of the popularity of politicians in the US, polls show that many governors who locked down have enjoyed astoundingly high popularity, which sometimes increased immediately after the imposition of the lockdown. Illinois governor J. B. Pritzker, for example, saw a steep increase in his popularity (Miller 2021) when the pandemic started, and he enforced very tight repeated lockdowns (State of Illinois 2021), while Massachusetts governor Charlie Baker is one of the most popular is the U.S. (Suffolk University 2021, 3–6) even after a sequence of strict repeated lockdowns that lasted for over a year (Massachusetts Gov't. 2021). Consider moreover that pro-lockdown governors face little to no criticism from the vast majority of the media, whereas South Dakota's laissez-faire handling of the pandemic is as often as not harshly criticized despite the fact that the majority of South Dakotans are better off in comparison to people in the pro-lockdown states: its economy has performed very well, having among the lowest unemployment rates in the U.S., and the virus-related death toll in this state is lower than that of many states that enforced strict lockdowns (Statista 2022). Similar is the case with Florida's governor Ron DeSantis, who was criticized for changing his attitude in September 2020 after imposing lockdowns from March to May 2020. As for the Netherlands, the prime minister, Mark Rutte, was reelected in March 2021 (Kiesraad 2021), even though he implemented lockdowns and the country faced a deep recession of 5.4 percent of GDP in 2020 (Statista 2021c). In France, Emmanuel Macron won reelection in spite of implementing strict repeated lockdowns which resulted in an economic downturn of 7.9 percent (World Bank 2020). These results show that recession is of little to no interest to the panicked voters. Action against the virus is the main criterion.

Moreover, polls in other countries show astonishing levels of lockdown popularity. In the U.K., almost a year after the first lockdown and while the third lockdown was being enforced in January 2021, 85 percent of the population supported it, and many

of them thought that it should have been in place earlier (Ibbetson 2021). And despite the fact that the UK faced an unprecedented 9.9 percent drop in real GDP in 2020, the public was primarily concerned about the virus, not about the economy (Ipsos 2021). High levels of lockdown approval—averaging around 61 percent—are also recorded in the E.U., despite the serious economic downturn (Silver, Moira, and Kent 2020). Lingering mass hysteria makes the prospect of shortened life expectancy due to recession not a top priority for voters and increases the popularity of repeated lockdowns.

Conclusion

The thesis that politicians followed science by implementing lockdowns collapses upon closer inspection and so does the claim that lockdowns were an example of public interest decision making. Although they are popular, lockdowns have benefited few—mainly the politicians who implement them. Public choice theory explains this decision making very well. Politicians are striving for utility maximization, and this is a problem in democratic decision making. When it comes to pandemics under conditions of mass hysteria, the problem becomes even more intense, and in the Covid-19 crisis people have rewarded politicians for implementing counterproductive lockdowns. The public is to be blamed for its hysteria, for following the lead of politicians, and for failing to punish them for ignoring the costs and exaggerating the benefits of lockdowns as they have traded away precious freedoms for illusory benefits.

References

Arrow, Kenneth. 1963. *Social Choice and Individual Values.* New York: Wiley.

Axfors, Cathrine, Andreas Schmitt, Perrine Janiaud, Janneke Van't Hooft, Sherief Abd-Elsalam, Ehab F. Abdo, Benjamin S. Abella et al. 2021. Mortality Outcomes with Hydroxychloroquine and Chloroquine in COVID-19 from an International Collaborative Meta-Analysis of Randomized Trials. *Nature Communications* 12, no. 1: 2349.

Bagus, Philipp, José Antonio Peña-Ramos, and Antonio Sánchez-Bayón. 2021. Covid-19 and the Political Economy of Mass Hysteria. *International Journal of Environmental Research and Public Health* 18: 1376.

