# Against "Covid Heterodoxy:" open review of Godfrey Smith, 2021.

Erol Akcay
University of Pennsylvania
08-08-2021

Peter Godfrey-Smith, a renowned philosopher of biology has come out with an essay[1] that purports to lay out the case for "covid heterodoxy," where the heterodoxy is counterposed to a alleged "orthodoxy" of covid policies with what he calls "lockdowns." His argument has three layers, one dealing with costs and benefits of "lockdowns" which he claims the "orthodoxy" got wrong, one dealing with the idea of suppressing liberties in the name of public health, and finally one dealing with more abstract issues like what makes a life worth living.

I will focus my review on the first layer since the first layer mostly relies on empirically decidable questions. The second layer has several internal inconsistencies that may be worth addressing but given the length of this document I will not touch upon it at length except to point out a few empirical overgeneralizations or falsehoods that come up. The third layer consists of essentially statements of values and beliefs independent of empirical information, much of which I don't disagree with, but also don't lead us to any necessary conclusions, and is therefore not productive to argue about.

My overall argument in response to Godfrey-Smith is that while in principle I agree with him that all costs and harms (along with benefits) of policies need to be considered (a truism), he fails at his own criterion and makes empirically unsupportable assumptions about the harms of "lockdowns" and alternatives. More specifically, I argue that the supposed "orthodoxy of lockdowns" does not exist, and what is really being opposed here (and by other "heterodox" writers) is the general idea that we should suppress the epidemic (with whatever means). This Godfrey-Smith justifies by downplaying the harms from the disease, which are objectively much worse than he represents. Moreover, contrary to Godfrey-Smith's assertion, people who lived through unchecked epidemics have a good sense of this. Finally, I point out that Godfrey-Smith (or people whose opinions he endorses to) have provided no feasible alternative to reduce harms, and more shockingly continue to downplay or display outright hostility to strategies such as masks and widespread vaccination, that can reduce both harms from disease and the need for harmful "lockdowns."

**A straw man target**

In the first layer, Godfrey-Smith's argument is that we put too much weight on the harms of the disease while too little on the harms of the "lockdown." I am compelled to put "lockdown" in scare quotes throughout since Godfrey-Smith doesn't work with a clear definition of the term. I

[1] This is the version I am reviewing: https://petergodfreysmith.com/wp-content/uploads/2021/08/Covid-Heterodoxy-PGS-v4D.pdf

quote the only definition he gives in full: “This term refers to a family of policies that differ significantly across contexts, but we all know what it refers to – schools taken online, businesses closed, restrictions on ordinary movement and interaction.“ This simply is an unworkable definition. There have been many, many kinds of responses, restrictions, mandates, guidances, with incredible variation of severity and enforcement that defies any argument that talks about them as a single policy.

The US for example (even NYC) never had a “lockdown” in the European or Australian sense with curfews, limits on how far you can be from home or for how long (when such limits existed, they were very rarely enforced). Most restrictions like restaurant closures were lifted in most of the country in May 2020 and returned only intermittently (or not at all) as local case numbers peaked. At the same time, some parts of the US were probably amongst the worst in the developed world in terms of school closures (especially in big urban districts like Philadelphia where I live). Similarly, Sweden is highlighted as a “light touch” country that eschewed “lockdowns,” but Sweden spent much of the pandemic with a stricter blanket ban on public gathering than most US. Gatherings of more than 50 people were banned from March 2020; the limit increased during summer 2020 for some kinds of events, but later reduced to just 8 people in November 2020 when Sweden was in the grips of a second wave. This is when political candidates in the “lockdown” country of the US were having rallies with thousands of people, and many events (like a certain party to celebrate a Supreme Court nominee) went forward that would have been banned in Sweden by government decree. The city of Lund in Sweden dumped manure on a public park to prevent people from gathering there for their traditional picnic (a low risk activity if there was one).

