**Framing B**

**My value criteria is maximizing aggregate utility of the general population – For life to be worth living, it is agreed upon that each member of a society must have an equal opportunity to maximize their general happiness and welfare, which are tangible experiences derived from material conditions**

**Default to an aggregate utilitarian calculus – Maximizing aggregate utility for the general population allows for policies that align with each actor’s preference for equal material outcomes.**

**Allen 17** (Daneille Allen, Director of the Edmond J. Safra Center for Ethics at Harvard University and professor in Harvard’s Department of Government and Graduate School of Education, political theorist who has published broadly in democratic theory, political sociology, and the history of political thought, “Political Equality and Empowering Economies-- Toward a New Political Economy” Page 2 – 7 <http://henryfarrell.net/wp/wp-content/uploads/2017/04/Allen_equality.pdf>, Rose)

We were of course surprised not just by Brexit and Trump but also by the recession of 2008. We have therefore been living in a state of intellectual surprise for almost a decade. Why is it that we have been so blind-sided? The answer lies, I suggest, in the dominant liberal policy-making paradigms. The dominant liberal policy paradigm, emerging from places like Harvard’s Kennedy School of Government and operating in Washington think-tanks and policy making-spaces, fuses two things: utilitarian economic welfarism and Rawlsian welfarism. Let me explain**. On the utilitarian model the goal of policy is to maximize happiness or, better, utility, as the economists label it, for society. In its crudest forms, the effort to maximize aggregate utility relies on cost-benefit analyses, linked to preferences typically cast in terms of material goods.** Much modeling of utility maximization in relation to preferences has abstracted away from the contextual, social, psychological, and cultural particularities of individual economic actors. **The pursuit of utilitarian welfare maximization has typically focused on maximizing aggregate growth—in terms of income and wealth--and on using redistributive policies to spread the benefit of that growth**. John Rawls is a philosopher who in 1971 published an important book called Theory of Justice; and one of his main goals was to overturn utilitarianism. He sought to prioritize the right over the good, establishing as the purpose of political order the protection of a framework of right, not the pursuit of any particular good, even utility or happiness. Yet even as, philosophically, he sought to overturn utilitarianism, in many ways Rawlsianism has reinforced its practical applications. In the Rawlsian framework, the goal of a just society is to do two things. The first goal is to protect a set of basic liberties. Those basic liberties include things like the right of association, the right to free expression, and the right to participate politically. The second goal is to pursue social and economic structures, within the constraint of protecting those rights, that are to the benefit of the least well of in society (“the difference principle”) and that secure fair equal opportunity throughout the society. Rawls’ innovative and influential difference principle has anchored the major part of the reception of his work and led to a dominant focus, in philosophical discussions of justice, on the economic questions of distributive justice. These questions have gotten far more attention than his discussion of basic rights. Indeed, in the policy world, Rawlsianism has turned into a basic focus on redistributive taxation as the starting point for building a policy framework. Without intending to, Rawls reinforced the utilitarian paradigm precisely by hiving off consideration of basic rights from his treatment, via the difference principle, of social and economic spheres. **He provided support for the utilitarian focus on growth, so long as it was tethered to redistribution.** **In both utilitarian welfarism and Rawlsian welfarism, as expressed in the policy world, the core question for justice is one of material distribution**. **This is recognizable. When someone invokes the concept of “social justice,” the first thing that comes to mind tends to be matters of economic distribution and welfarist social rights**. Similarly, when a speaker invokes the concept of inequality, the relevant kind of inequality the speaker has in mind is almost invariably economic inequality. That’s what scholars and the general public know how to talk about, thanks to the intellectual support provided by policy paradigms coming out of utilitarian welfarism, on the one hand, and Rawlsian welfarism, on the other. Two features of this fused utilitarian-Rawlsian policy paradigm merit attention. The first is that both the utilitarian paradigm and the Rawlsian paradigm are universalizing. **That is, they both abstract away from the contextual specifics of any given society to develop their overarching policy guidelines (utility maximization, on the one hand; and the difference principle, on the other).** For instance, in Theory of Justice, Rawls seeks the definition of the right by asking us to imagine stepping behind “a veil of ignorance,” where we no longer know anything about our own social situation; from that perspective in the imagination, we are to try to identify the principles that would constitute a just society, **one that we will consider just regardless of whether we turn out to be one of the just society’s wealthier or poorer, male or female, black or white citizens and so forth**. The principles of justice are to be devised without taking into account any underlying demographic features of a society. Moreover, **they are understood to apply universally, to any social context.** In the context of utilitarianism, the move to abstract away from social particularity is less a matter of the intentional design of the theory and more a necessary consequence of its mathematization. In principle, utility is a concept that can embrace not only a given actors preferences for material outcomes but also his or her values and norms. But the project of “maximizing” utility requires that we convert preferences into something arithmetic, and so financial interests are conventionally used as a proxy for utility, thus flattening the particularities of preference that may in fact give meaning and shape to the life of any particular agent. As in the Rawlsian case, the move to treat material gain, money, as a proxy for utility permits universalization. Financial stakes can be translated into a currency and compared across countries and contexts without reference to the underlying demographic facts or situations on the ground in any given country. In other words, one of the things both of these intellectual paradigms do is turn our attention away from the underlying demographic and institutionalarrangements of a society. Our minds are trained away from questions such as: Who has power and on account of what sorts of institutional structures and according to what sorts of allocations of resources and opportunities? We lose the habit of analyzing the demographic and political specificity of any given society to the degree that we embrace and reinforce the habits of using utilitarian and/or Rawlsian welfarism. To give you a concrete example of the kind of abstraction I am trying to pinpoint, think about how the World Bank historically operated throughout the late 20th century. A set of boilerplate requirements for economic liberalization were applied to developing economies as conditions for receiving loans from the bank. The fact the stability of these welfarist policy paradigms has taught us to overlook underlying social and political phenomena flows, I think, from a small philosophical mistake made in the early 19th century, and characterizing most variants of liberalism ever since. The mistake was to draw a distinction between two halves of that set of basic rights protected by liberalism. I introduced the concept of basic rights in describing Rawls’ Theory of Justice, and provided as examples freedom of association, freedom of expression, and the right to participate in politics. With these three examples, I was limning the full spectrum of basic rights, including both halves as distinguished in the early 19th century. What does this mean exactly? An early 19th century French thinker named Benjamin Constant was the first to divide basic rights, basic human rights, into two categories. He called them the rights of the ancients and the rights of the moderns. The rights of the ancients comprised rights to participate in politics, in shaping the collective life of a society. We now call these positive liberties. The rights of the moderns, in contrast, comprise a right to property and the right to be left alone to take your property, which you have a right to, and to engage in commercial transactions in pursuit of your own wellbeing as you see fit. We call these negative liberties. The rights of the ancients were political rights, a right to be a part of a society that was working together to steer itself through collective decision making**. The rights of the moderns, forConstant, were about private autonomy, having the right to steer your own life, and being more or less left alone by any collective decision- making, to the maximum degree possible.** That distinction has worked its way into the philosophical tradition, and was extended by Isaiah Berlin in the early 20th century (who introduced the terms negative and positive liberties). Rawls, in Theory of Justice, argues that he’s putting the two sets of rights back together again and that we need to protect the whole set of basic rights. In fact, however, the political rights become sacrifice-able in his argument, in various technical ways that I won’t go into here (but do detail in Allen, “Difference without Domination”). Over the whole arc of Theory of Justice, we end up primarily focusing our thinking about politics on the conjunction of our private rights (the right to autonomy, property, association, expression, and so forth) with the economic questions associated with those rights-- the wealth associated with property and the need for redistribution that comes from the unequal flow of the gains of productivity across a population. In other words, when you lose sight of the political rights and focus primarily on the private rights or negative liberties, you can easily come to focus exclusively on economic questions and lose sight of political questions. That is what I see as having happened in the policy paradigms that dominated U.S. policy-making in the late 20th century. Another part of the story about the development of a truncated focus on economic questions— without reference to underlying political questions—relates to the transition over the course of the 20th century from the influence of law on public policy to the influence of economics. Sociologist Elizabeth Popp Berman (2014) has written well about the variety of factors— including new capacities for computation—that drove that change, and much more could be said about this transition. But the transition from law to economics also underscores the point I’m making**.** Legal thinking is fundamentally about the institutions of specific societies and about the consequences of particularities of those institutions for specific societies. Even sub-disciplines like comparative law that compare the legal systems in different places must begin by seeing the specificity of the legal institutions in each place under comparison. When law dominated the policy-making universe, universalizing policy approaches that abstracted from demographic and social specificity, were not broadly available. The abstracting, universalizing features of the fused utilitarian/Rawlsian welfarism that dominated policy making of the late 20th century seem to me to have produced the blindspots to society, politics, and political rights, that left us surprised not only by 2008 but also by Brexit and Trump.

