

Costa, cancer and coronavirus: contractualism as a guide to the ethics of lockdown

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ABSTRACT

Lockdown measures in response to the COVID-19 pandemic involve placing huge burdens on some members of society for the sake of benefiting other members of society. How should we decide when these policies are permissible? Many writers propose we should address this question using cost-benefit analysis (CBA), a broadly consequentialist approach. We argue for an alternative non-consequentialist approach, grounded in contractualist moral theorising. The first section sets up key issues in the ethics of lockdown, and sketches the apparent appeal of addressing these problems in a CBA frame. The second section argues that CBA fundamentally distorts the normative landscape in two ways: first, in principle, it allows very many morally trivial preferences—say, for a coffee—might outweigh morally weighty life-and-death concerns; second, it is insensitive to the core moral distinction between victims and vectors of disease. The third section sketches our non-consequentialist alternative, grounded in Thomas Scanlon's contractualist moral theory. On this account, the ethics of self-defence implies a strong default presumption in favour of a highly restrictive, universal lockdown policy: we then ask whether there are alternatives to such a policy which are justifiable to all affected parties, paying particular attention to the complaints of those most burdened by policy. In the fourth section, we defend our contractualist approach against the charge that it is impractical or counterintuitive, noting that actual CBAs face similar, or worse, challenges.

In September 2020, as part of attempts to control the COVID-19 pandemic, students at Manchester Metropolitan University were effectively banned from leaving their accommodation.¹ Plausibly, this was not in their interests. Given their age, most were at very low risk of morbidity or mortality from contracting the virus.² They had to carry a very high burden—significant restrictions on free movement—for the sake of minimal expected prudential benefit. How might we justify this policy? An obvious answer appeals to the risks which the students posed to *others*, typically older members of society. But why, then, lock down the young rather than the elderly?³ This case exemplifies a more general problem: in order to restrict the spread of COVID-19, many countries have instituted lockdown policies which affect different social groups very differently. How should we trade off different groups' interests in pandemic response? Most responses to this challenge have been framed in consequentialist, specifically utilitarian, terms. This paper argues for a distinctive, non-consequentialist approach to assessing the ethics of lockdown, grounded in contractualist moral theory.

Our arguments are important for three reasons. First, lockdown policies are the most ethically challenging aspect of our response to COVID-19; they typically restrict fundamental rights of vast numbers of people. Furthermore, given uncertainty over whether vaccines are effective at stopping transmission and the possibility of further mutations, continued lockdowns may be necessary even as vaccination programmes go forward. Therefore, we need an account of the ethics of lockdown, and the standard approach, framed in consequentialist terms of cost-benefit analysis (CBA), is, we argue, ethically suspect. Second, analogous cases arise in thinking about vaccination: for example, should we compel the young to take a relatively under-estimated vaccine to protect the old? Our proposals help clarify the broader terrain of ethical thinking in pandemic control. Third, many think it is obvious that pandemic response *must* be conceptualised in consequentialist terms.⁴ This case, then, provides a uniquely challenging ground for clarifying the limits and scope of non-consequentialist approaches to public health ethics.

The first section sketches the CBA approach to the ethical challenges of lockdown policies. The second section argues against treating CBAs as even one input into ethical decision-making, because they allow *irrelevant considerations* to sway policy and they obscure the difference between *vectors* and *victims*. The third section develops an alternative contractualist approach, according to which the permissibility of lockdown policies turns on the complaints of those worst affected by them. The fourth section defends this approach against concerns that it is unworkable, noting that CBA faces similar challenges.

BACKGROUND

Although there is no precise epidemiological definition of 'lockdown', paradigm cases suggest a working definition: lockdown policies place significant, legally enforced restrictions on the freedom of movement and assembly of all members of some population, with the aim of preventing the spread of viral infection.

There is no such thing as 'lockdown' per se; rather, there are lockdown policies which vary along two dimensions. First, in terms of their *generality*: the proportion of the total population they affect. For example, lockdown policies can apply regionally or nationally to one age group or to all. Second, in terms of their *restrictiveness*: the extent of the restrictions they place on individuals' liberties. Closing only non-essential shops is less restrictive than closing both non-essential shops and schools.



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According to proponents, lockdowns have significant ‘benefits’ compared with the *status quo*: they considerably reduce immediate morbidity and mortality associated with COVID-19; furthermore, in doing this, they protect the healthcare system from becoming overwhelmed—an outcome with potentially disastrous social consequences both for public health and the moral fabric of society more generally.⁵ However, they also place significant restrictions on central human capabilities: to work, to spend time with family, to access healthcare, to engage in public life, and so on. Plausibly, these restrictions are both bad in themselves, and have significant, wide-ranging costs; for example, it has been suggested that lockdowns will lead to significant long-term economic loss, a rise in mental health problems, premature mortality from delayed diagnosis and significant reductions in educational attainment, to list but a few examples.^{6–9} Therefore, decisions about lockdown involve difficult judgments about the *relative value* of central human goods. Even worse, the expected costs and benefits of lockdown policies are spread unequally. Given epidemiological data, it seems that, typically, the direct health benefits accrue to older people, to men and to members of some ethnic groups.² Costs, too, are unequally distributed: for example, typically, the high social and economic costs of lockdown disproportionately affect those who are already disadvantaged and marginalised. For example, it has been estimated that the closure of schools in the UK will have significant, long-term effects on income inequality.¹⁰ How, then, should we decide when and which lockdown restrictions are permissible?