My point is that governments all over the world and all different levels have tried to manage things according to their own lights with a huge variation in actual policies and compliance. Lumping all these together as “lockdowns” of “no-lockdowns” obscures the specific context and mechanics of disease, behavior, and politics, and cannot be the basis of a serious discussion of harms and benefits, or the tradeoffs involved in each.

To take a case I know a little about, when you chalk up school closures in US to some imagined “lockdown orthodoxy” you end up with a cartoonish story that ignores very salient, readily observable facts. For example, many schools did reopen in the US. Which ones did and which didn’t was not even a function of local cases, but almost entirely based on idiosyncratic local considerations and crucially on local politics. In many urban districts (including Philadelphia) these factors included dysfunctional relationships between the district and the teacher’s union, decades of disinvestment resulting in facilities in disrepair that even pre-covid caused health hazards, a failure to provide clear guidance and resources for mitigation at a national level, and finally lack of trust from the community. These factors rather than some amorphous “COVID orthodoxy,” precluded implementation of mitigation measures and agreement to reopen schools for in person instruction. This was incredibly frustrating to watch, yes, but equally frustrating is to then be told that if only we were more “heterodox” we would have had open schools. Second, districts that did reopen were subject to frequent and unpredictable (but foreseeable) closures of individual schools or classrooms because of exposure to the virus of

students or teachers. Several schools in the Southern US which started the school year this month already had to close because of outbreaks. This was so disruptive, and the risk from the virus to parents, grandparents and other caregivers is such that many parents, despite having the option of some in person teaching, opted into online only teaching. Even this year, when vaccines are widely available but a new wave is building at the start of a new school year, many parents are opting into online learning because of risks to their family and the anticipation of disruptive school closures due to exposure.

So, Godfrey-Smith sets up a straw men when he imagines people who sometimes advocated for what he calls "lockdowns" with no regard to their costs and harms. For example, many who I am sure would be identified by Godfrey-Smith as belonging to the "orthodoxy" were loudly and energetically advocating opening schools as soon as possible and keeping them open [1]. More generally, many of us advocated, with increased frustration as the (Northern Hemisphere) Summer, Fall, and Winter went by, for policies and behaviors that would reduce community spread, including mitigation measures other than blanket restrictions (including masking, ventilation, rapid testing, and since November 2020, vaccines), explicitly so that we could go about our lives without being at too great a risk of infection. It is frustrating, to say the least, that while we were trying to argue for actual non-"lockdown" policies, we had to argue with people who were yelling us that "lockdowns" were bad. Godfrey-Smith doesn't yell, but his argument is the same.

What makes things even more frustrating is that, at least in the US context, the very direct reason why none of these mitigation measures (masks, ventilation, rapid testing, and now, vaccines) were consistently and widely implemented was "heterodox" positions similar to Godfrey-Smith. These positions always start with the assumption that the unchecked spread of COVID is not a big deal. After all, if COVID only affects a very specific set of people and you can do just do "focused protection" to save them (fallacies that Godfrey-Smith explicitly subscribes to, see below), why bother with all the inconveniences like masks, rapid tests, etc.? This view was directly in power in the US during the Trump presidency and directly prevented concerted campaigns to institute masking and testing. It still holds both direct power at state and local level and social salience because of its entrenchment in a particular social and political identity.

So, the "lockdown orthodoxy" that Godfrey-Smith argues against does not exist. But there is a kernel of truth in Godfrey-Smith's conflation of all the diversity of policies under a catch-all term because there is indeed a common idea driving various government responses. That idea is that unchecked community transmission of COVID-19 is intolerable. And ultimately, it is this idea that Godfrey-Smith disagrees with: he, and other "heterodoxs" like him, think that unchecked spread is tolerable. This view is almost entirely based on the strength of one set of numbers: the age-specific infection fatality rate. In the next section, I discuss why this position is empirically false.