* **If I prove that an unconditional right to strike undermines optimal and increases suffering, per an aggregate utilitarian calculus you have an ethical obligation to vote affirmative.**
* **Aggregate Utility is the most practical standard – when we construct and refine our structure of government we always presume that maximal happiness and minimal suffering are a concurrent end goal.**
* **The Negative’s burden is to provide a rational opportunity cost to doing the affirmative policy. To vote negative, either the status quo or an alternative policy option must be indefinitely better for the general welfare of the entire population.**

**Geo Engineering DA**

**Recent Kaiser engineer strikes prove that engineers have the motive and means to organize a collective strike. If world-wide States recognized the unconditional rights of workers to strike the results would be catastrophic.**

**Stone 9/30/21** (J.R. Stone and I'm a reporter at ABC7 News, "Hundreds of striking Kaiser engineers rally in the streets of Oakland" 9 – 30 -21 https://abc7news.com/kaiser-strike-update-workers-october-2021-oakland-protest/11067308/)

OAKLAND, Calif. (KGO) -- Hundreds of Kaiser engineers took to the streets of Oakland Thursday to demand better wages. Union workers have been on strike for nearly two weeks and say they aren't going back until the two sides can come to an agreement on a fair contract. "**If you want to have a decent lifestyle, you have to make a few bucks," said engineer Lemont Reid. His thoughts echo that of the more than 700 union workers currently on strike.** RELATED: Kaiser Permanente announces tentative agreement with unions to avoid nationwide strike "They've offered us a 2% wage, we do make a decent wage but the way that this economy is right now a 13% increase in prices of everything, it doesn't equal out what they've offered us," says union worker Russell Tiffany. The situation has gotten so bad, trash wasn't picked up at Oakland Medical Center three days ago. An anonymous Kaiser employee shared trash pictures with ABC7 News and said union Waste Management employees did not cross the picket line. Kaiser says picketers blocked the waste hauling trucks, they also tell us the trash has since been cleared. Union representatives say Kaiser came with a take it or leave it contract earlier this month. They voted against it and authorized a strike. "They want to give a bonus and not an increase, which over time will result in lower wages," says union worker Matt Jones. RELATED: Oakland approves sale of city-owned garage for Kaiser HQ In a statement, Kaiser said that the engineers are some of the highest-paid in the nation in their profession if you include wages, benefits, and retirement. Those we talked with were quick to respond to that. "We're in the Bay Area and it's also one of the highest costs of living in the country," says Xitlali Sanchez of the Alameda Labor Council. "We keep the lights on, and the machines running, and air circulating in the building, what we do is important," says Christina Anderson. **"Something happens right now, there are no engineers in there. If you have a family member in there wouldn't you be worried and wonder if a bed needs to go down or a machine goes down? Who's going to fix it? There's nobody in there," says Local 39 engineer Cynthia Diaz.** RELATED: Bay Area Kaiser nurses protest lack of masks, medical supplies Kaiser refused an on-camera interview but gave a statement saying they are offering a "reasonable wage increase and no takeaways, but the union is demanding more." Union representatives say 24 Kaiser locations in Northern California are currently affected by the strike. Story updated Oct. 1, 2021 to include response from Kaiser employee about concerns from patients about the safety of facilities: "We made extensive preparations so that during this strike, engineering duties are handled by skilled and experienced engineers, including those brought in from Kaiser Permanente facilities in other regions across the country. In addition, they are being supported by qualified contractors and equipment specialists, all of whom have been appropriately prepared for this work."

**If engineers leveraged their unconditional right to strike that would compromise the geo engineering sector. Geo engineering is key to solve climate change.**

**Dunne 18** (Daisy Dunne, BSc in biology from the University of Bristol and a science journalism MA from City, University of London. She previously worked at MailOnline covering science and technology. She was Carbon Brief's science writer from 2017-2020.9/5/2018 “Explainer: Six ideas to limit global warming with solar geoengineering” https://www.carbonbrief.org/explainer-six-ideas-to-limit-global-warming-with-solar-geoengineering)

