This Paper Attacks a Strawman but the Strawman Wins: A reply to van Basshuysen and White

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1. Why It Is a Strawman?

Van Basshuysen and White have recently written what they consider to be a critique of our 2020 paper, "How Government Leaders Violated Their Epistemic Duties During the SARS-CoV-2 Crisis."[1] We maintain that this paper rather clearly attacks a strawman, yet the strawman actually wins.

Why is it a strawman? One of van Basshuysen and White's central claims is that because of errors we make in our paper, our "conclusion *that lockdowns were unjustified* does not follow." (our emphasis).[2] Now, there is an ambiguity in saying something is "unjustified". One meaning is "not the correct action to pursue all things considered" and another is "lacking demonstrated justification". We were clearly arguing that the lockdowns lacked demonstrated justification and that government leaders were failing in their duties to supply it. Thus, our title is about a failure of epistemic duties.

But it's clear that van Basshuysen and White take us to have argued that lockdowns weren't justified in the former sense. First, they say that "Because the lockdowns restricted basic liberties and led to severe economic damage (Mandel and Veetil 2020), the question of *whether governments were justified* in imposing them comes to the fore. We aim to show that a convincing answer to this question is to date owing, by arguing that a recent paper by Eric Winsberg, Jason Brennan and Chris W. Surprenant (2020), according to which these lockdowns were unjustified, is based on false factual claims…"

When we think about whether a government **is** justified in doing something, at issue is whether that action is the best action to pursue based on a reasonable assessment of the circumstances, not whether the government claimed their actions were justified and provided reasons for that justification. The grammar here is unambiguous. What makes it even more clear is the fact that, immediately after saying we were wrong in saying lockdowns were unjustified, they say that "We do not, here, address the first part of the argument in detail – that governments must meet this high evidentiary bar in order to impose restrictive measures." You can't address the question of whether something lacked demonstrated justification without addressing the question of where the evidentiary bar lies for demonstration. Thus, they admit that they are not responding to the question of whether lockdowns "lacked

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demonstrated justification". But that was what our paper was about. It *just is* the question of whether governments met the needed evidentiary bar.

Their approach, focusing on "whether governments were justified" is an odd response because it was not our conclusion that lockdowns were not the best action to pursue all things considered; *the text clearly and repeatedly indicates otherwise*. As early as the abstract of our paper (published on the first page), we say, "While in theory, lockdowns can be justified, governments did not meet and have not yet met their justificatory burdens. We will not argue that less stringent policies were optimal or better justified."[3] Later in the paper we say "our core contention is not that the danger of SARS-CoV-2 has been overstated, or that lockdowns were the wrong policy to adopt. Nor is our aim to establish what the optimal suppression strategy would have been in light of what information governments had. (Doing so would require an extensive cost-benefit analysis, which would take another paper's worth of work at least.)"[4] We also say, "We do not thereby claim that lockdowns were bad policy, nor are we assessing how dangerous COVID-19 is."[5]

In the paper, we explicitly compared the situation of lockdowns to an accused criminal being held prior to trial. But we go on to say, "Nor are we arguing that the appropriate remedy here is the same as in the case of a trial. In the case of a trial, if the state fails to meet its epistemic duties, the defendant goes free. We are not arguing that when the state fails to meet its epistemic duties, a quarantine must be immediately ended."[6] Thus, while we argued that the state was failing to meet its epistemic burdens, much like a prosecution could fail to discharge its evidentiary burdens, we then explicitly denied that this meant that the lockdowns should end. The fact that governments were doing a poor job of random testing to establish the true values of things like the infection fatality rate of the virus, which was wildly unknown at the time we published our paper, was sufficient to establish this point.

2. What We Know Now Versus Then

We wrote the paper van Basshuysen and White are responding to in April of 2020. While we did not claim when we wrote it that lockdowns were unjustified (in the sense of being "not the best action to pursue all things considered"), now, in June of 2021, we believe the evidence against lockdowns is quite strong.