One claim in public discussion has been that the ‘cure should not be worse than the disease’, or we should balance the public health benefits of lockdown against costs to other aspects of health or the economy.⁶ Economists and philosophers have suggested a related, more precise claim: that lockdown measures should pass a CBA, such that its aggregate benefits should outweigh its aggregate costs.^{7–9} This approach can be understood as reflecting a more general ethical standpoint, most famously associated with utilitarian theorising, according to which policy-makers should seek to maximise expected aggregate welfare.¹¹ Such an approach has intuitive appeal; choosing between policy options by adding up the costs and benefits for every individual seems to show equal concern for the interests of *each individual*. Indeed, such *impartiality* may seem fundamental to the moral outlook.

We can distinguish two ways of using CBA in thinking about lockdown. On a ‘strong’ approach, CBA captures *all* of the normative considerations, such that we should choose whichever option is ‘best’ according to CBA. On a ‘weak’ approach, CBAs serve as one input into decision-making; if a CBA shows that a lockdown policy will maximise welfare, this is a strong *pro tanto* consideration in its favour to be balanced against other concerns, much as many hold that tools such as cost-effectiveness analysis provide *one* but *only one* important input into decision-making about resource allocation.^{11 12}

There are two reasons to prefer the weak approach in our case. First, concerns about distributive justice seem central to debates both about COVID-19 in general, which has strikingly unequal patterns of morbidity and mortality, and, as noted, to lockdown specifically.¹³ A focus on aggregate outcomes is blind to these worries. Strictly, CBAs might be able to take account of distributional concerns, for example, through inclusion of equity weights.¹⁴ However, they seem ill suited to capturing worries about *structural* and *relational* inequalities—say, stemming from race or class—expressed in the pandemic context, which, confusingly, often speak both *in favour* of taking significant action against disease to protect the already marginalised,

and *against* lockdown, which can widen existing inequalities. Second, predictions about the effects of lockdown are highly uncertain¹⁵; for example, while lockdowns *might* be necessary to avoid health system collapse, this is far from certain⁵; similarly, while lockdowns exacerbate educational inequality in the short term, it is hard to know the long-term effects of such unprecedented policies.¹⁰ Even proponents of aggregative theorising often accept that, in the face of uncertainty, there might be good reasons to prefer maximin over maximising strategies.¹⁶ Hence, using uncertain CBAs to determine policy is theoretically problematic.

Therefore, it would be prudential for proponents of CBA to claim that their approach captures but one aspect of the ethics of lockdown. In the next section, however, we argue that even this weak use of CBA is problematic, because it distorts the normative landscape in two fundamental ways: CBA risks including *normatively irrelevant considerations* into debate, and it obscures the difference between *vectors* and *victims*. Based on these concerns, the third section builds a positive, non-consequentialist account of the ethics of lockdown.

COSTA COFFEE, CANCER SCREENING AND CBA: TWO PROBLEMS FOR CBA

Consider a hypothetical example:

Costa: The Prime Minister’s Office has done a CBA of a lockdown policy and concluded that the aggregate ‘benefits’ slightly outweigh the ‘costs’. A representative from Costa Coffee turns up at the final meeting, she has excellent survey evidence that very many people are feeling slight frustration at being unable to obtain their daily coffee. She proposes that, were the CBA to take the aggregate feelings of irritation into account, then the ‘costs’ of lockdown would outweigh the ‘benefits’. Brandishing her Politics, Philosophy and Economics degree, she shouts that ignoring her would be a ‘mistake in moral mathematics’.

Should we listen to the Costa representative? There are three reasons to be sceptical of including aggregate annoyance in the ‘costs’ of lockdown. First, we might be concerned that frustration is difficult to measure and commensurate against other goods.¹⁷ Second, we might be concerned that preferences for Costa over coronavirus protection are ill informed or malformed.¹⁸ Third, we might worry that preferences for Costa are simply *ethically irrelevant* (at least, to this decision).

To illustrate and motivate the third claim, consider an example from Thomas Scanlon: an engineer gets trapped in the machinery broadcasting the World Cup final, such that the only way to save her arm is to halt the transmission.¹⁹ Stopping the broadcast would cause 15 min of frustration for 1 billion viewers. An aggregative ethical theory implies that we should not switch off the broadcast, because the *aggregate* costs would outweigh the benefits to the individual engineer. Still, Scanlon suggests, this is ethically problematic; feelings of frustration seem simply *irrelevant* to our ethical decision-making when significant physical injury is at stake, regardless of how many people have those feelings.

By analogy, even if the Costa Public Relations rep has accurately measured well-formed preferences, those preferences are *ethically irrelevant* to life-and-death decisions. This is not to say that, when thinking about life-saving interventions, *all* non-health-related considerations are irrelevant. For example, that many children lose out on basic schooling is relevant to thinking about lockdown. Frustration at missing your morning coffee,

unlike loss of basic schooling, is not *morally significant* enough to enter the conversation when costs like death are on the table.

The *ethical relevance* objection is not uncontroversial. Some hold that decision-making *must* be guided by considerations of aggregate welfare; if enough people are watching, we should not turn off the transmitter.²⁰ In the fourth section, we consider some of these issues. Still, Scanlon's concerns are compelling to many. We should, then, be suspicious of using CBA as an input into policy decisions; doing so implicitly prejudices a controversial ethical debate. There is a response to this worry: precisely because of the measurement and malformed preference concerns, actual CBAs do not take account of things like aggregate frustration. One might think that our case is a nice philosophical example, but of no practical interest, because no actual CBA includes such irrelevant concerns.