Scientists agree that cutting global greenhouse emissions as soon as possible will be key to tackling global warming. But, **with global emissions still on the rise, some researchers are now calling for more research into measures that could be taken alongside emissions cuts, including – controversially – the use of “solar geoengineering” technologies**. **Solar geoengineering is a term used to describe a group of hypothetical technologies that could, in theory, counteract temperature rise by reflecting more sunlight away from the Earth’s surface.** From sending a giant mirror into space to spraying aerosols in the stratosphere, the range of proposed techniques all come with unique technical, ethical and political challenges. Carbon Brief spoke to the scientists who are pioneering research into these techniques to find out more about their potential uses, shortfalls and overall feasibility. Heating up All types of solar geoengineering – known also as solar radiation management (SRM) – are united by their goal of limiting the effect of sunlight on the Earth, but they vary widely in their approach. **Possible methods include reducing heat-trapping clouds, sending a giant sunshade up into orbit or releasing aerosols into the stratosphere.** It is worth noting that, although these technologies could theoretically lower global warming, they do not aim to reduce the amount of greenhouse gases in the atmosphere and, therefore, would not be able to directly address problems such as ocean acidification. However, research shows that using solar geoengineering could indirectly lower the amount of CO2 in the atmosphere by stemming permafrost melt, reducing energy-sector emissions and causing changes to the carbon-cycle feedback. The idea of engineering the climate in order to limit sunlight has been debated by scientists and politicians for more than 50 years, but – apart from studies based on computer simulations – very little field research has been carried out. However, in recent months, interest in SRM appears to be growing. In October of last year, scientists met in Berlin to discuss the future of geoengineering. Last November, the US House of Representatives held a subcommittee meeting on geoengineering, with SRM dominating the conversation. But this interest has been met with resistance by some scientists and campaigners, who say that the potential risks of such technologies are still far from fully understood. Some fear that a geoengineered world could come with its own set of environmental and societal challenges, which they say could be comparable to – or even worse than – climate change. Below, Carbon Brief outlines the possible uses, shortcomings, costs and feasibility of the six most commonly proposed solar geoengineering technologies. Aerosol injection Marine cloud brightening High-albedo crops and buildings Ocean mirror Cloud thinning Space sunshades Six proposed methods for Solar Geoengineering. Graphic by Rosamund Pearce for Carbon Brief. Solar Geoengingeering options. Graphic by Rosamund Pearce for Carbon Brief. Aerosol injection Spraying aerosols high up into the stratosphere is currently the most talked-about form of SRM. The technique, which is known as “stratospheric aerosol injection”, could cool the planet in a similar way to a large volcanic eruption. When a volcano erupts, it sends an ash cloud high into the atmosphere. The sulphur dioxide released in the plume combines with water to form sulfuric acid aerosols, which are able to reflect incoming sunlight. Volcanic plume rises from the Kilauea volcano following a 6.9-magnitude earthquake 4 May 2018 in Leilani Estates, Hawaii. Credit: Planetpix / Alamy Stock Photo. MKTG41 Volcanic plume rises from the Kilauea volcano following a 6.9-magnitude earthquake 4 May 2018 in Leilani Estates, Hawaii. Credit: Planetpix / Alamy Stock Photo. Researchers have proposed that artificially introducing aerosols into the atmosphere – via a plane or a high-altitude balloon – could have a similar cooling effect. The amount of cooling could be large, says Dr Anthony Jones, an atmospheric scientist at the University of Exeter. He tells Carbon Brief: “We know after the Mount Pinatubo eruption in 1991 there was a global cooling of about half a degrees for two or three years afterwards, so it does seem that injecting aerosols into the stratosphere is quite effective.” Research suggests that releasing aerosols could also help to bring back global rainfall patterns to their pre-industrial averages. However, this is dependent on how aerosols are used, Jones says. For example, his research finds that releasing aerosols in just the northern hemisphere could lead to a decrease in rainfall – and, therefore, an enhanced drought risk – in India and the African Sahel. And there’s a mix of other potential regional impacts, he explains: “We found that the solar geoengineering could either reduce the frequency and intensity of storms in the North Atlantic basin or, if you did radical solar geoengineering in just one hemisphere, then you’d actually increase the number of storms. “[Researchers] have looked at changes to climate extremes, such as heatwaves, extreme precipitation events, cold nights. They’ve found that solar geoengineering over land regions could be very effective at reducing these extremes.” Some scientists have raised concerns that, if aerosols were used to address global warming, the world could be left at risk of a “termination shock”. That is, if aerosols were released and then suddenly stopped – as a result of political disagreement or a terrorist attack, for example – global temperatures could rapidly rebound. This sharp temperature change could be “catastrophic” for wildlife, studies have suggested. However, other research argues that the likelihood of a termination shock has been “overplayed” and that measures could be put in place to ensure that the risk is minimised. **Aerosol injection could have an edge on other proposed forms of solar geoengineering because it would not require a large technological leap to become a reality, Jones says: “We have aircraft that can go to that altitude already, high up into the upper troposphere and lower stratosphere.