**Fallacies about harms of unchecked community spread**.

The biggest empirical fallacy in Godfrey-Smith's essay is the assumption that Covid-19 has essentially zero health cost on non-elderly and otherwise healthy people, based on the (true) fact that the infection fatality rate (the fraction of people who die after getting infected) is much lower for younger people than it is for older people. But the exclusive focus on mortality ignores significant morbidity that not just old people suffer. For example, it is not clear if Godfrey-Smith is aware that in the first wave (before any of the variants of concern, which almost certainly made things worse), there was a ~1% chance conditional on infection that a 30-something will need hospitalization [2,3], and ~0.1% chance they will need intensive care (from the meta-analysis in [3], for 20 yr olds, the numbers are ~0.4%, 0.05%, 40-yr olds ~2% and 0.4%, and 50 yr olds 4% and ~1% respectively). So, depending on the age structure of your country, you might be looking at 1.5-2% of your prime working age population (20-60) needing to be hospitalized if they get infected and maybe 0.3-0.4% of them needing ICU care. For the US, that is more than 1.5 million hospitalization *from the 20-60 yr old age group alone*, if about 60% of people were infected. This is consistent with the almost 900K hospitalizations in the 18-60 age group that has already happened in the US. These rates mean that even a fraction population experiencing unchecked spread will easily overwhelm the capacity of even the best healthcare systems in a developed country.[2] Even in countries with well-functioning, well-funded and supplied socialized health care system, one quickly runs against sheer capacity limits for things like beds, oxygen, ventilators, and crucially, the people to operate all of these. In countries that lack these, disaster is unmitigated. This is not a hypothetical scenario: it happened in places like Bergamo, Italy, NYC in the US, Peru, India; it may be happening right now in the South of the US: Florida, with 80% of its 65+ population fully vaccinated, has more people in hospital than ever (more on FL below).

Godfrey-Smith seems to concede that we may need to "slow[ing] transmission while the health system's capacity is increased," but then arbitrarily imposes a deadline of months or at most a year on this process. After this, he says, the argument cannot be sustained. But even if the facilities and beds and equipment can be procured quickly, the professionals who actually provide care (and ensure those low IFRs hold) cannot be trained overnight. This is not at all my area of expertise, but as an illustration, McCabe et al. [4] estimates that in the UK critical care nurses were the limiting factor to covid care capacity in the first wave. They explore options like calling up former staff or using nursing students, but even all the measures that were implemented only barely reaches the level actually attained in the first wave. The situation gets worse if one considers the well-documented and pervasive burnout healthcare workers suffer over a prolonged epidemic. Godfrey-Smith betrays no awareness of the complexity and immensity of this problem.

These much higher (compared to mortality) morbidity and severity numbers for younger people highlight the role of health care infrastructure, and why it is a fallacy to assume that younger people are not at risk from COVID-19, or by implication (as Godfrey Smith explicitly says he

[2] Note that I am not talking about "long-covid" here, which Godfrey-Smith considers and dismisses out of hand, even though evidence is mounting that it is a significant chronic harm. These numbers are for people who need acute care in a hospital.

does at the end of his essay) developing countries are not at a huge risk from COVID-19. We have most recently seen the horrors in India, which eschewed "lockdowns" in its second wave as the "heterodoxy" would have us do and showed us what happens when a fragile and inadequately resourced health system is confronted with an (initially) unmitigated epidemic.

Even if the healthcare system stays intact, you have good health insurance or socialized medicine, and hospitals are not overwhelmed, hospitalization or a stay at ICU is no fun. But here in the richest country on Earth, even after ACA (aka "Obamacare"), many people have no or inadequate health insurance, and even a short stay in a hospital can and does upend economic lives irreversibly. Furthermore, in focusing solely on individual mortality risk, and dismissing it as essentially zero for non-elderly, Godfrey-Smith (and all other "lockdown" opponents) also gloss over all the harm that accrue to survivors when an individual dies. One recent study estimated that between 1 in 100 (Peru) and 1 in 1000 (Russia) children lost a primary caregiver (parent or extended family) from March 2020 to the end of April 2021 [5].