Bakouny, Ziad, Marco Paciotti, Andrew Schmidt, Stuart R. Lipsitz, Toni K. Choueiri, and Quoc-Dien Trinh. 2021. Cancer Screening Tests and Cancer Diagnoses during the Covid-19 Pandemic. *JAMA Oncology* 7, no. 3: 458–60.

Ballotpedia. 2021. School Responses in South Dakota to the Coronavirus (COVID-19) Pandemic during the 2020–2021 School Year.

Barrett, Scott. 2004. Eradication versus Control: The Economics of Global Infectious Disease Policies. *Bulletin of the World Health Organization* 82, no. 9: 683–88.

Baumeister, Roy, Ellen Bratslavsky, Catrin Finkenauer, and Kathleen Vohs. 2001. Bad Is Stronger than Good. *Review of General Psychology* 5, no. 4: 323–70.

Bendavid, Eran, Christopher Oh, Jay Bhattacharya, and John Ioannidis. 2021. Assessing Mandatory Stay-at-Home and Business Closure Effects on the Spread of Covid-19. *European Journal of Clinical Investigation* 51, no. 4: e13484.

Bhattacharya, Jay, Sunetra Gupta, and Martin Kulldorf. 2020. *Great Barrington Declaration*.

Bianchi, Francesco, Gianda Bianchi, and Dongho Song. 2020. The Long-Term Impact of the Covid-19 Unemployment Shock on Life Expectancy and Mortality Rates. NBER Working Paper No. 28304. Cambridge, Mass.: National Bureau of Economic Research.

BLS (Bureau of Labor Statistics). 2021. Unemployment Rates for States. Accessed December 2021.https://www.bls.gov/web/laus/laumstrk.htm

———. 2022. Local Area Unemployment Statistics. Accessed January 22, 2022, https://www.bls.gov/web/laus/lauhsthl.htm

Bolourian, Alizera, and Zahra Mojtahedi. 2021. COVID-19 and Flu Pandemics Follow a Pattern: A Possible Cross-Immunity in the Pandemic Origin and Graver Disease in Farther Regions. *Archives of Medical Research* 52, no. 2: 240–41.

Buchanan, James. 1987. The Constitution of Economic Policy. *American Economic Review* 77, no. 3: 243–50.

———. 2003. Public Choice: Politics without Romance. *Policy* 19, no. 3: 13–18.

Buchanan, James, and Gordon Tullock. 1962. *The Calculus of Consent*. Ann Arbor: University of Michigan Press.

Buchanan, James, and Richard E. Wagner. 1977. *Democracy in Deficit: The Political Legacy of Lord Keynes*. New York: Academic Press.

Bylund, Peter, and Mark Packard. 2020. Separation of Power and Expertise: Evidence of the Tyranny of Experts in Sweden's COVID-19 Responses. *Southern Economic Journal* 87, no. 4: 1300–19.

Caly, Leon, Julian D. Druce, Mike G. Catton, David A. Jans, and Kylie M. Wagstaff. 2020. The FDA-Approved Drug Ivermectin Inhibits the Replication of SARS-CoV-2 in Vitro. *Antiviral Research* 178: 104787.

Cao, Shiyi, Yong Gan, Chao Wang, Max Bachmann, Shanbo Wei, Jie Gong, Yuchai Huang et al. 2020. Post-Lockdown SARS-CoV-2 Nucleic Acid Screening in Nearly Ten Million Residents of Wuhan, China. *Nature* 11: 5917.

Caplan, Bryan. 2001. Rational Irrationality and the Microfoundations of Political Failure. *Public Choice* 107, no. 3/4: 311–31.

———. 2007. *The Myth of the Rational Voter: Why Democracies Choose Bad Policies*. Princeton, N.J.: Princeton University Press.

Carlson, Johan. 2020. Covid-19 in Schoolchildren: A Comparison between Finland and Sweden. Public Health Agency of Sweden. Accessed 2 April 2020, www.folkhalsomyndigheten.se/publicerat-material

CDC (Centers for Disease Control and Prevention). 2020a. CovidView Summary Ending May 9, 2020.