This distinction is crucial. We did *not* claim to know in April of 2020 whether lockdowns were the best action to pursue all things considered. We conceded that, in such a situation, precaution might dictate that lockdowns be held while the state went on to meet its burden of colleting better evidence. We wrote, "Even so, it might be appropriate, at the beginning of a potential catastrophe, for policymakers to adopt a very cautious stance. In doing so, it might be

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[3] Winsberg et al 2020, 215.
[4] Winsberg et al 2020, 233-4.
[5] Winsberg et al 2020, 216.
[6] Winsberg et al 2020, 221.

excusable to accept, provisionally, the extremely cautious predictions of epidemiologists, despite the problems in their data and models. It might be fine to act first and ask questions later."[7]

We want to be clear that we were not reckless in April of 2020 and we did not call for the end of lockdowns. Instead, our critique was of the behavior of politicians and public health officials around the world. We argued that to suppress civil and economic liberties in the name of public health, they needed to meet certain epistemic burdens, and then we argued these burdens were not met. (This is one reason our title was, "…Government Leaders Failed to Meet Their Epistemic Burdens…" rather than "Why Lockdowns Are Bad.")

What we called for was clear, "It will not do, in more than the very short run, for policy makers to declare, as Governor Newsom of California has done, that they are simply 'following the science' in responding to a crisis like the COVID-19 pandemic. In the interest of transparency, they should make it clear that they are adopting precautionary reasoning and inform their constituents what the plan is to quickly move to a more substantive cost-benefit analysis—and explain what values are to undergird that analysis."[8] If there is an argument against this claim in van Basshuysen and White, we cannot find it. We did not claim, in April of 2020, to know what the outcome of such a cost benefit analysis would be. Indeed, we explicitly denied knowing: ("Doing so would require an extensive cost-benefit analysis, which would take another paper's worth of work at least."[9]) We think it is important to make this point for the sake of historical clarity.

Now, it is May of 2021, and we think it is far clearer what such a cost-benefits analysis would show. We also think it is perfectly clear that the S.A.G.E/Imperial College Model was wildly pessimistic concerning the outcome a state should expect if it followed any strategy short of the maximum suppression strategy they recommended in their "Report 9". We frankly are dumbfounded that anyone would argue about this. We are even more shocked that anyone would try to downplay the harms of lockdowns in May of 2021, as van Basshuysen and White do. We also think that the IHME models, which played a prominent role in, for example, leading Governor Cuomo of the State of New York to lock elderly nursing home patients out of hospitals[10], were even worse. And van Basshuysen and White don't even touch on that model.

(Showing that the IHME model was reliable is essential for them to even defeat their strawman, and they don't even try to do that. Part of the problem, we suspect, is that their paper was written in the fall of 2020, presented in early 2021, but then was not substantially updated after that as new data has come out.)

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[7] Winsberg et al 2020, 231.
[8] Winsberg et al 2020, 232.
[9] Winsberg et al 2020, 234.
[10] https://www.forbes.com/sites/sethcohen/2020/05/26/we-all-failed--the-real-reason-behind-ny-governor-andrew-cuomos-surprising-confession/?sh=3a648c7b6fa5

https://www.nytimes.com/article/andrew-cuomo-nursing-home-deaths.html

3. **Were the Imperial College of London projections overly pessimistic?**

Government leaders around the world largely relied on the Imperial College of London models—and the direct advice of ICL researchers—to justify the shutdowns. For instance, the Trump administration explicitly cited ICL on March 2016 as its reason for reversing course and recommending shutdowns.[11] The ICL model induced Boris Johnson to shut down the UK.[12]

It is no longer debatable that ICL projections were overly pessimistic. The ICL model predicted 2.2 million deaths in the US by August 2020 without strict mitigation measures, and over a million with mitigation but not suppression. Consider what has happened in the State of Florida. Florida has a population of 21.5M, is roughly 6.7% of the entire US population, and has a median age four years higher than the US average. They have had virtually no state-imposed mitigation measures since September of 2020.[13] Not only are there no state-level measures, but almost all local measures are strictly forbidden by the state government. Even without adjusting for age, the ICL model would predict that Florida would have over 147,000 deaths. As of May 10, 2021, Florida has had under 36,000 deaths. We come back to this in more detail below.

Worse still, ICL predicted that critical care beds would be overwhelmed by several fold. Note that this was a critical part of the case for lockdowns: We were told we need to shutdown schools, universities, movie theaters, restaurants, pools, beaches, gyms, malls, outdoor playgrounds, and the like because we had to "flatten the curve" to ensure that hospital facilities would not be overwhelmed. The conclusion in Fergusen et al. (2020) was that even with suppression mechanisms, about 80% of the population would get COVID-19 eventually, but suppression could spread infections out over time enough to ensure that more critical care patients would receive necessary treatment and survive.[14] In fact, not a single ICU was overwhelmed in Florida, despite it having very few suppression mechanisms.