**” However, existing aircraft may not be large enough to carry the equipment needed to perform the aerosol release, says Prof Alan Robock, a professor in the department of environmental sciences at Rutgers University. At the sidelines of this year’s European Geosciences Union General Assembly, where Robock took part in a panel debate on geoengineering, he told Carbon Brief: “Even if you could, what do you spray? Do you spray sulphur dioxide gas? When the sulphur comes down, it’s going to create acid rain.” Sulphur dioxide is often proposed as the most likely candidate for aerosol release. However, others have suggested that sulfuric acid or hydrogen sulfide could also be used. Despite recent research, it is still “very difficult” to gauge what the true impacts of using aerosols to cool the planet would be, says Dr Ben Kravitz, an atmospheric scientist from the Pacific Northwest National Laboratory. This is because the technique “only exists in the modelling world”, he told Carbon Brief at the sidelines of a conference held in Berlin last October. In the video below, he explains why there is still “so much we don’t know”: With this issue in mind, a team of researchers from Harvard University plan to carry out later this year one of the first field experiments looking into the possible impacts of releasing aerosols. The timeline below offers more detail on how this experiment, known as SCoPEx, would work. It also includes the details of two previous attempts to bring solar geoengineering research out into the open. Marine cloud brightening The second most talked-about option for solar geoengineering is “marine cloud brightening”. In theory, this could involve using ships to spray saltwater into the clouds above the sea. Once airborne, the salt particles would act as “cloud condensation nuclei”, meaning they would facilitate the condensation of water vapour into liquid. As more water droplets are created, clouds would appear larger and brighter. Sea landscape with overcast stratocumulus clouds. Credit: progressman / Alamy Stock Photo. MDWT9P Sea landscape with overcast stratocumulus clouds. Credit: progressman / Alamy Stock Photo. These brighter clouds would reflect away more sunlight, says Prof Douglas MacMartin, an engineering researcher from Cornell University, who contributed to the US House of Representatives’ hearing on geoengineering. He tells Carbon Brief: “It would simply be making those existing clouds just a little bit brighter and could help cool planet.” Unlike aerosol injection, marine cloud brightening could, in theory, be used over very specific areas, he says: “It may be possible, for instance, to just cool over coral reefs. Or it may be possible to only cool in one particular region off the Gulf of Mexico that would reduce hurricane strength in that area. But I think a lot of that is still just an idea.” Research into these ideas has so far been scant, he says. A few studies based on modelling suggest that marine cloud brightening may be able to “restore temperatures and ice cover”, address coral bleaching, and could have a “mixed” impact on global crop yields. However, concerns remain over how using marine cloud brightening could affect other aspects of the climate system, MacMartin says: “In contrast to something like SAI [stratospheric aerosol injection] – where you have a very spatially small effect over the entire planet – you have a large and very localised effect and that could lead to much more regional variation in the climate response.” This variation could possibly lead to unfavourable weather in some parts of the world, says Dr Anthony Jones: “You may be getting global cooling of 1-2C on average, but that’s entirely confined to certain regions and that would really upset weather patterns, ocean circulation and local biology.” High-albedo crops and buildings Another proposed technique that is starting to turn heads is the idea of increasing the albedo of buildings in order to reflect more sunlight. Put simply, this would involve making rooftops and walls brighter – by painting them white, for example. Although this technique is much less controversial, it is also unlikely to make a large difference to global temperatures, says Prof Sonia Seneviratne, a geophysicist from ETH Zurich, who recently published a literature review on the topic. However, it could be used in cities to counteract heatwaves, she tells Carbon Brief: “In cities, it could potentially help reduce the highest temperatures to reduce health problems for the population during heatwaves. White buildings are already common in some areas, for instance, in the Mediterranean.” Sunset in Oia, Santorini, Cyclades, Greece. Credit: imageBROKER / Alamy Stock Photo. E7F5JB Sunset in Oia, Santorini, Greece. Credit: imageBROKER / Alamy Stock Photo. Scientists have also suggested that the same technique could be applied to crops, possibly by introducing genes that would give plants a waxy sheen. To date, research into this idea has remained theoretical. Seneviratne says: “If more reflective crop species can be developed…this could decrease local and regional temperatures, in particular, during heatwaves. However, these potential benefits should be carefully weighed against potential negative side effects, for instance, on crop productivity and, thus, food production.” The technique could be used on a smaller scale than other proposed technologies, such as stratospheric aerosol injection. This means the risk of issues, such as “cross-boundary conflict” and termination shock, could be much smaller, she says: “Land radiative management is not aiming to reduce the global temperature and so allows some regional limitation of the effects.” Ocean mirror A less well-known option for limiting the effects of sunlight would be to use an “ocean mirror”. In theory, this would involve using a fleet of sea vessels to churn up millions of tiny microbubbles on the ocean surface. This seafoam would reflect away sunlight, cooling the planet, explains Prof Julian Evans, an emeritus professor in materials science from University College London. He tells Carbon Brief: “The reflectance of ocean foam can be more than ten times higher than the ocean itself and the ocean occupies 71% of our planet’s surface so enhancing sea foam is a sensible and simple way to reflect a few per cent more sunlight. “Obviously, the main criterion for a climate intervention is that it must be capable of being shut down fast if things start to go wrong. An ocean foam is shut down when the bubbles burst.” Wake