———. 2020b. Covid-19 Pandemic Planning Scenarios.

Chaudhry, Rabail, George Dranitsaris, Talha Mubashir, Justyna Bartoszko, and Sheila Riasi. 2020. A Country Level Analysis Measuring the Impact of Government Actions, Country Preparedness and Socioeconomic Factors on COVID-19 Mortality and Related Health Outcomes. *Lancet* 25, 100464.

Chetty, Raj, Michael Stepner, Sarah Abraham, Shelby Lin, Benjamin Scuderi, Nicholas Turner, Augustin Bergeron, and David Cutler. 2016. The Association between Income and Life Expectancy in the United States, 2001–2014. *JAMA* 315, no. 16: 1750–66.

Christakis, Dimitri, Wil Van Cleve, and Frederick J. Zimmerman. 2020. Estimation of US Children's Educational Attainment and Years of Life Lost Associated with Primary School Closures during the Coronavirus Disease 2019 Pandemic. *JAMA Network Open* 3, no. 11: e2028786.

Cohen, Kristen W., Susanne L. Linderman, Zoe Moodie, Julie Czartoski, Lilin Lai, Grace Mantus, Carson Norwood et al. 2021. Longitudinal Analysis Shows Durable and Broad Immune Memory after SARS-CoV-2 Infection with Persisting Antibody Responses and Memory B and T Cells. *Cell Reports Medicine* 2: 100354.

Doshi, Peter. 2020. Covid-19: Do Many People have Pre-Existing Immunity? *British Journal of Medicine* 370: m3563.

Dougan, Michael, Ajay Nirula, Masoud Azizad, Bharat Mocherla, Robert L. Gottlieb, Peter Chen, Corey Hebert et al. 2021. Bamlanivimab plus Etesevimab in Mild or Moderate Covid-19. *New England Journal of Medicine* 385: 1382–92.

Egger, Dennis, Edward Miguel, Shana S. Warren, Ashish Shenoy, Elliott Collins, Dean Karlan, Doug Parkerson et al. 2021. Falling Living Standards during the COVID-19 Crisis: Quantitative Evidence from Nine Developing Countries. *Science Advances*. 7, no. 6: eabe0997.

Euronews. 2021. Sweden's Parliament Approves Law to Allow Government to Introduce COVID-19 Measures. January 8.

Fauci, Anthony, Clifford Lane, and Robert Redfield. 2020. Covid-19—Navigating the Uncharted. *New England Journal of Medicine* 382: 1268–69.

FDA (Food and Drug Administration). 2020. FDA Approves First Treatment for Covid-19, October 22.

Ferguson, Neil M., Daniel Laydon, Gemma Nedjati-Gilani, Natsuko Imai, Kylie Ainslie, Marc Baguelin, Sangeeta Bhatia et al. 2020. Report 9: Impact of Non-Pharmaceutical Interventions (NPIs) to Reduce COVID-19 Mortality and Healthcare Demand. London: Imperial College, March 16.

Freedman, Jonathan L. 1982. Theories of Contagion as They Relate to Mass Psychogenic Illness. In *Mass Psychogenic Illness: A Social Psychological Analysis*, edited by Michael J. Colligan, James W. Pennebaker, and Lawrence R. Murphy, 171–82. London: Routledge.

Friedman, Joseph, N. Clay Mann, Helena Hansen, Philippe Bourgois, Joel Braslow, Alex A. T. Bui, Leo Baletsky, and David L. Schriger. 2021. Racial/Ethnic, Social, and Geographic Trends in Overdose-Associated Cardiac Arrests Observed by US Emergency Medical Services during the COVID-19 Pandemic. *JAMA Psychiatry* 78, no. 8: 886–95.

Gardner, John W., and Jill S. Sanborn. 1990. Years of Potential Life Lost (YPLL)—What Does It Measure? *Epidemiology* 1, no. 4: 322–29.