In response, we note three things. First, in general, it seems odd to say we should use CBA because *actual* CBAs differ from *ideal* CBAs. Second, we are not at all convinced that *actual* CBAs do exclude *all* irrelevant factors—for example, insofar as they focus on gross economic indicators, which bundle together a wide variety of 'losses'. Likewise, we are not convinced that they include *all* relevant factors—for example, the genuine psychological suffering of people unable to see their relatives. Finally, even if CBAs do capture *all* and *only* relevant concerns, they only do so because 'practical' decisions are themselves implicitly shaped by substantive value judgments; for example, claims about the *difficulty* of measurement typically reflect claims about the *value* of pouring resources into a measurement task, and claims that preferences are malformed often reflect judgments about which preferences people *ought* to have. *In practice*, actual CBAs are shaped by implicit relevance judgments—they should be explicit.

Consider a second hypothetical case:

Cancer screening: The National Institute for Health and Care Excellence concludes that were each woman between 50 and 70 to go for biennial mammography, the aggregate 'benefits' would outweigh the aggregate 'costs'. The only way to ensure that all women do attend, however, is to compel them (and the programme still passes CBA even if we include the 'costs' of compulsion). So, the government passes a law making it a legal requirement that all women between 50 and 70 attend biennial screening.

This policy decision seems deeply problematic. Even if (rather implausibly) it would be in each woman's interest to go to biennial breast cancer screening, their failure to attend does not harm anyone else. *Compelling* attendance seems problematic, CBA or not.

Consider, now, the decision to lock down Manchester Met students. Regardless of whether the lockdown was morally permitted, it certainly seems more justifiable than compulsory mammography. The key difference between the two policies is nothing to do, though, with the expected net balance of consequences for the targeted population. Indeed, locking down students is clearly *not* in their prudential interests, whereas compulsory mammography might benefit the relevant women. The primary reason to lock up the students is not because this is good for them, but because of the risks of harm they pose to others. And it is because their behaviour threatens harm to *others* that liberty-restricting measures might be appropriate in this case, but inappropriate in the screening case.²¹ It is a common thought that risking harm to others makes one liable to have their liberties restricted—it is for such a reason that it would be morally permissible to restrain someone who was wildly brandishing a knife at passers-by.²² The students, by risking spreading

coronavirus to others, have made themselves liable to have their liberties restricted. By contrast, non-attendees of mammography do not threaten others, and, as such, are not liable to have their liberties restricted. Infectious disease control measures can and should be grounded in the ethics of self-defence.^{23 24}

Importantly, the ethics of self-defence cannot be subsumed neatly into an aggregative framework. When *you* threaten *me*, I am ethically permitted to respond in ways which protect *me* even if those responses are not 'best' from an impersonal, population-level viewpoint. Imagine a horrible case in which a villain is attempting to grievously, but not fatally, harm you. Plausibly, if killing the villain was the only way to defend yourself, it would be permissible to do so, even if, from an impersonal standpoint, the 'costs' of self-defence are higher than the 'costs' of not doing so. Using CBA to think through this case would mangle the ethical situation. This limitation of CBA is part of a broader pattern, linked to its inability to consider structural and historical inequality; CBA cannot capture morally important facts regarding how costs and benefits have arisen.¹¹

Let us take a step back. We can do a CBA to decide whether to initiate mandatory breast cancer screening, and we can do a CBA to decide whether to initiate lockdown measures. However, the tool risks distorting the normative landscape. In some cases, as when it mandates cancer screening, the approach is *too strong*; in others, however, it is *too weak*, as when it overlooks how disease vectors become liable to self-defensive action. This is not to say that CBA has *no* place in public (health) policy. For example, perhaps in deciding whether to *offer* mammography to all, we should ask whether the 'benefits' outweigh the 'costs'.²⁵ You might think something similar is true about lockdown; even if CBA cannot justify having lockdown policies in the first place, it can help us choose between lockdown policies. However, using CBA to choose between lockdown policies misdirects our focus on *consequences*, when the real normative question concerns who can impose *risk* on whom (see the Contracting out of lockdown section). Further, even if there is some limited role for CBA, numerical reasoning tends to crowd out more complex qualitative considerations in policy contexts.²⁶ This phenomenon is particularly worrying when the estimates are 'spuriously precise', as in the case of CBA for lockdown (The limits to contractualism section)

As an instructive example of the importance of keeping a close eye on the normative landscape in lockdown debates, consider a recent article by Julian Savulescu and James Cameron arguing that lockdown policies should target only the elderly, and not the young.³ Interestingly, they explicitly recognise that the ethics of lockdown must be grounded in an account of harm to others. Yet, they do so by focusing on the ways the elderly's use of National Health Service (NHS) resources might 'harm' the young. It seems odd to focus on this opportunity cost when there is a far more straightforward way in which the young's behaviour 'costs' the elderly. A focus on opportunity costs is central to CBA, but risks odd conclusions—for example, justifying mandatory screening attendance on the grounds that treating late-stage breast cancer can be costly—and faces theoretical challenges insofar as it assumes an unusual sense of 'harm'.

More importantly, Savulescu and Cameron motivate their conclusion through a 'no levelling-down principle'. They claim that locking down everyone and locking down only the elderly would have similar health consequences, and as such, the only reason to lock down all would be a concern for equality. This would, though, be an instance of 'levelling down', like responding to the fact that some are blind by poking out everyone else's eyes. One concern here is that they misrepresent

the epidemiology.²⁷ A more fundamental concern, however, is that the concept of levelling down is ethically inappropriate; ‘levelling down’ concerns only really make sense if we are choosing between social policies in terms of expected distributive consequences, where all other moral considerations are equal. In our case, however, other moral considerations are not equal; in this case, some are non-consensually imposing risk on others. In such cases, it might be important to ensure responses are ‘proportionate’ or use the ‘least restrictive’ option, but such deontic concepts cannot neatly be translated into an impersonal, consequentialist standpoint.