caused by cruise ship. Credit: Satida Inpakdee / Alamy Stock Photo. JPGFRB Wake caused by cruise ship. Credit: Satida Inpakdee / Alamy Stock Photo. While the possible cooling effect of microbubbles could be large, there could be drawbacks to the technique. In a 2010 research paper, Evans suggested that using microbubbles could reduce the amount of sunlight reaching below the ocean’s surface, which may negatively impact marine ecosystems. With less light penetrating the ocean surface, marine plants – otherwise known as primary producers – may be less able to carry out photosynthesis. This could lead to a drop in the number of marine plants, which could have knock-on effects further up the food chain. However, more recent research modelling the impacts of using microbubbles to address global warming found that the technique would not affect ocean primary productivity, a measure of the activity of primary producers. On top of this, creating enough microbubbles at the ocean’s surface to have an overall cooling effect on the planet could require large amounts of energy, according to research co-authored by Evans. The research paper notes that the main energy cost would come from sustaining the bubbles for several days or weeks after they are first created. Cloud thinning Another less-explored option for reducing the effects of sunlight at the Earth’s surface would be to “remove” cirrus clouds from the atmosphere. Cirrus clouds are thin, wispy clouds made of ice crystals, which form at high altitudes. The clouds reflect away some sunlight, but also absorb large amounts of long-wave radiation – meaning that, on balance, they warm the planet. Cirrus clouds against sun, Pomerania, Germany. Credit: imageBROKER / Alamy Stock Photo. HCB8ND Cirrus clouds against sun, Pomerania, Germany. Credit: imageBROKER / Alamy Stock Photo. The overall heat-trapping effect of cirrus clouds is so large that it exceeds that of human-released CO2, says Prof Ulrike Lohmann, an atmospheric scientist from ETH Zurich who recently published a review on cloud thinning in Science. She tells Carbon Brief: “Therefore, if we could remove all cirrus clouds, we could more than offset the warming caused by a doubling of CO2 [in the atmosphere].” **In theory, aerial vehicles such as drones could be used to deliver and then inject solid aerosol particles, such as desert dust or pollen, into cirrus clouds. Seeding the clouds in this way would cause them to dissipate more quickly, lessening their overall warming effect.** However, overseeding could lead to the formation of thicker and more persistent cirrus clouds, Lohmann says in her research paper: “If cirrus cloud thinning is not done carefully, the effect could be additional warming rather than the intended cooling.” On top of this, large questions remain over how cirrus cloud thinning could affect other aspects of the climate system, such as atmospheric circulation, the paper concludes: “Only after these questions are addressed could one move further to explore the costs and feasibility of cirrus cloud thinning.” Space sunshades The final SRM technology discussed by scientists involves sending a giant mirror – or fleet of mirrors – into orbit in order to reflect away more sunlight from the Earth. The size of the mirror would determine how much sunlight it could reflect back towards space and, therefore, its cooling effect, says Prof Govindasamy Bala, from the Divecha Centre for Climate Change at the Indian Institute of Science. He tells Carbon Brief: “Approximately a 2% reduction in incoming sunlight [using a sunshade] is sufficient to offset the warming from a doubling of CO2 from the pre-industrial level of 280ppm to 560ppm. The current CO2 level is about 400ppm.” But introducing a space mirror into orbit – either around the Earth or the sun – would be a huge technological challenge, Bala says. And, once introduced, it would need to be continually altered to deal with further rises in atmospheric CO2, he says: “On the positive side, sunshades are implemented in space and, hence, environmentally they are the least disruptive. However, as a negative, it requires the most advanced technology for implementation and, hence, the costs are probably prohibitively expensive when we compare with other solar geoengineering techniques.” Substitute or supplement? One issue looming over solar geoengineering research is how – if at all – it will be used by society. There is currently no clarity among policymakers over whether any technology, or combination of technologies, should one day be used to address global warming. A larger question mark hangs over how solar geoengineering could sit alongside mitigation efforts. Some scientists and campaign groups believe that solar geoengineering could be viewed by politicians as a quick “technofix” to climate change. If more research and development is channeled into these techniques, they argue, politicians may start to backpedal on their promises to cut their greenhouse gas emissions. This issue should be considered “the major barrier” to the implementation of solar geoengineering, says Bala: “People might think there is a solution to climate change and, hence, abandon the efforts in CO2 emission reduction. This might allow CO2 to build to dangerous levels in the atmosphere by the end of this century.” However, other scientists say that solar geoengineering should be considered as a “supplement” rather than a quick fix. Speaking at the Climate Engineering Conference held in Berlin last year, Keith said: “In my view, solar geoengineering is – at best – a supplement to emissions cuts, not a substitute for them. It is possible that a combination of emissions cuts, carbon removal and solar geoengineering could provide a significantly safer climate than emissions cuts alone or emissions cuts and carbon removal combined. Possible, but unproven.” Reaching 1.5C Earlier this month, MacMartin, Keith and Prof Katharine Ricke, a climate scientist from the University of California, San Diego, published a research paper exploring how solar geoengineering – via releasing aerosols into the stratosphere – could be used as part of an “overall strategy” for limiting global warming to 1.5C, which is the aspirational target of the Paris Agreement. The researchers used a set of climate models to simulate changes in temperature and other variables over the