India, and basically every other place where the epidemic ran unchecked for a period also shows a second flawed assumption implicit in Godfrey-Smith's and most "heterodox" arguments. That assumption is that but for "lockdown policies" (whatever they are), people would go about their lives in a relatively normal way, and all the human endeavors and flourishing for younger people would go on unchecked. I find this hard to fathom and it makes me wonder: for example, do we really believe that people in NYC would continue enjoy dining out, going to shows, enjoying a night out in a bar while bodies are piling out by the thousand per day, overflowing morgues into refrigerated trucks outside hospitals? Do we buy that healthcare workers that have to deal with all this death (even if it's only 80+ that are dying) continue checking boxes in death certificates and shrugging them off? Do we think young(ish) parents of young children will, without flinching, keep sending their young kids to school despite seeing (as I did) their friends' young kid brings an infection home, ending both parents in hospital on oxygen for an entire week? Will restaurants, free from government orders to close in person dining, be able to maintain enough staffing and customers to remain open? And if they cannot, will landlords without any friction forgive rent that they cannot pay?

These are not hypothetical questions, nor questions whose answers we have to guess. I agree with Godfrey-Smith that most people do have a good sense of the dangers from the disease and the consequences of unchecked community spread. I think they strongly disagree with him that it's not a big deal. As evidence, one can turn to the fact that in all places where policies lumped together as "lockdown" by Godfrey-Smith were implemented, the shifts in population behavior *preceded* government policies [e.g., 6, analyzing mobility data from US counties shows that people started staying at home *before* any stay at home orders are issued and even in states where no (statewide) orders were issued]. Or one might look at Sweden and Denmark, which as above was not a "no-lockdown" country but did rely much more on voluntary social distancing and individual decisions than government policy. A recent paper looked at Swedish and Danish spending when the Danes imposed a lot of restrictions and the Swedes did not [7]. Using individual bank account data, they find that individual spending dropped in Sweden and Denmark by similar amounts (25% vs. 29%, mostly driven by the fact after initially dropping by

more than Sweden, Danish spending compensated in April 2020), while Swedish spending remained lower than normal throughout May. Interestingly, while young people dropped spending more in Denmark than Sweden, the reverse was true for 70+ olds in Sweden: as their country left them to fend for themselves, they reduced their economic activity a lot more. Of course, for avoiding the 4% decline in spending (and no obvious benefit in GDP terms either), the Swedes had to accept a huge mortality per capita cost relative to Denmark. This kind of "voluntary" social distancing without any government coordination, policy, or help also disproportionately favors wealthier and white-collar workers and families, as they have the most flexibility about their working conditions and more likely to be able to living at home.[3]

My point is human populations are not made of automatons that will do what their governments tell them to do or keep doing what they've always done unless the government tells them not to, regardless of the death and sickness that surrounds them. People will observe case and deaths around them and will adjust their behaviors and demand action from their governments when things get bad. The advantage of government action (if done right) is that it can foresee things getting bad, and act to coordinate individual behavior before it does. The point is that unchecked spread of the virus is intolerable and when the virus arrives at your shores, something has to happen to mitigate spread one way or another.