van Basshuysen and White claim that Gardner et al (2020)'s simulation – which we reference as a proxy for what the ICL model would have predicted for Sweden – is a poor proxy for the ICL model.[15] What we didn't know in 2020, but Van Basshuysen and White did know in

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[11] https://www.nytimes.com/2020/03/16/us/coronavirus-fatality-rate-white-house.html

[12] https://www.nytimes.com/2020/03/17/world/europe/coronavirus-imperial-college-johnson.html

[13] Obviously, people's personal behaviors have changed everywhere in response to the virus. We do not claim that everything in Florida and Sweden has been normal. But our paper was a paper about government restrictions on liberties, not on advice regarding personal behavior. Governments, moreover, held out the ICL projections as the likely outcomes if government mandated restrictions were not put in place.   Report 9, moreover, is clearly meant to outline what outcomes to expect in the face of various government "strategies."

[14] Ferguson, Neil M., Daniel Laydon, Gemma Nedjati Gilani, et al. 2020. "Report 9: Impact of Non-Pharmaceutical Interventions (NPIs) to Reduce COVID19 Mortality and Healthcare Demand." Imperial College London. https://doi. org/10.25561/77482.
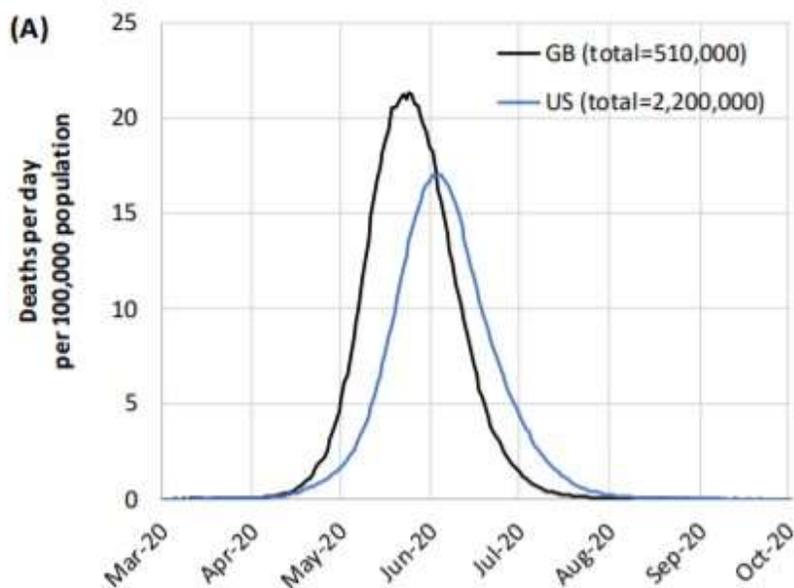
2021 (because we discussed it with them in early 2021), is that the ICL ran their own model on Sweden and a dozen or so other countries, but hid its output in an obscure appendix to "Report 12", which is nevertheless available online.[16] The ICL results were almost identical to Gardner et al (2020)'s simulation, including a top-end projection of 90,157 deaths if Sweden did not go into lockdown.[17] So, contrary to what van Basshuysen and White say, Gardner et al (2020)'s simulation is a straightforwardly accurate adaptation of the ICL model to Sweden. van Basshuysen and White knew this but did not update their paper.

Despite the fact that various places around the world used a variety of different mitigation measures, few came anywhere near to carrying out what the Report 9 advised: A policy of "maximum suppression" that would be held in place until Rt fell to near zero (the "hammer") followed by a "dance" until the death rate reached .2/100,000 per week, followed by another hammer, etc., until a vaccine was available.

Sweden and Florida received the most media attention for their response (or lack thereof). We compare the ICL's most optimistic estimate (the lowest R0 value they used: 2.4, even though few people think the virus's R value is this low) and we compare the predictions from those start dates until a date four months later, since that's the time frame that it takes, in the ICL model for the virus to reach its peak and subside when maximum suppression is not in play. We make this comparison with Sweden beginning on the date of Report 9 (March 16, 2020) and Florida beginning on the day that Governor DeSantis lifted all government-mandated restrictions in the state, prohibited any local level restrictions or mask mandates, and opened all the schools (September 25, 2020).

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[16] Available here: https://www.imperial.ac.uk/media/imperial-college/medicine/mrc-gida/Imperial-College-COVID19-Global-unmitigated-mitigated-suppression-scenarios.xlsx

[17] Indeed, in report 12, the ICL group even touted the fact that their output matched Gardner et al as evidence that their model was accurate. (see fn 8 of report 12)

(A)

Deaths per day per 100,000 population

— GB (total=510,000)
— US (total=2,200,000)

Mar-20 Apr-20 May-20 Jun-20 Jul-20 Aug-20 Sep-20 Oct-20

Report 9, figure 1a. (Deaths per day per 100k population in the US and UK under no NPIs). Note the four-month duration of the curves.