next three centuries under a range of future scenarios. The scenarios include: “business as usual” (BAU), which assumes no mitigation efforts are made (“RCP8.5”); “mitigation”, which assumes an intermediate level of emissions (“RCP4.5”) without negative emissions; “carbon dioxide removal” (“CDR”), which assumes moderate emissions with long-term CO2 removal; and “solar radiation management” (“SRM”), which is the same as the CDR pathway, but also includes enough SRM to limit temperatures to 1.5C above pre-industrial levels by 2100. The results are shown on the chart below, where colour shows the results for BAU (red), mitigation (orange), CDR (green) and SRM (blue). Dashed lines mark the start of a new century. Projected global average temperature rise above pre-industrial levels under a range of future scenarios, “business as usual” (BAU), which assumes no mitigation efforts are made (RCP8.5); “mitigation”, which assumes moderate emissions (RCP4.5) without <a href="https://www.carbonbrief.org/explainer-10-ways-negative-emissions-could-slow-climate-change">negative emissions</a>, “carbon dioxide removal” (CDR), which assumes moderate emissions with long-term CO2 removal; and “solar radiation management” (SRM), which is the same as the CDR pathway but also includes enough SRM to limit temperatures to 1.5C by 2100. Source: MacMartin et al. (2018) Projected global average temperature rise above pre-industrial levels under a range of future scenarios, “business as usual” (BAU), which assumes no mitigation efforts are made (RCP8.5); “mitigation”, which assumes moderate emissions (RCP4.5) without negative emissions, “carbon dioxide removal” (CDR), which assumes moderate emissions with long-term CO2 removal; and “solar radiation management” (SRM), which is the same as the CDR pathway but also includes enough SRM to limit temperatures to 1.5C by 2100. Source: MacMartin et al. (2018) The results show that, at around 2100, the mitigation scenario and CDR scenario result in global warming of around 2.7C, while the SRM scenario is used to hold warming at 1.5C. The SRM scenario assumes that the world would start releasing aerosols in 2030 and continue until past 2250. It expects aerosol release to reach a peak at around the year 2100, when close to 5m tonnes of sulphur dioxide would be released into the atmosphere. However, the researchers point out that using solar geoengineering to hold global warming to 1.5C would not have the same environmental effect as reaching the target using mitigation. This is largely because using SRM would not significantly reduce the amount of CO2 in the atmosphere. The research paper reads: “Since geoengineering would not affect the climate the same way [as mitigation], a lower global mean temperature anomaly achieved using geoengineering does not necessarily lead to lower aggregate climate risks. Choosing an appropriate level that balances different risks to the climate system will not be straightforward.” Also, in a similar way to negative emissions technologies, solar geoengineering would not see the additional benefits for health of reducing fossil fuel emissions and improving air quality. Controlling the global thermostat Another unresolved aspect of geoengineering research is the issue of governance. Though ideas are beginning to emerge, it is still not clear who could be responsible for carrying out and regulating solar geoengineering. At present, research into solar geoengineering is largely restricted to the US, the UK and other parts of Europe – although China recently launched the world’s largest geoengineering research programme. But earlier this month, a group of scientists and policymakers from the global south published a letter in Nature calling for developing nations to take the lead on SRM research. Developing countries are likely to be the most affected by future climate change, research shows.Therefore, “it is right” for these nations to play “a central role in solar geoengineering research, discussion and evaluation”, the group argues. A small number of initiatives aim to widen participation in SRM research. The Solar Radiation Management Governance Initiative (SRMGI) recently released funding for research projects that plan to model the impacts of SRM in developing nations. In addition, the Carnegie Climate Geoengineering Governance Initiative (C2G2) has been established to “encourage a broader, society-wide discussion about the risks, potential benefits, ethical and governance challenges raised by climate geoengineering”. Speaking to Carbon Brief last year, C2G2’s executive director Janos Pasztor said developing a system of global governance for solar geoengineering research and regulation will “require more global cooperation than has ever been attempted before”. The challenge could be so large that it could stop the development of solar geoengineering altogether, says Dr Anthony Jones: “I actually find it very difficult to imagine a scenario where all countries agree on a certain amount of global warming that they want to counteract. How much solar geoengineering do you do – and where? I really struggle to picture that scenario.” Agreeing on a global geoengineering strategy would require even more cooperation than efforts to cut global emissions, says Prof Alan Robock: “You’re asking if the world can come together and agree on geoengineering without agreeing on mitigation. I think the answer is for us to agree on mitigation. Paris is the first step, the pledges made there aren’t enough but have got to increase.” One way researchers could start to tackle the global governance issue is by dividing it into smaller parts, says Dr Joshua Horton, research director of geoengineering at Keith’s research team at Harvard University. He tells Carbon Brief: “There will be a number of governance challenges – related to moral hazards, decision making, democracy, compensation, termination risk – a whole slew of things that aren’t easy to solve. It helps to start by recognising there’s a complex of problems that need to be addressed.” Including more political scientists and governance experts in conversations about geoengineering will be vital to solving the problem, he adds: “If there are solutions, they’re the ones who are going to actually figure out how we can proceed and, if we can’t, they’ll be the ones to make that determination as well.”