Gudbjartsson, Daniel F., Gudmundur L. Norddahl, Pall Melsted, Kristbjorg Gunnarsdottir, Hilma Holm, Elias Eythorsson, Asgeir O. Arnthorsson et al. 2020. Humoral Immune Response to SARS-CoV-2 in Iceland. *New England Journal of Medicine* 383: 1724–34.

Haug, Nils, Lukas Geyrhofer, Alessandro Londei, Elma Dervic, Amélie Desvars-Larrive, Vittorio Loreto, Beate Pinior et al. 2020. Ranking the Effectiveness of Worldwide COVID-19 Government Interventions. *Nature Human Behavior* 4: 1303–12.

Holt-Lunstad, Julianne, Timothy B. Smith, and Bradley J. Layton. 2010. Social Relationships and Mortality Risk: A Meta-Analytic Review. *Plos Medicine 7*, no. 7: e1000316.

Ibbetson, Connor. 2021. Brits Support New National Lockdown. YouGov, January 5.

Human Development Report. 2020. *The Next Frontier*. United Nations Development Program. http://hdr.undp.org/sites/default/files/hdr2020.pdf.

Inglesby, Thomas, Jennifer Nuzzo, Tara O'Toole, and D. A. Henderson. 2006. Disease Mitigation Measures in the Control of Pandemic Influenza. *Biosecurity and Bioterrorism: Biodefense Strategy, Practice, and Science* 4, no. 4: 366–75.

Ioannidis, John. 2020. Infection Fatality Rate of COVID-19 Inferred from Seroprevalence Data. *Bulletin of the World Health Organization*. 20.265892.

———. 2021. Reconciling Estimates of Global Spread and Infection Fatality Rates of COVID-19: An Overview of Systematic Evaluations, *European Journal of Clinical Investigation* 51, no. 5: e13554.

Ipsos. 2021. *Coronavirus One Year On. Tracking UK Public Perception*, March 25.

Kiesraad. 2021. Announcement of Results of the 2021 Parliamentary Elections. https://www.kiesraad.nl/verkiezingen/tweede-kamer/uitslagen/bekendmaking-uitslag.

Larochelambert, Quentin de, Andy Marc, Juliana Antero, Eric Le Bourg, and Jean-Francois Toussaint. 2020. Covid-19 Mortality: A Matter of Vulnerability among Nations Facing Limited Margins of Adaptation. *Frontiers of Public Health*, 8:604339.

Lavine, Jennie, Ottar Bjornstad, and Rustom Antia. 2021. Immunological Characteristics Govern the Transition of Covid-19 to Endemicity. *Science* 371, no. 6539: 741–45.

Le Bert, Nina, Anthony T. Tan, Kamini Kunasegaran, Christine Y. L. Tham, Morteza Hafezi, Adeline Chia, Melissa Hui Yen Chng et al. 2020. SARS-CoV-2-Specific T-Cell Immunity in Cases of COVID-19 and SARS, and Uninfected Controls. *Nature* 584, no. 7821: 457–62.

Le Bon, Gustave. 2002. *The Crowd: A Study of the Popular Mind*. Loki's Publishing.

Leeson, Peter T., and Henry A. Thompson. 2021. Public Choice and Public Health. *Public Choice*, March 22.

Ludvigson, Jonas F. 2021. Open Schools, Covid-19, and Child and Teacher Morbidity in Sweden. *New England Journal of Medicine* 384: 669–71.

Luo, Lei, Dan Liu, Xinlong Liao, Xianbo Wu, Qinlong Jing, Jiazhen Zheng, Fanghua Liu et. al. 2020. Contact Settings and Risk for Transmission in 3410 Close Contacts of Patients with COVID-19 in Guangzhou, China. *Annals of Internal Medicine* 173, no. 11: 879–87.

Mahmud, Mahreen, and Emma Riley. 2020. Household Response to an Extreme Shock: Evidence on the Immediate Impact of the Covid-19 Lockdown on Economic Outcomes and Well-Being in Rural Uganda. *World Development* 140: 105318.