We are not cherry picking these cases—Sweden and Florida were by far the media's darlings of "covid-denying death cults" through the pandemic. The prediction for Sweden, under the lowest R0 value that they considered, after four months, was 66,000 deaths. The actual number of deaths in Sweden was 5,800 in the four months following March 16---less than 10% of what the model predicted.

The prediction for the United States, under an absence of restrictions, but under the most optimistic R value, was 2,186,000. Without adjusting for age, Florida's share of those deaths should have been 147,000 deaths (as we calculated above). But some adjustment for age is surely necessary. By the ICL group's own lights, Covid infection fatality more or less triples every age decade. Since Florida's median age is four years higher than the rest of the US, we very conservatively add 25% to the 147,000 deaths and get 184,000 deaths. The total number of deaths in Florida between the time DeSantis ended all restrictions and the date four months later is 11,300, which is also less than 10% of what the model predicted for the lowest considered R value.

But all of that actually understates how overly pessimistic the ICL model was, because it fails to look at how fast these deaths were supposed to come.   If you look at figure 1a above, it's clear that by November 25th, 2020, Florida should have been, without adjusting for age, experiencing over 3500 deaths/day at its peak. But after DeSantis opened Florida up, the peak number of deaths Florida experienced was on January 22nd, and it was 208 deaths. This is 1/17th of what the model projects. It is not possible to look at this data and say that the ICL was not overly pessimistic about the outcome under absence of mitigation.

We are also much better positioned today to know why the ICL model faired so poorly, and it mostly confirms our suspicions from last April. Edeling et al. (2020)[18] finally did for the ICL model what any modeler who wants to inform policy ought to do if they are being epistemically responsible: they undertook to examine the degree to which the model was sensitive to unknown parameter values. They found that almost two thirds of the differences in the model's results could be attributed to changes in just three especially important variables: (1) the length of the latent period during which an infected person has no symptoms and can't pass the virus on; (2) the effectiveness of social distancing; and (3) how long after getting infected a person goes into isolation.

More importantly, Edeling et al. found that for most values of these parameters, five to six times as many people die during "maximum suppression" than the model predicted using the values that the ICL grouped used.   And we also now know that the values the ICL group used for infection fatality and hospitalization were much too high in the lower age brackets. So, in effect, they were overestimating the impact of the virus if left unchecked, and overestimating the effectiveness of the measures they were recommending. Unsurprisingly, these sometimes approximately cancel out when Report 9's recommended measures are put into the model. Edeling et al. also found that the model had fundamental structural errors in that it was unable to replicate the course of the disease in many places for any value in parameter space.

We also know that in some countries, Germany in particular, scientists were put under explicit pressure by policy makers to make their projections as dire as possible (so as to produce the "desired shock effect") in order to justify "further measures of a preventive and repressive nature".[19]   If this is not a case of government leaders failing to meet their epistemic duties, we would love to see an actual case of it. Of course, we did not know about this in April of 2020, but we expect two scholars who live and work in Germany, writing on the topic of the epistemic practices used to justify lockdowns, to be aware of it in May 2021. Similar revelations are emerging about the relationship between policy makers and experts in the UK.[20]

4. Are the Epistemic Burdens of Suspending Civil Liberties Easily Dismissed?

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[18] Edeling, Wouter, Hamid Arabnejad, Robbie Sinclair, Diana Suleimenova, Krishnakumar Gopalakrishnan, Bartosz Bosak, Derek Groen, Imran Mahmood, Daan Crommelin, and Peter V. Coveney. "The impact of uncertainty on predictions of the CovidSim epidemiological code." *Nature Computational Science* 1, no. 2 (2021): 128-135.

[19] https://www.welt.de/politik/deutschland/article225991449/Corona-Papier-Opposition-fordert-Aufklaerung.html (translations into English are via Google Translate).