**Climate change causes extinction – their defense is based on inaccurate models**

**Specktor 19** [Brandon Specktor, Senior Writer, "Human Civilization Will Crumble by 2050 If We Don't Stop Climate Change Now, New Paper Claims," Live Science, 6-4-2019, https://www.livescience.com/65633-climate-change-dooms-humans-by-2050.html]

It seems every week there's a scary new report about how man-made climate change is going to cause the collapse of the world's ice sheets, result in the extinction of up to 1 million animal species and — if that wasn't bad enough — make our beer very, very expensive. This week, a new policy paper from an Australian think tank claims that those other reports are slightly off; the risks of climate change are actually much, much worse than anyone can imagine. According to the paper, **climate change poses a** "near- to mid-term **existential threat to human civilization**," and there's a good chance **society could collapse** as soon as 2050 **if serious mitigation actions aren't taken** in the next decade. Published by the Breakthrough National Centre for Climate Restoration in Melbourne (an independent think tank focused on climate policy) and authored by a climate researcher and a former fossil fuel executive, the paper's central thesis is that climate scientists are too restrained in their predictions of how climate change will affect the planet in the near future. [Top 9 Ways the World Could End] The current climate crisis, they say, is larger and more complex than any humans have ever dealt with before. **General climate models** — like the one that the United Nations' Panel on Climate Change (IPCC) used in 2018 to predict that a global temperature increase of 3.6 degrees Fahrenheit (2 degrees Celsius) could put hundreds of millions of people at risk — fail to account for the sheer complexity of Earth'smany interlinked geological processes; as such, they **fail to adequately predict the scale of the potential consequences.** The truth, the authors wrote, is probably far worse than any models can fathom. How the world ends What might an accurate worst-case picture of the planet's climate-addled future actually look like, then? The authors provide one particularly grim scenario that begins with world governments "politely ignoring" the advice of scientists and the will of the public to decarbonize the economy (finding alternative energy sources), resulting in a global temperature increase 5.4 F (3 C) by the year 2050. At this point, the world's ice sheets vanish; brutal droughts kill many of the trees in the Amazon rainforest (removing one of the world's largest carbon offsets); and the planet plunges into **a feedback loop of ever-hotter, ever-deadlier conditions.** "Thirty-five percent of the global land area, and 55 percent of the global population, are subject to more than 20 days a year of lethal heat conditions, **beyond the threshold of human survivability**," the authors hypothesized. Meanwhile, droughts, floods and wildfires regularly ravage the land. Nearly one-third of the world's land surface turns to desert. Entire ecosystems collapse, beginning with the planet's coral reefs, the rainforest and the Arctic ice sheets. The world's tropics are hit hardest by these new climate extremes, destroying the region's agriculture and turning more than 1 billion people into refugees. This mass movement of refugees — coupled with shrinking coastlines and severe drops in food and water availability — begin to stress the fabric of the world's largest nations, including the United States. **Armed conflicts over resources**, perhaps **culminating in nuclear war**, **are likely.** The result, according to the new paper, is "outright chaos" and perhaps **"the end of human global civilization as we know it."**

**Case**

**Econ Turn**

**Strikes reduce real wages of workers as a whole – companies mitigate losses by hiring less employees. Strikes also make gains at the expense of other workers who are excluded despite wanting to fill vacant jobs.**

**Hazlitt 19** (Henry Hazlitt (1894–1993) was a well-known journalist who wrote on economic affairs for the New York Times, the Wall Street Journal, and Newsweek, “How Unions Reduce Real Wages” \*\*\*\*Note ---The Text in the card comes from Chapter 13 of Henry Hazlitt’s 1973 Book “The Conquest of Poverty,” which the Mises Institute posted on 12/17/2019 The Mises Institute cites 12/17/2019 as the publication date, but the text originally appeared in Hazlitt’s book in **1973** the url: https://mises.org/wire/how-unions-reduce-real-wages)