We do not claim that Savulescu and Cameron have been beguiled by CBA. Rather, our concern is that their arguments exemplify how easy it is to misrepresent the normative landscape of COVID-19 policy choices, by treating them as akin to deciding how to distribute scarce resources, rather than as responding to webs of risk imposition. CBA is an even worse guide to that landscape: it either ignores relevance concerns or makes relevance judgments non-transparently, and is blind to the ethically deep difference between vectors and victims. Few people think CBA tells us the full ethical story—we doubt it tells us any of it.

CONTRACTING OUT OF LOCKDOWN

If not CBA, how ought we assess the large-scale trade-offs implicit in lockdown policies? In this section, we propose an approach to this question based on contractualist ethical theory.

Thomas Scanlon has proposed a ‘contractualist’ model for assessing the permissibility of ethical principles in terms of agents’ *reasonable complaints* against those principles.¹⁹ Contractualism holds that ‘an action is right only if there is a principle permitting them that no one could reasonably reject’ [19] (p 98). On this model, individuals can reasonably reject a principle or policy on the basis that it harms their interests. They cannot, however, take impersonal considerations—such as abstract concerns about equality—into account. Consequently, Scanlon suggests that an action is permissible only if it is in accordance with a principle where the strongest complaint any party has against acting on that principle is weaker than the strongest complaint any other party has against acting on an alternative principle.

Consider again the World Cup case. We have a choice between two principles: carry on broadcasting or stop broadcasting. The engineer has a complaint against the first—that following it involves losing her arm—whereas each of the viewers has a complaint against the second—that following it causes them 15 min of frustration. The engineer’s complaint against broadcasting is stronger than the complaint of any of the viewers against stopping—losing an arm is a far weightier harm than feeling some frustration. So, we should reject the first principle in favour of the second. In this case, contractualism is insensitive to aggregative concerns; we should not turn off the broadcast regardless of how much *aggregate* frustration is felt. Unlike CBA, contractualism provides a simple and compelling retort to the Costa representative.

To develop this approach for the ethics of lockdown it is important to clarify two things. First, contractualist justification is supposed to work at a *generic*, rather than individual, level.²⁸ We are supposed to assess principles in terms of the *kinds* of complaints which *kinds* of individuals could have against them; the *kinds* of complaints which generic schoolchildren might make against school closures, rather than the actual complaints of each and every actual schoolchild. Second, and related, we will assume that complaints should be indexed to individuals’ *ex-ante* perspective, rather than to the (expected) *ex-post*

perspective.^{29 30} To explain, consider two cases. In the first, in pursuing some socially beneficial end, such as fluoridating the water supply, we impose a one-in-ten risk of death on 10 people; in the second, pursuing the same end, we impose a one-in-a-million risk on a million people. It seems that, even though we can expect the same *ex-post* outcome in both cases, they differ ethically.³¹ To capture this distinction, we suggest that complaints should be indexed to individuals’ *ex-ante* prospects. Rather than say that the complaint against each policy is the same—one death—we will assume that the strongest complaint against the first policy is that it imposes a one-in-ten risk of death, whereas the strongest complaint against the second is that it imposes a one-in-a-million risk of death.¹ As well as fitting general intuitions, our focus on prospects fits neatly with our understanding of the ethics of lockdown in the second section, as grounded in legitimate responses to risk imposition.

What makes pandemic control especially ethically complex is that *each* member of society is posing a risk of harm to *each other* member of society by being a potential disease vector. As a result, it seems that *each and every* individual is liable to self-defensive response! What would this response look like? Each generic individual—the young, the old—poses a significant risk of infection, and associated mortality and morbidity, on others. The only known effective way to prevent this, currently, is to stop these individuals coming into contact with others by restricting their movements. While restricting their movements is a significant response, it seems proportionate given it is the only way to avoid imposition of a mortal risk. In turn, if it is ethically permissible *for each* person to be restricted in her movements, it is ethically permissible *for all*. Taking the perspective of self-defence when discussing lockdown policies implies an ethical baseline of a highly restrictive universal lockdown. Clearly, however, there are all sorts of cases where we impose mortal risks on others, but where our actions are permissible; consider, for example, driving a car, or even cooking dinner for your friends. How might we contract out of lockdown?

Key to thinking about this problem is the fact that lockdown measures impose heavy burdens on individuals—for example, in terms of their educational opportunities, or their ability to work or access healthcare—of the sort which ground reasonable complaints. We can, then, imagine representatives of different groups proposing alternative, less restrictive or less general policies. In turn, whether we should prefer those policies turns on whether the complaints other generic individuals have against those proposed policies are stronger than the complaints which the proposers have against the baseline highly restrictive universal policy. Consider two examples.

First, consider a universal lockdown policy, where each is prohibited from leaving her house. Plausibly, given the effects on their education and long-term mental health, and their relatively low risk of suffering from coronavirus, this policy is particularly bad for schoolchildren^{2 10}—of all social groups, they have the strongest complaint. (To return to the second section, note that not *all* of the students’ complaints are *relevant*: even if most individual children feel more strongly about their Pokémon card collection than their multiplication tables, a 9-year-old’s complaint that he cannot trade his Pokémon cards is not relevant, whereas the complaint that he cannot develop essential

¹This stipulation is controversial. We suggest, though, that the differences between an *ex-ante* and *ex-post* contractualism are lesser than the differences between either and CBA, such that what we say helps sketch a plausible alternative to CBA regardless of whether the details are correct.

numeracy is relevant.)ⁱⁱ We can, then, imagine the schoolchildren proposing an alternative policy—say, lockdown everyone *apart* from schoolchildren. We then ask whether any other group in society has a stronger complaint against *this* policy than the schoolchildren had against the universal policy. Answering this question turns on two kinds of inputs: factual inputs concerning the likely epidemiological effects of allowing children to attend school; and, second, evaluative judgments about whether the risk increase associated with children attending school grounds a weightier complaint than the children's complaint against not being at school. If the greatest complaint of the other groups against schoolchildren returning to school is weaker than the schoolchildren's complaints against total lockdown, then schools should reopen.