Massachusetts Gov't. 2021. *Press Releases Related to Covid-19*. https://www.mass.gov/lists/press-releases-related-to-covid-19#november-2020-

Miller, Rich. 2021. As Election Year Nears, Gov. J. B. Pritzker Faces a Voter Enthusiasm Gap. *Chicago Sun Times*, March 12.

Mondelli, Mario, Marta Colaneri, Elena Seminari, Fausto Baldanti, and Raffaele Bruno. 2020. Low Risk of SARS-CoV-2 Transmission by Fomites in Real-Life Conditions. *Lancet* 21, no. 5: E112.

Mueller, Dennis C. 2003. *Public Choice III*. Cambridge: Cambridge University Press.

Munro, Alasdair, and Saul Faust. 2020. Children Are Not Covid-19 Super Spreaders: Time to Go Back to School. *BMJ Journals: Archives for Disease in Childhood* 105: 618–19.

Onakpoya, Igho J., Carl J. Heneghan, Elizabeth A. Spencer, Jon Brassey, Annette Plüddemann, David H. Evans, John M. Conly, and Tom Jefferson. 2021. SARS-CoV-2 and the Role of Fomite Transmission: A Systematic Review. *F1000Research*.

ONS (Office for the National Statistics). 2021. *Average Age of Those Who Had Died with Covid-19*, January 11.

———. 2022. *Public Sector Finances, UK: December 2021*, January 25 2022.

OWD (Our World in Data). 2021a. *Coronavirus Pandemic Data Explorer*. Accessed April 18, 2021. https://ourworldindata.org/grapher/visitors-transit-covid?tab=chart

———. 2021b. *Coronavirus Pandemic Data Explorer*. Accessed April 22 2021, https://ourworldindata.org/explorers/coronavirus-data-explorer?zoomToSelection=true&time=2020-03-01.latest&facet=none&pickerSort=desc&pickerMetric=total_deaths_per_million&Metric=Confirmed±deaths&Interval=Cumulative&Relative±to±Population=true&Color±by±test±positivity=false&country=SWE~PER~BEL~GBR~ITA~FRA

Pape, Katherine, Thamotharampillai Dileepan, Amanda Kabage, Daria Kozysa, Rodolfo Batres, Clayton Evert, Michael Matson et al. 2021. High-Affinity Memory B-Cells Induced by SARS-CoV-2 Infection Produce More Plasmablasts and Atypical Memory B-Cells than those Primed by mRNA Vaccines. *Cell Report* 37, no. 2: 109823.

Popp, Maria, Miriam Stegemann, Maria-Inti Metzendorf, Susan Gould, Peter Kranke, Patrick Meybohm, Nicole Skoetz, and Stephanie Weibel. 2021. Ivermectin for Preventing and Treating COVID-19. *Cochrane Database for Systematic Reviews* 7: 1465–1858.

Preston, Samuel. 1975. The Changing Relation between Mortality and Level of Economic Development. *Population Studies* 29, no. 2: 231–48.

Prodromos, C., and T. Rumschlag. 2020. Hydroxychloroquine Is Effective, and Consistently So When Provided Early, for COVID-19: A Systematic Review. *New Microbes and New Infections* 38: 100776.

Rothwell, Jonathan, and Sonal Desai. 2020. How Misinformation Is Distorting COVID Policies and Behaviors. Brookings, December 22.

Ruhm, Christopher. 2013. Recessions, Healthy No More? NBER Working Paper No. 19287. Cambridge, Mass.: National Bureau of Economic Research.

Sacerdote, Bruce, Ranjan Sehgal, and Molly Cook. 2020. Why Is All Covid-19 News Bad News? NBER Working Paper No. 28110. Cambridge, Mass.: National Bureau of Economic Research.