**What is the alternative?**

Most of Godfrey-Smith's essay is an argument *against* "lockdowns" but he does endorse an alternative: he says that deaths (the only kind of direct harm from disease that he considers) can be averted through something called "focused protection" and explicitly although only partially endorses the Great Barrington Declaration (GBD; not clear which part is excluded from agreement). Since this "focused protection" seems to be his only or main remedy, it is relevant that the concept is, in Harry Frankfurt's technical term, *bullshit*. It is not meant to be a real alternative to "lockdowns," but rather a rhetorical crutch against "lockdowns" (really, any strategy of suppressing community spread). The workability and efficiency of any "focused protection" is neither here nor there in practice because the concept is just meant to persuade people to give up efforts to reduce community spread. I make this as an empirical claim, so here is my evidence.[4]

First, it is important to note that "focused protection," in the sense of a set of policies that can be implemented and have a reasonable chance of success, does not exist. We know this

[3] A point on inequality: I fully agree with Godfrey-Smith in being concerned about unequal distribution of costs of mitigation measures. But for all its failures, the US offers a surprising counterpoint here: thanks to government programs, poverty in this country has actually declined during the pandemic. I recognize this is not necessarily a permanent and it doesn't apply to a lot of places without the resources that the US has, but nonetheless it shows that economic and distributional impacts are not unavoidable consequences of "lockdowns."

[4] I should perhaps say that I am not necessarily accusing Godfrey-Smith himself of bullshit. I am saying (at least) that he is taken in by the bullshit. It is possible that Godfrey-Smith assumes, perhaps based on credentials of the people involved, that this much-heralded phrase actually comes with an actual set of recommendations and is meant to be implemented.

because the people who think we should implement “focused protection” never produced so much as a white paper to tell us exactly how we should be doing it, and what actual policies are most effective. If you go the GDB website and look at the footnotes which they say are the “publications” where they described the policies in detail, you will see that they are newspaper op-eds repeating the same vague talking points. Despite the GBD telling us to stake a lot of people’s lives on their strategy, they have not put out any actual studies (theoretical or empirical) or guidelines of best practices that one might expect from such a high-stakes recommendation.

This is certainly not because they lack access to scientific networks, know-how, or resources to do their research and shape their policy recommendations. It is also not because no one in power would listen to them: they had the ear of the previous President of the United States. They still empathically have the ear of the current Governor of Florida, who seems intent on doing things his own way, and who made a show of meeting with the GBD architects and lifting all restrictions on their advice. Florida proceeded to have most of its Covid deaths *after* its governor publicly and explicitly signed on to the GBD policies, which would have marked a remarkable test and failure of “focused protection” as policy, if it actually was one. It isn’t. Indeed, there is little indication that Florida implemented or even tried to implement *any* of the vague recommendations (e.g., “providing disability job accommodations for older vulnerable workers” or “[finding] temporary accommodations for older people living in multi-generational homes”) of the GBD. For nursing homes, no specific “focused protection” policies seem to be implemented (other than federally mandated testing). Even for the no-brainer strategy of vaccinations, FL is almost dead last in the nation (third (<70%) and second (<50%) from the bottom among all states, in resident and staff vaccination rates respectively). If “focused protection” was meant to be policy advice, one might expect these failures to disturb its architects (and distance themselves from the policies), but their actual reaction was to embrace the Governor’s handling of the pandemic: on March 18, 2021, they came together to specifically praise the job DeSantis has been doing [8]. This makes one think that the architects of GBD themselves did not mean their recommendations to be considered as actual implementable policy or care that they haven’t been implemented.

Of course, as I write this, Florida is experiencing a new wave, with hospitalization levels at or near their all-time peak in that state and death numbers predictably following on their heels, including in nursing homes where FL currently is leading the nation. If “focused protection” was meant to avoid all this, the GBD people, who staked the well-being of the people of Florida on this idea would now be advising the sympathetic Governor DeSantis on how to avoid infections, hospitalizations, and deaths in vulnerable people. But the governor himself seems more concerned with preventing school districts from implementing mitigation measures like masks and fighting vaccination requirements for health care workers (including nursing home staff), and the GBD architects seem to have moved on from talking about “focused protection” (despite FL currently leading the nation in nursing home deaths). Instead, they seem happy to just support the governor’s anti-mask push with empirical falsehoods or unsubstantiated speculations [9].