[20] https://www.telegraph.co.uk/news/2021/05/14/scientists-admit-totalitarian-use-fear-control-behaviour-covid/?fbclid=IwAR3vMf8aQXkEJ9qgc4zkPeATp15uxvGnw4OZqaGfmwQd89EpiwyNZZumsrk

Before moving on, it's worth stopping to assess the dialectic. We wrote a paper arguing that government leaders face certain epistemic burdens which they must meet in order to suspend civil and economic liberties for the sake of public health. We argued that those burdens were not met when government leaders around the world ordered shutdowns, lockdowns, and various other heavy-handed mitigation measures. We carefully stated that despite this, as of the time we wrote our 2020 paper, we were not arguing that lockdowns were not in fact justifiable or defensible. We wrote a critique of governments' attitude to evidence rather than lockdowns per se. If van Basshuysen and White wanted to write a genuine critique of us, what they should have done was show that in fact those standards were met, or that the standards for suspending civil and economic liberties are in fact very low. As we just saw, though, government leaders around the world relied upon a model which not only had all the flaws we outlined above, but which we now know was a massive failure. They did little to improve the quality of data on which better models could be built, and they doubled down on bad models for months.

On the contrary, van Basshuysen and White explicitly decline to address our argument or conclusion, saying instead, "We do not here address the first part of the argument in detail—that governments must meet this high evidentiary bar in order to impose restrictive measures."[21] Instead, they attempt to dispose of the issue by citing a few obscure papers and books which argue that during emergencies, epistemic standards may be lowered. In particular, in dismissing our argument, they rely heavily on a book of political theory which applies the ideas of the authoritarian Thomas Hobbes and the fascist Carl Schmitt to argue that during emergencies, liberal states have lower burdens and may override freedoms fairly easily. (We note that we ironically started our 2020 paper with a quotation from Schmitt on this point.)

We think it is important to be more careful here. Van Basshuysen and White seem to think citing a philosopher who disagrees with our argument about epistemic burdens is enough to toss the issue away. But a wide range of views are defended in political philosophy, and not all of them should be casually referenced as though they are part of the mainstream of liberal political thinking. For instance, one of the main sources van Basshuysen and White use to support the claim that some political theorists believe that emergency situations "lead to changes in both normal epistemic (see Birch 2020, Sorell 2013) and normative (see Sorell 2013) policy-making requirements" is Tom Sorell's (2013) *Emergencies and Politics: A Sober Hobbesian Approach*. Lest anyone think we are exaggerating how extreme Sorrell's views are here, we quote a typical passage from the Preface (p. xii)[22],

> There is something of value in this point of agreement between Hobbes and Schmitt. Emergency makes vivid the worth of a unitary, central authority that can quickly translate decision into action. But emergency can also put in an unflattering light the

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[21] Van Basshuysen and White 2021, 2.
[22] We also note that, according to google scholar, this 2013 book has been cited only 27 times, including their citation and ours. This might suggest that it does not represent a set of widely held views in political philosophy.

divided and protracted decision making of peacetime. Divided decision making is incipient war, according to Hobbes, and the purpose of the state is to avoid war. Again according to Hobbes, behaving as a citizen is best seen as an exercise in self-preservation, so that there is something irrational about disturbing the peace or unsettling a government that is good at maintaining order. Someone who accepts the responsibilities of government is supposed to decide in a more impartial way than citizens what their protection requires, and citizenship requires deference to that co-ordinating and dispassionate directing intelligence. The design of the state is to be dictated by the overriding goal of public safety, a goal that everyone would agree to adopt if they were clear-headed about the consequences of not doing so.

It should be obvious that political philosophers who lie outside of mainstream liberal political philosophy will have a wide range of views about what is allowed during an emergency, and we did not expect that our arguments would convince fascists and authoritarians like Schmitt and Hobbes.

Since van Basshuysen and White admit they do not address this part of our argument, we have nothing to respond to. But it is at least instructive to offer them the following challenge: It's easy for philosophers to argue that, for instance, torture might be permissible in genuine ticking time-bomb cases. But in the real world, we know government leaders have a proclivity for believing they are in ticking time bomb cases even when they are not, and so this knowledge of how we know they operate should be taken into account. For instance, consider the degree of torture the George W. Bush administration authorized and allowed during the Iraq War, which it justified (when it stopped denying it) on emergency grounds. Or, more broadly, consider how throughout history, governments which unjustly suspend civil and economic liberties, or which start unjust wars, or which engage in horrific mass coercion, almost always do so on the grounds that there is an immediate emergency. For instance, it's why the mostly liberal Weimar Republic suspended a significant degree of freedom of speech and imprisoned Nazis in the 1920s for their speech, and of course the pretense under which the Nazi regime suspended far more liberties later.