Second, consider the question of whether the UK government should impose 'local' lockdowns or a single 'national' lockdown, as in the 'Tier' system which was once imposed and which may, at the time of writing, be reintroduced. Again, the default assumption is that *all* should be locked down. Consider, now, members of the same demographic group, say students, but living in areas, say Manchester and Cambridge, with very different prevalence and transmission rates (at least, at the time of writing³²). Plausibly, both Mancunian and Cantabrigian students have roughly similar complaints against lockdown. Imagine that both propose a principle which would allow students to exit lockdown. The key difference between these cases is that, plausibly, the complaints of members of other groups in low-prevalence areas such as Cambridge, against the students going out, will be weaker than the complaints of members of other groups in high-prevalence areas such as Manchester. As such, we might justify a more variegated lockdown policy. Indeed, presumably, in areas of low prevalence, it may turn out that members of all groups would object strongly to lockdown measures, and, as such, we might justify removing measures entirely. We could understand this lack of lockdown policy as a case where risk imposition is justified as in the (*ex-ante*) interests of each, much as we understand the permissibility of allowing people to drive cars.³³

At this point, it is worth noting an important feature of our approach: although contractualism is focused on the complaints that generic individuals can make against principles, grounded on their own interests, the approach is well suited to tackle the kinds of worries about inequalities in risk of disease and inequalities in the effects of lockdown, raised in the first section. In focusing our attention on those at the highest *risk* of ill health, our approach automatically places our attention on the most vulnerable members of society, and their claims against others. In turn, however, nothing in our account suggests that *only* health-related concerns count as legitimate or 'proper' in thinking about responses to COVID-19. For example, on our account, concerns that lockdowns disproportionately affect the education of those already suffering socioeconomic disadvantage provide strong reasons against that policy. Of course, standard CBA can also incorporate concerns about the effects of lockdown policies on educational achievement, but only by conflating these interests with, say, the interests of shareholders in Costa Coffee. Our approach has an in-built concern for the interests of the most disadvantaged when considering both the arguments for and against lockdown.

So far, we have considered cases where the complaints of some group against some policy clearly outweigh the complaints of a second group in favour. What, though, about cases where the complaints against some policy and against some alternative policy seem roughly equivalent? For example, consider the worry that, even if they save lives, lockdown measures 'cost' lives through delaying diagnosis and treatment of cancer³⁴; *prima facie*, it is hard to see how we can think through this kind of life-for-life trade-off without some form of aggregative reasoning.

These concerns point to a more general problem for contractualism: that aggregative concerns do sometimes seem ethically relevant. This is most obvious when we are comparing harms or goods of equal magnitude, such as where we must choose between saving one life and saving five. However, something similar seems true when we are comparing harms that are not equal; take, for example, a decision between saving one person from death and 10 others from quadriplegia. Even though the one's complaint against being allowed to die is greater than each of the ten's complaint against not being saved from quadriplegia, it seems it might be permissible to save the 10. One option here, familiar from much work in applied ethics, is to suggest the need for a *plurality* of principles and approaches, for example, to say that, in such cases, there are both valid contractualist and consequentialist perspectives, which must be balanced.²⁴ Such moves are appealing, but tricky: as we argued in the second section, the problem with CBA is not just that it does not get *all* of the picture, but that it fundamentally *distorts* the picture. Therefore, rather than retreat to pluralism, we will investigate the options for a contractualist account of aggregation cases.

There is much debate over whether contractualism can capture these concerns.^{35–38} We will not canvass all these arguments here, but simply assume that, as many writers have argued, when complaints for and against a principle seem 'relevant' to one another, we can engage in a form of limited aggregation.³⁷ For example, we might allow 10 complaints against quadriplegia to outweigh one complaint against death, even though no amount of frustration could outweigh one complaint against death. We accept that this approach raises both conceptual puzzles—we may face sorites problems³⁹—and operationalisation problems—how should we decide whether complaints are relevant, and, if so, how should they be commensurated? We discuss such concerns in the fourth section. For now, we note simply that the notion of relevance *seems* important to thinking through the ethics of lockdown—as the Costa case illustrates—and that the literature contains a well-respected, well-developed alternative to CBA which takes this concern seriously.

With this approach in mind, we can model concerns about topics such as delayed diagnosis as follows: a generic older person has a complaint against loosening lockdown measures—she will be exposed to a high risk of avoidable morbidity and mortality—but a generic potential patient with cancer also has a complaint against maintaining lockdown measures—she is exposed to a high risk of avoidable cancer-related mortality. In this kind of case, who 'wins'? At this point, we need to engage in limited aggregation. If the risks are close enough that the complaints against lockdown and against no lockdown are, in effect, equal, then we should simply adopt the policy which burdens the lesser number. By contrast, if the complaints differ in weight, but still seem relevant to each other—for example, a 10% risk of premature mortality and a 15% risk of premature mortality—we may need a more complex aggregation procedure. For example, we might consider the number of people

ⁱⁱThanks to Isaac Goodburn John for (inadvertently) suggesting this example.

who would have these kinds of complaints, alongside the relative weight of each complaint. We would then prefer the policy which brought about the smallest number of weighted complaints. For example, if no lockdown leaves a million elderly people with a strong complaint of (arbitrarily) strength 0.4, but lockdown also leaves 500 000 potential patients with cancer with a complaint of (arbitrarily) strength 0.7, then we should maintain lockdown measures.ⁱⁱⁱ