**Fear of covid or fear of mitigation?**

This last point brings me to an odd pattern in "lockdown skeptics" that Godfrey-Smith also seems to conform, which is an almost hostility or annoyance at risk mitigation measures that are not "lockdowns," such as masks, rapid testing, or more recently, vaccination. This oddity is manifested here in Godfrey-Smith's complaints about how people talk about vaccines. He seems to find it disingenuous for Peter Hotez to say that we should be telling people that the vaccine is going to save their lives, because (as he assumes) that young and healthy people are not at risk anyway. For one, this takes Hotez's comments, which were made about the US in January 18 2021 (and quoted again by NYT in March), when many people most at risk were still unvaccinated (as I write this in August 2021, this very much remains true) out of context, and assumes that they are meant to apply to only to healthy young people. Second, as above, while it is certainly true that younger people are at less risk of dying, they are not at zero risk. Something like 10000 people between 18-40 yr olds died in the US from Covid (CDC, as of 8/4/21). Many more were hospitalized. The vaccines seem almost hundred percent effective in preventing serious disease and death. So, clearly there *is* a benefit to self, and the vaccine might indeed save your life. This of course goes hand in hand with saving other people's life, too, because you do not transmit the virus to them if you yourself are uninfected. Ironically, Godfrey-Smith makes this complaint in a section arguing that governments and media are trying to scare people, but the two articles cite here are titled "We explain why the vaccine news is better than you may think" and "The case for COVID optimism."

I admit that I don't understand this. Widespread vaccination can avoid most or almost all of the harms (from infection AND "lockdown") that we all are worried about. Yet, judging from the tone of their arguments, "lockdown skeptics" almost seem annoyed that we caught this break, and willing to pick fights over empirically indisputable facts like yes, the vaccine will indeed also protect you.

Going beyond Godfrey-Smith's essay, the same problem applies with even more force to masks: "lockdown opponents" are almost uniformly also hostile to masking requirements indoors which we know to be safe, effective, and very low cost mitigation strategy. The more sophisticated of these arguments rely on exaggerating the supposed costs of masks that they reduce oxygen availability, create psychological costs, etc.; none of these empirically hold up (e.g. the quotes in [9]). To me, this tracks with what I argued at the beginning: the broader discussion here is whether we should do any mitigation at all, not whether specific policies are worth doing or not. Godfrey-Smith's essay contributes to this conflation of the debate about merits of a nebulous "lockdown" concept with the shadow debate about whether any mitigation is worth doing.

Now, the broader claim in Godfrey-Smith's passage on vaccines is that governments and media tried to scare us into giving up liberties and telling us what to do, and we shouldn't let them. This again is hugely at odds with what I have experienced in the US: from the very early stages of the pandemic, there was if anything, a tendency to play down or underestimate how bad things were. This was most visible at the top of course: apart from former President Trump's

consistent downplaying of risks, the White House in February 2020 explicitly and swiftly muzzled a senior CDC official after she warned that we might experience serious disruptions to our daily lives because of the pandemic. But the initial downplaying of risks was by no means restricted to the White House of the political right. The liberal mayor of New York City, Bill De Blasio was still encouraging people on March 11, 2020 to go out and enjoy bars if they are not sick. He had to be forced into changing course four days later and order dining in at bars and restaurants closed. At that point in the pandemic, with no mitigation measures like masks, doubling time was close to 4 days, so this delay by itself likely caused a huge number of cases and deaths. Likewise, we literally had to beg the Philadelphia mayor Jim Kenney to cancel the St Patrick's day parade that weekend, which he reluctantly did, but he didn't close the bars that weekend, which in retrospect (given outdoor transmission is lower than indoors) was exactly the wrong thing to do.