Accordingly, it's crucial that we recognize that there is actually a point of imposing high epistemic burdens on government leaders. This is not a small point drawn from thought experiments like the ticking-bomb case, and there is a reason it is agreed upon by almost all liberal philosophers. It's rather a set of principles developed to respond to real-world problems and actual government behavior. These rules are in part meant to be a prophylactic against government overreach and abuse. van Basshuysen and White seem to think that high epistemic standards are fine with the stakes are low but not when the stakes are high. But we know from history that when you tell governments that they have low burdens during emergencies, they act like they are in emergencies whenever doing so is expedient to get what they want. Telling governments, "You must respect liberty and democratic procedure except in emergencies" in

practice amounts to advising them to see everything as an emergency. The point of imposing high burdens on governments is to get them to act correctly given how badly they tend to act.

5. In Hindsight, Were Lockdowns Effective?

van Basshuysen and White decline to address our argument about epistemic burdens, and instead decide to focus on defending lockdowns, even though they know doing so is irrelevant as a means to critique our 2020 paper.

Are they right about the strawman's view that lockdowns are ineffective? They provide no good evidence to the contrary. They are not justified in this belief given the poor quality of the evidence they cite to defend it. In defense of the claim that lockdowns are effective, van Basshuysen and White spend almost the entire section of their paper entitled "4. ARE LOCKDOWNS EFFECTIVE?" defending an April 2020 working paper by Andrew Friedson et al. that studied the California lockdowns of March/April 2020 to show that lockdowns were effective.[23] This paper was last revised in, well, April 2020.[24]

Let that sink in. It's now May 2021. We—including van Basshuysen and White— know what happened in California and around the world after April 2020, despite varying degrees of lockdowns. California, despite having maintained some of the strictest and most enduring lockdowns in North America or Europe, has a death rate that is higher than Sweden, and, on an age-adjusted basis (see appendix) more than 50% higher than Florida. In April/May of 2020, it was hard to tell what was going on in California. Maybe it wasn't completely unreasonable in April of 2020 for Friedson et al. to think California's low infection and fatality rates then, compared to some other states, were due to its quick lockdowns.

But with 20/20 hindsight, it's clear that California was benefiting from the calendar and whatever mechanism caused the US to undergo various waves that hit various different parts of the country at different times. One could write a whole paper (indeed one of us is doing so) on how causal inference studies during the Covid-19 pandemic systematically violated the crucial parallel trends assumption that is required for causal inference. There are many examples of studies that claimed to show that such and such measures were responsible for the wonderful performance of such and such place, only for that place to blow up in cases, hospitalizations, and deaths only weeks later.[25] One could debate whether this is entirely true, and we don't

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[23] Friedson, A.I., McNichols, D., Sabia, J.J. and Dave, D., 2020. *Did California's shelter-in-place order work? Early coronavirus-related public health effects* (No. w26992). National Bureau of Economic Research.

[24] IDEAS, NBER, IZA, and EconStor all list April 2020 as their last revision date.

[25] Consider the case of the paper "Decrease in Hospitalizations for COVID-19 after Mask Mandates in 1083 U.S. Counties" which appeared last October but was then followed up with " The authors have withdrawn this manuscript because there are increased rates of SARS- CoV-2 cases in the areas that we originally analyzed in this study." Or the Scientific American article titled, " How New Mexico Controlled the Spread of COVID-19. The state went after the disease with widespread testing and science-based targets. Now it is in better shape than its neighbors"

have the space to defend the claim here. But it's bizarre that van Basshuysen and White would pour over an April 2020 paper that clearly hasn't stood up to the test of time and litigate the finer points of its synthetic control method as if that's what will tell us whether lockdowns are effective.

We now know, a year in, after the calendar has played itself out, that the correlation between the stringency of mitigation measures and US states and the impact of covid-19 is negligible. Sweden, in the meantime, sits in the middle of the pack of EU countries with respect to its Covid-19 outcomes. In the US, thanks to a combination of mass vaccination, mass infection, and warmer weather, Covid-19 is winding down. (Whether it will be endemic long-term remains open.) With so much more data available, we are at least better positioned now than we were in April 2020 to assess how well lockdowns worked. That said, we suspect it will be years before we get anything like a final word on this topic, because we may need everything to be over. After all, the trends we see today are not guaranteed to continue.

In a sense though, none of this matters. It does not matter because we note that in May of 2020, when our paper first appeared, many places in the US were closing beaches, golf courses, parks, and playgrounds. If anything ought to be uncontroversial in May of 2021, it's that this behavior was not included among the best actions to pursue. So, it's *at least* true that some aspects of lockdowns that were in place, aspects that were both harmful and restricted liberties, were completely ineffective.