In the second section, we suggested that actual CBA often implicitly reflects ‘relevance’ concerns. Therefore, you might worry our ‘limited aggregation’ approach is likely to dovetail with actual CBA; we could simply rebrand CBA as contractualism in action. However, it is important to remember that we have proposed an *ex-ante* form of contractualism.^{29 30} To see why this matters, imagine two different possible worries about delayed diagnosis; in one case, lockdown prevents a very small number of very high-risk people from accessing early diagnosis; in the second, lockdown prevents a very large number of low-risk people from accessing early diagnosis. It is easy to see how, from the viewpoint of CBA, these two cases might appear identical; in many instances, the same number of lives will be lost.³⁰ However, if we focus attention instead on individuals’ risk-based complaints for and against lockdown, we can distinguish the two cases; a form of limited aggregation may be permissible in thinking about the first scenario, but inappropriate in the second, because the small risks are simply irrelevant compared with the risks of COVID-19. Of course, a lot here depends on the size of the risks. Our point, however, is that there is an important operational difference between our form of contractualist limited aggregation and CBA. This difference is grounded on a more fundamental distinction: our contractualism focuses on how policies affect the prospects of the most disadvantaged individuals, whereas CBA looks to population-level effects. In turn, as the previous section demonstrated, the former, risk-based perspective is preferable as an approach to the ethics of lockdown, as it better captures why lockdown might be permissible in the first place.

THE LIMITS TO CONTRACTUALISM

In this section, we consider five possible objections to our approach to show that our proposals are concrete, realisable and plausible. At the end, we develop a methodological claim: even if our contractualist model cannot serve as an algorithmic way of determining the best policy, something similar is true of actual CBA. Compared with contractualism, CBA may appear definitive, but this is an instance of spurious precision. Our real choice is between ways of orienting our thinking.

The first objection concerns *judgments of relevance*. Contractualism requires us to judge complaints as relevant or irrelevant, and assumes that we can assess relative weight for purposes of limited aggregation. However, such judgments seem contestable; *we* might think that missing a cappuccino is irrelevant to life and death, but *others* might disagree. How can such judgments be justified?

ⁱⁱⁱ Again, this is but one way of cashing out the intuitions behind partial, or limited, aggregation. Another form might only let you aggregate in cases where the claims are of roughly equal weight, such that you should simply choose the principles which minimise the number of complaints. We have presented the version we did because it has the benefit of allowing unequal, but still highly morally significant claims to be taken into consideration—although by introducing an extra level of complexity.

This is a complex issue with many answers in the literature.³⁷ Our proposal is that we should think about the correctness of relevance judgments—at least in public policy contexts—in broadly contractualist terms. This may sound odd, but consider a hypothetical example: local residents object to building a wind farm because it affects their enjoyment of the landscape. Part of a policy-maker’s job is to decide whether such complaints should be balanced against the (apparent) benefits of the project at all, and, if so, how. These deliberations are prior to a final political judgment, but, we suggest, subject to similar norms. The policy-maker ought to ask whether the complaints individuals might raise against taking these concerns into account—for example, they privilege one social group’s aesthetic preferences—are weightier than the reasons in favour—for example, the relationship between natural beauty and well-being.^{iv} Our claim that the pleasures of frothy coffee are irrelevant to life-and-death issues is not a putative report on a moral reality to which we claim access, but a prediction that any process for thinking about which considerations should enter into policy would render this judgment.

This general strategy of deepening contractualism helps respond to the second and third objections, stemming from our focus on the complaints of individuals viewed as members of groups. The second objection concerns *interest heterogeneity* within groups. You might object that, given the huge variation between different schoolchildren, it makes little sense to talk of ‘the’ complaints which schoolchildren can raise; or, given that different elderly people might be at very different health risk, it makes no sense to talk of ‘the’ complaints of the elderly. The third worry concerns the *arbitrariness of group designation*. We have compared the claims of ‘the young’ versus ‘the old’, but why not divide the first group into ‘young-and-not-immuno-compromised’ versus ‘young-and-immuno-compromised’ and so on? Plausibly, decisions about which groups to recognise might affect our ethical analysis, and there is no obvious scientific fact of the matter about how we *must* distinguish groups.³⁰

Our response to both claims is simple: policy assessment and analysis *must* progress at the level of the group, rather than the individual. Given bureaucratic structures, there may simply be no option other than to close *all* or *none* of the schools and no sensible way to make these decisions other than to think about the ‘average’ child. We must recognise groups and think in terms of the interests of the average or normal member of these groups. One great advantage of contractualism is that it provides us with tools for thinking about how to draw up groups; for example, given ethical concerns about the long history of racism, there might be strong complaints against *not* categorising the population by ethnicity, but far weaker complaints against, say, not recognising the claims of all those sharing some genetic mutation. Contractualism can also help us decide how to represent the interests of a group; by asking what complaints we might have against using a purely subjective account of well-being in policy contexts, contractualism can justify why we should represent the average child as lacking an interest in swapping Pokémon cards, regardless of children’s own preferences.⁴⁰

^{iv} This may seem simply to push back the problem: how should the policy-maker decide that *these* concerns should be taken into account? By thinking about general political norms about how citizens should interact and the kinds of claims they may legitimately make on one another in political decision-making. Can these norms themselves be justified in contractualist terms? That is tricky, but we do not have to settle the fundamental questions in moral and political theories to show contractualism could work.