Sebhatu, Abiel, Karl Wennberg, Stefan Arora-Jonsson, and Staffan I. Lindberg. 2020. Explaining the Homogeneous Diffusion of Covid-19 Nonpharmaceutical Interventions across Heterogeneous Countries. *Proceedings of the National Academy of Sciences* 117, no. 35: 21201–8.

Shughart, William, and Laura Razzolini. 2001. *The Elgar Companion to Public Choice*, 2nd ed. Northampton, Mass.: Edward Elgar.

Silver, Laura, Moira Fagan, and Nicholas Kent. 2020. Majorities in the European Union Have Favorable Views of the Bloc. *Pew Research Center*, November 17.

Slovic, Paul. 1987. Perception of Risk. *Science* 236: 280–85.

State of Florida. Office of the Governor. 2021. Executive Order Number 20-244.

State of Illinois: Coronavirus Response. 2020–2021. Executive Orders Related to COVID-19.

Statista. 2020. Widespread Public Support for Future U.S. Lockdowns, November 11.

———. 2021a. Public Spending Ratio in the Member States of the European Union in 2020.

———. 2021b. National Debt in EU Countries in the 3rd Quarter 2020 in Relation to Gross Domestic Product.

———. 2021c. Netherlands: Real Gross Domestic Product (GDP) Growth Rate from 2009 to 2021.

———. 2022. Death Rates from Coronavirus (COVID-19) in the United States as of August 19, 2021, by State, accessed August 19 2021.

Suffolk University. 2021. *Massachusetts Polling*, Accessed April 1, 2021, 4_1_2021_tables_pdftxt.pdf

Taub, Dennis, William Ershler, Mark Janowski, Andrew Artz, Michael L. Key, Julie McKelvey, Denis Muller et al. 2008. Immunity from Smallpox Vaccine Persists for Decades: A Longitudinal Study. *American Journal of Medicine* 121, no. 12: 1058–64.

Turner, Jackson, Wooseob Kim, Elizaveta Kalaidina, Charles W. Goss, Adriana M. Rauseo, Aaron J. Schmitz, Lena Hansen et al. 2021. SARS-CoV-2 Infection Induces Long-Lived Bone Marrow Plasma Cells in Humans. *Nature* 595: 421–25.

U.K. Government. 2011. UK Influenza Pandemic Preparedness Strategy 2011, November 10.

———. 2021. High Consequence Infectious Diseases, Status of COVID-19.

USA Spending. 2021. Accessed February 28, 2021. https://www.usaspending.gov/

U.S. Debt Clock. https://www.usdebtclock.org/

Vagero, Denny, and Anthony Garcy. 2016. Does Unemployment Cause Long-Term Mortality? Selection and Causation after the 1992–96 Deep Swedish Recession. *European Journal of Public Health* 26 no. 5: 778–83.

WHO. 2009. Director-General's Statement to the Press: World Now at the Start of 2009 Influenza Pandemic, June 11.

———. 2019. Non-Pharmaceutical Public Health Measures for Mitigating the Risk and Impact of Epidemic and Pandemic Influenza, September 19.

———. 2020a. WHO–China Joint Mission on Coronavirus Disease 2019 (COVID-19) 16–24 February 2020.

———. 2020b. WHO Director-General's Opening Remarks at the Media Briefing on COVID-19, 3 March 2020.

———. 2020c. WHO Recommends against the Use of Remdesivir in COVID-19 Patients, November 20.

World Bank. 2020. GDP Annual Growth- France. https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?locations=FR.

World Food Programme of the United Nations. 2020. WFP Chief Warns of Grave Dangers of Economic Impact of Coronavirus as Millions Are Pushed Further into Hunger, September 17.

Zweifel, Peter. 2020. The Covid-19 Crisis: A Public Choice View. *Economic Affairs* 40: 395–405.

Acknowledgments: I would like to thank Chrysostomos Mantzavinos for many helpful discussions, three anonymous referees for constructive criticism and excellent insights on earlier drafts of the paper, and Robert Whaples for providing comments that improved the piece in several respects.