At that point, we knew the disease was here. We didn't know just how bad it was and had no way of knowing because of limited testing. But those of us who understood exponential growth knew it would soon be bad if it already wasn't. Yet actual government responses didn't come until the mortality costs started to hit us, by which time an enormous mortality was baked in in places like New York City. After this first wave, some governments tooks things more seriously while others preferred to do as little as possible, or even keep local governments from implementing mitigation measures. The US federal government was firmly amongst the latter until January 2021. To be sure, there has been plenty of bad communication going both ways, but in the US, the bulk of the misinformation minimized the danger.

**What do we do now?**

I share many of the frustration of Godfrey-Smith: mitigation policies in many countries including those me and my family live in have often been haphazard, not very well thought out, in many cases useless or sometimes even worse. I also agree that local policies like indefinite school closures in the US have been failures, creating huge harm but little benefit because they were never coupled with better policies to reduce community spread. But all of this applies even more so to the alternative, not mitigating community spread. When states or countries tried to do no mitigation, the result has invariably been a disaster. This was true before the variants of concern, and it's even more true now, especially in countries with not near-complete vaccine coverage (which is almost all of them).

So what do we do now? I would like us to begin by acknowledging some facts, the most fundamental one of which is that COVID-19 is a serious disease. It affects not just the old and frail, it can and does do significant harm to most of us. If you minimize the burden of disease to the point of assuming there is none for non-elderly and frail, you are kidding yourself.

Next, I would like us to stop frivolous debates over low-cost, proven mitigation measures. This includes masks (where the real question is how to improve the supply and usage of good filtration/well-fitting masks), improving ventilation indoors where people congregate (including simple measures like opening windows or window fans), moving as many activities as possible

outdoors, expanding our rapid testing infrastructure, and finally vaccinating as many people (in the entire world) as we can as fast as we can. These measures effectively mitigate risk, are safe, and minimally intrusive. They break the tradeoffs between harms from the disease and harms from activity restrictions. There is no reason to adopt them as widely as possible. (The exception is vaccinating the world, which is a very non-trivial problem where we should be spending a lot more of our energy.) The more we can collectively do these things, the more we can *all* continue doing the things that make life worth living while minimizing the harms from the disease.

Only after we do as much of these low-cost mitigation as much we possibly can, and outbreaks still happen[5], should we consider more drastic measures. In that case, I would like us to get our priorities straight as a society (this I suspect is a point Godfrey-Smith agrees with it). For example, if we must, closing indoor dining and bars should come *before* closing schools, not after as it did in most of US. We should pay close attention to the distribution of costs (again, a point I agree with Godfrey-Smith) and try to correct for entrenched inequalities. In the long term, we should also make our infrastructure (including work-, care-, and information-infrastructure) more resilient to such outbreaks. None of these, by the way, are brilliant ideas of my own: they are what the "orthodoxy" was saying all along (at least after we learned more about airborne spread, which is a story for another time).

If this document sounds exasperated, it's because I am. I have engaged versions of Godfrey-Smith's "heterodoxy" (at least his first and second layers) in one form or another since April 2020. I tried giving these arguments (and others, like fantastically low herd immunity thresholds) a fair shake, but they cannot be reconciled by simple facts about the disease and human behavior. Yet no matter how many times you refute them based on first principles and aggregate outcomes, they seem to come back in some form. This is my attempt to get this all in one document so I don't have to do it again.

Covid is a though problem. There is going to be some harm and inconvenience because a deadly virus jumped over to a population that lacked immunity. I certainly agree with Godfrey-Smith that it's not just biology (in fact, that ended up being almost "easy" so far, see: vaccines) or epidemiology, but also social sciences and humanities. I also agree that it is worth discussing what worked and what didn't to be better prepared for next time. But we cannot minimize harm if we don't first acknowledge what kind of problem it is. Kidding ourselves about the nature of the problem only makes it *more* likely that we end up with more harms both from the disease and the inevitable measures we will take to reduce spread.

[5] I should say that this is in the US and most of the world context; Australia and New Zealand may or may not face a different tradeoff. But as I argued at the beginning of this document, we need to discuss the specifics of each policy in its context to make sense of it.

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