The fourth objection concerns not so much the mechanics of our approach as its implications. Specifically, the contractualist approach faces a ‘demandingness’ problem. Plausibly, the risks which any individual imposes by going out are very, very small, but the restrictions she suffers are major: can morality really demand that we give up so much when we only impose such a small risk? In reply, we concede that there is something problematic here: clearly, the risk any particular young person imposes on others when, say, she goes to the pub is tiny. It may seem unfair, then, to demand that any specific young person does not go to the pub. However, while there is a mystery here, it is a mystery faced by a wide range of ethical theories. The damage one causes to the environment by flying is minimal, but the damage caused to the environment by allowing very many people to fly is massive. If we want to recognise that there can be obligations to reduce one’s carbon footprint, say, then, it seems that contractualism must operate on a generic level. Of course, this generates demandingness problems, but our approach does not face any distinctive problems here; the worry, rather, is with the nature of morality.

The fifth worry concerns the *conflict framing* of the ethics of lockdown: why frame all of these debates as conflicts *between* social groups, rather than in terms of social solidarity? In response, we are not saying that people should be selfish. It is admirable if people voluntarily help others. However, appeals to social solidarity and goodwill should be handled carefully in the context of lockdown measures. In these cases, we are considering policies which impose severe legal restrictions, well beyond normal, everyday bonds of solidarity. It may be unpleasant to recognise that such policies will have winners and losers, but we should face up this fact and consider which trade-offs are proper, rather than simply assuming away problems.

We have responded to five possible concerns about our proposal. Still, we suspect that these concerns are often motivated by a more general worry: that, when compared with tools such as CBA, contractualism just seems too hand-waving; it requires a series of piecemeal comparisons, guided by judgments about what is ‘reasonable’ or ‘relevant’, rather than a rigorous, quantitative approach producing a single, clean answer. In one sense, this criticism is spot-on; we do not have a recipe for reaching decisions, simply waiting for some numbers to be plugged in, but a more general framework for interpreting, orienting and guiding political negotiation and deliberation. In another sense, though, the criticism is misguided, because it misrepresents CBA. CBA faces analogues of the worries explored in this section: if it is to account for intuitions around inequality, it, too, must tell us how to divide the population into groups⁴⁰; it can generate huge demands on individuals; and it escapes making ethics about conflicts of interests only at the cost of the odd fiction that *potential* Pareto improvements are better for all.¹¹

Still, you might say, at least it gives us some numbers! But even this claim is illusory: for all the talk of comparing ‘the economy’ and ‘health’ or even ‘health/health’ trade-offs, there is no obvious, uncontroversial way of commensurating the ‘costs’ and ‘benefits’ at stake in thinking through lockdown. We cannot, for example, blithely use the NHS’s £30 000/quality-adjusted life year rule as a guide to trade-offs generally; there are obvious worries about using willingness-to-pay measures to think through the ‘costs’ for different social groups, and so on.

Appeals to CBA are not really an algorithmic decision procedure, but more a way of orienting our ethical thinking. What proponents of CBA get right is that we should recognise the *costs*—including the *opportunity costs*—of tackling COVID-19. However, our proposed contractualist approach also does the

same. Beyond that, our approach has the great advantage over CBA that it captures relevance concerns and it focuses attention on where it should be—those who impose risk and those who are most at risk. We agree with proponents of CBA that trade-offs matter. But the relevant trade-offs are between the interests of different individuals, not between aggregated bundles of goods, such as ‘health outcomes’ versus ‘economic outputs’. All we have to guide our ethical thinking are general frameworks; our framework is not perfect, but it is better than the alternatives.

CONCLUSION: FROM LOCKDOWN TO VACCINATION

In this paper, we have argued against framing discussions of the ethics of lockdown in terms of CBA, and in favour of framing those discussions in broadly contractualist terms. What, though, does this approach imply for decisions such as that to lockdown the students at Manchester Met or when schools should reopen? We do not claim to have a definitive answer to that sort of question. Rather, what we have is a framework for thinking about how we should go about answering it: by looking at the sorts of complaints which members of different parts of society can make for and against policies. In turn, this mirrors how we often debate policies, focusing on how they affect the interests of members of different groups.

What an ethical perspective on these actual political debates adds is the importance of thinking about those who lack powerful or well-spoken or pushy representatives. It makes us think about what schoolchildren *could* say if they had power. It also makes us think about how members of different ethnic groups might respond if they had a political voice.

Lockdown cannot be a permanent policy option; to think otherwise is to be confused on the value of health, by treating it as a valuable end in itself, rather than as a means to an end. Rather, lockdown is part of a strategy which, it is hoped, will be ended with vaccination. However, given the huge uncertainties around the efficacy and safety of vaccines, and the threat of mutant strains, lockdown will remain a policy option for some time. Furthermore, when we think hard about vaccination policies, we face similar problems; for example, questions about whether scarce vaccines should be diverted from the elderly to teachers are, in effect, questions about how to balance the interests of the elderly in protecting their health over the interests of the young in receiving an education. Similarly, in campaigns against vaccine hesitancy we may implicitly assume that each has good reason to get vaccinated, hence overlooking the fact that, for some, reasons for vaccination are primarily prudential, whereas, for others, they are primarily ethical. As such, mature debate over all stages of our response to pandemics needs to focus on how to balance interests and the ethics of risk imposition. We suggest that the framework we have developed in this paper is exactly what we need to answer this challenge.