With that caveat, what do papers assessing lockdowns say? How do they test effectiveness? How do they measure stringency? How do they deal with compliance issues? How to do they deal with endogenous variables such as demographics or spread at various times? These are hard matters to disentangle. Further, we have to be wary of studies that "prove" lockdowns work which simply assume the mechanical, guesswork-filled models we critiqued in our 2020 paper are correct and then assume that lockdowns have to work because, well, they work.

We also have to be careful not to cite obsolete papers. But that's all van Besshuysen and White do. They cite an "incomplete" list of papers "providing evidence for the effectiveness of lockdowns," but all of them were written in early 2020.[26] One has a listed bibliography date of 2021 but in fact hasn't been updated since May 2020. We were perplexed that in May 2020, when the disease had barely spread, people thought they could do cross-country comparisons which proved lockdowns worked or didn't. But it's even more perplexing that anyone would want to publish a paper in the summer of 2021 which relies upon papers that only use data from early 2020, before almost all of the spread took place (despite near universal mask-

which appeared on September 15, 2020, right before New Mexico experienced one of the largest case surges in the country.

[26] van Besshuysen and White 2021, 10.

wearing, kids home from school, and so on). It was short sighted, in May 2020, to think these studies would be the last word. To take them as the last word in May 2021 is something else entirely.

As economist Daniel Allen notes in a review of 80 studies on lockdowns, many relied on the assumption that lockdowns would be so effectively enforced (or complied with) that of course transmission would end, and many—such as the studies van Besshuysen and White cited—relied on data that later turned obsolete or misleading when waves of increased cases spread throughout the world despite lockdowns. There is, as of now, little statistical evidence that lockdowns had much of a positive effect.[27] There are other papers finding the same results. There are papers disputing them. Perhaps it is too early to know. But this brings us to our original point: We argued in April 2020 that government leaders had a significant epistemic burden which they did not meet. In April 2021, after another year's worth of data, they still wouldn't be able to meet that burden, and it's looking more and more like lockdowns were not the cure everyone hoped for.

However, it's going to be hard to persuade people. After all, if we simply imagine that everyone stays in their house for two months, then by the very logic of the disease, wouldn't it have to end? After two months, all household members in households with sick people would have been infected and recovered, no one would be shedding virus, and so no could spread to anyone else. By necessity, it seems, imaginary lockdowns with perfect compliance have to work, and so lockdown proponents will not be much impressed by any study showing actual lockdowns did not succeed. After all, those weren't *real* lockdowns.

6. Were Lockdowns High Stakes?

The last section of van Basshuysen and White's paper is called "Do lockdowns cause more harm than good?" At no point did we argue in our 2020 paper that lockdowns do more harm than good. What we argued were that lockdowns were "high stakes" (because we wanted to argue that high stakes decisions have high epistemic burdens). The last (and corresponding) section of our paper is called "The high stakes". Before we submitted the paper, we even discussed among ourselves whether this section was even necessary since it argued for such an obvious conclusion: lockdowns are high stakes actions. *Nowhere in the section, or anywhere else in the paper, do we evaluate the claim that lockdowns cause more harm than good*. (Recall that we said, "Doing so would require an extensive cost-benefit analysis, which would take another paper's worth of work at least.")

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[27] Daniel Allen, "Covid Lockdown Cost/Benefits: A Critical Assessment of the Literature," working paper, April 2021, Simon Fraser University, URL = http://www.sfu.ca/~allen/LockdownReport.pdf?fbclid=IwAR30ZxkpCfcoOkkDKVU4vEo_PNp kPbIMW8Ro5puv9qRVuM0t7jnhJhLkRGg

So, what are van Basshuysen and White up to in their section titled, "Do lockdowns cause more harm than good?". Oddly, they spend the entire section replying to claims made in Cordle (2020) that we make no mention of, having only cited the paper in passing.[28]

Nevertheless, van Basshuysen and White's assessments of the harms of lockdowns display an unbelievably callous disregard for the harms of lockdowns, suggesting that they might be offset by reduced deaths from air pollution and traffic fatalities. (In fact, we now know that traffic fatalities surged in 2020 in the US, so once again, their paper reads like it was written in May 2020 and never updated.[29]) This displays a shocking indifference to the various harms that have been caused, many of which cannot be quantified in deaths. Start with the fact that the United Nations has declared that 2021 is going to be a humanitarian catastrophe:

> The **pandemic measures** are taken by countries to try to stop its spread, and the economic impact has fueled a 40% increase in the number of people needing humanitarian help, the United Nations said earlier this week. It has appealed for $35 billion in aid funding.
>
> "2021 is literally going to be catastrophic based on what we're seeing at this stage of the game," said Beasley, adding that for a dozen countries, famine is "knocking on the door."
>
> He said 2021 was likely to be "the worst humanitarian crisis year since the beginning of the United Nations" 75 years ago and "we're not going to be able to fund everything ... so we have to prioritize, as I say, the icebergs in front of the Titanic."[30]

UNICEF is feeding children in the UK for the first time in its 70-year history. The US homicide rate jumped 30% in 2020, going up as much as 70% in many major cities. Measles deaths hit a 23 year high last year, killing 200,000, as lockdowns inhibited vaccination efforts.[31] Lockdowns have sparked riots in North Africa.[32] 3 million children in the U.S. haven't received *any*

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[28] Cordle, Vaughn. 2020. "Pandemic 2020: Layoff-related Deaths." April 23. *https:// www.linkedin.com/pulse/pandemic-2020-layoff-related-deaths-increase- covid-19-cordle-cfa/?fbclid=IwAR18TeBQA3Lna61kdMPzPcWyrBnj70n6 EP9qF7sFIL10JZlPdVeX9Mnt6Ok*.

[29] https://www.npr.org/2021/03/05/974006735/tragic-driving-was-down-in-2020-but-traffic-fatality-rates-surged

[30] U.N. Warns 2021 Is Shaping Up To Be A Humanitarian Catastrophe | HuffPost

[31] Measles cases hit 23-year high last year, killing 200,000 as vaccination stalls, WHO says || UN News

[32] 600 people arrested, army deployed after riots in Tunisia | Al Arabiya English

education (whether in person or online) since their schools shuttered in March.[33] Roughly 25% of child abuse cases that normally get reported in schools in Florida have gone unreported.[34]

Governments around the world have spent trillions of dollars on aid and relief, at least some of which was necessary because people needed aid and relief. This spending has a huge opportunity cost--as this is money that could have been spent on climate mitigation, vaccination of children against preventable diseases, alleviating hunger in developing countries, etc. 200,000 extra businesses closed in the US during the pandemic—which is not some light thing, since such businesses represent people's livelihood and often their lifelong dreams.[35] In the US, a disproportionate number of these lost businesses were owned and operated by members of disadvantaged minority groups.[36]

We could go on virtually endlessly here, but we will spare our readers. Suffice it to say the idea that all of these harms could be offset by traffic fatalities[37] and reduced air pollution is ridiculous. If van Basshuysen and White want to argue that lockdowns do more good than harm, what they would need to do is first provide a proper, synthetic-control, demographics-adjusted study demonstrating just how the lockdowns reduced mobility and reduced transmission rates. Second, they need to do a full cost-benefit analysis of lockdowns, taking into account all of their negative and positive effects. But what we get instead is mostly handwaving. If van Basshuysen and White want to argue, as they seem to be doing, that lockdowns really don't do very much harm at all (comparing them to lives saved by traffic accidents and pollution) we have no rebuttal beyond an incredulous stare.

Appendix: Age adjusted comparison of death rate in Florida and California

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[33] As Many As 3 Million Children Have Gone Without Education Since March: Estimate | Education News | US News

[34] Suffering in silence: How COVID-19 school closures inhibit the reporting of child maltreatment - PubMed (nih.gov)

[35] https://www.wsj.com/articles/covid-19s-toll-on-u-s-business-200-000-extra-closures-in-pandemics-first-year-11618580619

[36] https://www.uschamber.com/press-release/coronavirus-pandemic-hits-minority-owned-small-businesses-disproportionately-hard-new

[37] Incidentally, while traffic fatalities are down in the EU during the pandemic, they are up in the USA.

	A	B	C	D	E	F	G
		FL	CA	risk factor*	FL expected	CA expected	
65-75 %		9.1	5.6	1.3	11.83	7.28	
75-85 %		6.4	3.8	3.2	20.48	12.16	
85+ %		2.1	1.3	8.7	18.27	11.31	
					50.58	30.75	
				*from CDC	ratio:	1.644878049	

CDC risk factor source: https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/older-adults.html

Florida's total deaths per 100,000 people as of 5/11/2021 is 167. California's is 158. Adjusted to Florida's age structure, therefore, California's death rate would be 259, or 55% higher than Florida's.