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REFERENCES

- Robson S. How Manchester metropolitan university went from huge student parties to lockdown in two weeks Manchester evening news. Available: <https://www.manchester-eveningnews.co.uk/news/greater-manchester-news/how-manchester-metropolitan-university-went-19006014>
- Spiegelhalter D. What are the Risks of COVID? And What is Meant by "the Risks of COVID"? Medium, 2020. Available: <https://medium.com/wintoncentre/what-are-the-risks-of-covid-and-what-is-meant-by-the-risks-of-covid-c828695aea69> [Accessed 14 May 2020].
- Savulescu J, Cameron J. Why lockdown of the elderly is not ageist and why levelling down equality is wrong. *J Med Ethics* 2020;46(11):717–21.
- Savulescu J, Persson I, Wilkinson D. Utilitarianism and the pandemic. *Bioethics* 2020;34(6):620–32.
- Hunter DJ. Trying to "Protect the NHS" in the United Kingdom. *N Engl J Med* 2020;383(25):e136.
- White L. Second lockdown will be the 'final death blow' for thousands of British businesses, industry leaders warn as leading economist predicts new measures will cost £1.8billion per day 1st Nov 2020 Mail Online. Available: https://www.dailymail.co.uk/news/article-8903375/Second-lockdown-final-death-blow-thousands-British-businesses.html?ns_mchannel=rss&ns_campaign=1490&ito=1490
- Broadbent A. Lockdown is wrong for Africa. *mail and guardian*, 2020. Available: <https://mg.co.za/article/2020-04-08-is-lockdown-wrong-for-africa/>
- Singer P, Plant M. When Will the Pandemic Cure Be Worse Than the Disease?" Project Syndicate, 2020. Available: <https://www.project-syndicate.org/commentary/when-will-lockdowns-be-worse-than-covid-19-by-peter-singer-and-michael-plant-2020-04> [Accessed 14 May 2020].
- Jessop J. Coronavirus and the economic value of a human life Institute of economic Affairs, London. Available: <https://iea.org.uk/publications/coronavirus-and-the-economic-value-of-human-life/>
- Andrew A. Primary school closures created substantial inequality in time spent learning between pupils from poorer and better-off families - and re-opening schools may be the only remedy Institute for Fiscal Studies, 2020. Available: <https://www.ifs.org.uk/publications/14976#>
- Hansson SOVE. Philosophical problems in cost–benefit analysis. *Econ Philos* 2007;23(2):163–83.
- Badano G, John S, Junghans T. Chapter 10. NICE's Cost-Effectiveness Threshold. In: McClimans L, ed. *Measurement in medicine: philosophical essays on assessment and evaluation*. London: Rowman and Littlefield, 2017.
- Horton R. Offline: COVID-19 is not a pandemic. *Lancet* 2020;396(10255):874.
- Adler Matthew D, Posner Eric A, Yale LJ. *Rethinking cost-benefit analysis*. , 1999: 109, 165–247.
- Bradley R, Bright LK. *Managing our uncertainty in the crisis*. . The Philosophers' Magazine, 2020: 17. 32–5.
- Peterson M. *An introduction to decision theory*. Cambridge University Press, 2017.
- Sunstein CR. The limits of quantification. *Calif L Rev* 2014;102.
- Mitchell P. Adaptive preferences, adapted preferences. *Mind* 2018;127(508):1003–25.
- Scanlon T. *What we owe to each other*. Belknap Press, 1998.
- Norcross A, Department of Philosophy, Florida State University. Contractualism and aggregation. *Soc Theory Pract* 2002;28(2):303–14.
- Grill K, Hanna J, eds. *The Routledge handbook of the philosophy of paternalism*. Routledge, 2018.
- McMahan J. The ethics of killing in war. *Ethics* 2004;114(4):693–733.
- Wilkinson TM. Contagious disease and self-defence. *Res Publica* 2007;13(4):339–59.
- Douglas T, Forsberg L, Pugh J. Compulsory medical intervention versus external constraint in pandemic control. *J Med Ethics* 2020. doi:10.1136/medethics-2020-106435. [Epub ahead of print: 20 Aug 2020].
- John S. First, do no harm? Screening, non-maleficence and ex-ante contractualism. *Social Theory and Practice*.
- Bevan G, Hood C. What's measured is what matters: targets and gaming in the english public health care system. *Public Adm* 2006;84(3):517–38.
- Hughes JA. Lockdown and levelling down: why Savulescu and Cameron are mistaken about selective isolation of the elderly. *J Med Ethics* 2020;46(11):722–3.
- Kumar R. Reasonable reasons in Contractualist moral argument. *Ethics* 2003;114(1):6–37.
- Frick J. Contractualism and social risk. *Philos Public Aff* 2015;43(3):175–223.
- John SD, Department of Philosophy, Florida State University. Risk, contractualism, and rose's "prevention paradox". *Soc Theory Pract* 2014;40(1):28–50.
- Daniels N. Reasonable disagreement about identified vs. statistical. *Hastings Cent Rep* 2012;42(1):35–45.
- The Guardian. Available: <https://www.theguardian.com/world/2020/nov/20/covid-cases-and-deaths-today-coronavirus-uk-map>
- Lenman J. Contractualism and risk imposition. *Politics Philosophy Eco* 2008;7(1):99–122.
- Maringe C, Spicer J, Morris M, et al. The impact of the COVID-19 pandemic on cancer deaths due to delays in diagnosis in England, UK: a national, population-based, modelling study. *Lancet Oncol* 2020;21(8):1023–34.
- Kamm FM. Nonconsequentialism. In: *The Blackwell guide to ethical theory*, 2013: 261–86.
- Lazar S. Limited aggregation and risk. *Philos Public Aff* 2018;46(2):117–59.
- Voorhoeve A. How should we aggregate competing claims? *Ethics* 2014;125(1):64–87.
- Horton J. Aggregation, risk, and Reductio. *Ethics* 2020;130(4):514–29.
- Tomlin P. On limited aggregation. *Philos Public Aff* 2017;45(3):232–60.
- John S. The ethics of Lockdown: communication, consequences, and the Separateness of persons. *Kennedy Inst Ethics J* 2020;30(3-4):265–89.