Case For more than a century the economic thinking not only of the public but of the majority of economists has been dominated by a myth — the myth that labor unions have been on the whole a highly beneficent institution, and have raised the level of real wages far above what it would have been without union pressure. Many even talk as if the unions had been chiefly responsible for whatever gains labor has made. **Yet the blunt truth is that labor unions cannot raise the real wages of all workers.** We may go further: **the actual policies that labor unions have systematically followed from the beginning of their existence have in fact reduced the real wages of the workers as a whole below what they would otherwise have been.** Labor unions are today the chief antilabor force. To realize why this is so we must understand what determines wages in a free market. **Wage rates are prices. Like other prices they are determined by supply and demand.** And the demand for labor is determined by the marginal productivity of labor. **If wage rates go above that level, employers drop their marginal workers because it costs more to employ them than they earn. They cannot long be employed at a loss**. If, on the other hand, wage rates fall below the marginal productivity of workers, employers bid against each other for more workers up to the point where there is no further marginal profit in hiring more or bidding up wages more. So assuming mobility of both capital and labor, assuming free competition between workers and free competition between employers, there would be full employment of every person wanting and able to work, and the wage rate of each would tend to equal his marginal productivity. It will be said — it has in fact repeatedly been said — that such an analysis is merely a beautiful abstraction and that in the actual world this mobility and competition of labor and capital do not exist. There is, some economists have argued, in fact a wide range of "indeterminacy" in wages, and it is the function of unions to make sure that wage rates are fixed at the top rather than the bottom of this range or zone. We cannot reply that this indeterminacy theory is wholly wrong; but what we can say is that in relation to the problem of unions it is unimportant. The indeterminacy theory is true of wages only to the extent that it is true of other prices: it is true where the market is narrow or specialized. It is true, say, of highly specialized jobs in journalism, or in the universities, or in scientific research, or in the professions. But wherever we have large numbers of unskilled workers, or large numbers of approximately equal special but widespread skills — such as carpenters, bricklayers, painters, plumbers, printers, train-men, truckdrivers — this zone of indeterminacy shrinks or disappears. It is the craft unions themselves who insist that their individual members are so nearly equal to each other in competence that all should be paid on equal "standard" wage. And so we have the paradox that the unions exist and flourish precisely where they are least necessary to assure that their members get a market wage equal to their marginal productivity. It is true, of course, that an individual union can succeed in forcing the money wage rates of its members above what the free market rate would be. It can do this through the device of a strike, or often merely through the threat of a strike. Now a strike is not, as it is constantly represented as being, merely the act of a worker in "withholding his labor," or even merely a collusion of a large group of workers simultaneously to "withhold their labor" or give up their jobs. The whole point of a strike is the insistence by the strikers that they have not given up their jobs at all. They contend that they are still employees — in fact, the only legitimate employees. They claim an ownership of the jobs at which they refuse to work; they claim the "right" to prevent anybody else from taking the jobs that they have abandoned. That is the purpose of their mass picket lines, and of the vandalism and violence that they either resort to or threaten. They insist that the employer has no right to replace them with other workers, temporary or permanent, and they mean to see to it that he doesn't. **Their demands are enforced always by intimidation and coercion, and in the last resort by actual violence. So wherever a union makes a gain by a strike or strike threat, it makes it by forcibly excluding other workers from taking the jobs that the strikers have abandoned. The union always makes its gains at the expense of these excluded workers.**

**Reject their solvency arguments – their evidence is tainted by a socio- economic bias that assumes strikes are always positive sum. Recognizing the unconditional right to strike increases unemployment and competition amongst unions.**

**Hazlitt 19** (Henry Hazlitt (1894–1993) was a well-known journalist who wrote on economic affairs for the New York Times, the Wall Street Journal, and Newsweek, “How Unions Reduce Real Wages” \*\*\*\*Note ---The Text in the card comes from Chapter 13 of Henry Hazlitt’s 1973 Book “The Conquest of Poverty,” which the Mises Institute posted on 12/17/2019 The Mises Institute cites 12/17/2019 as the publication date, but the text originally appeared in Hazlitt’s book in **1973** the url: https://mises.org/wire/how-unions-reduce-real-wages)

Overlooking the Victims **It is amazing to find how systematically the self-proclaimed humanitarians, even among professional economists, have managed to overlook the unemployed, or the still more poorly paid workers, who are the victims of the union members' "gains.**" It is important to keep in mind that the unions cannot create a "monopoly" of all labor, but at best a monopoly of labor in certain specific crafts, firms, or industries. A monopolist of a product can get a higher monopoly price for that product, and perhaps a higher total income from it, by deliberately restricting the supply, either by refusing to produce as much as he can of it, or by withholding part of it, or even by destroying part of it that has already come into existence. But while the unions can and do restrict their membership, and exclude other workers from it, they cannot reduce the total number of workers seeking jobs. Therefore whenever the unions gain higher wage rates for their own members than free competition would have brought, they can do this only by increasing unemployment, or by increasing the number of workers forced to compete for other jobs and so comparatively reducing the wage rates paid for such jobs. All union "gains" (i.e., wage rates above what a competitive free market would have brought) are at the expense of lower wages than otherwise for at least some if not most nonunion workers. The unions cannot raise the average level of real wages; they can at best distort it. As the gains of union workers are made at the expense of nonunion workers, it is instructive to ask what proportion union members constitute of the whole working population.The answer for the United States is that union members now number about 20 million, or not more than 25 percent of the total civilian labor force of 87 million. So the unions are in a distinct minority. This might not be a fact worth emphasizing if there were reason to think that the average earnings of union workers were below the average earnings of nonunion workers. But while statistical comparisons cannot be exact, the evidence is conclusive that the case is the other way round. It is the most skilled occupations that are most unionized. In brief, we have a one-quarter minority of already higher paid union workers exploiting a three-quarters majority consisting mainly of already lower paid nonunion workers. People could save themselves a good deal of misplaced sympathy if next time they read in their newspapers of a strike for a "decent wage," they take the trouble to compare what the strikers were already getting with, say, the official statistics of average wages for all nonagricultural workers. The "gains" of union labor, of course, need not be solely at the expense of nonunion labor; they may be at the expense of some union members themselves. **The higher wage rates gained in a particular industry (assuming an elastic demand for its product) will lead to less employment than otherwise in that industry. This may force unemployment on some of the members of the "successful" union. The result may then be that smaller aggregate wages will be paid in that industry than if the higher** wage rate had not been successfully imposed. In addition, any union's "gains" (continuing to use "gains" in the sense of any excess over what would have been free-market wage rates) will be at the expense not only of unemployment or lower pay for other workers, but at the expense of consumers, by forcing them to pay higher prices. But as the great bulk of consumers consists of other workers, this means that these gains will be at the expense not only of nonunion workers but also of other union workers. **The real wages of the mass of workers are reduced whenever they have to pay higher prices. Once it is clearly recognized that the strike-threat gains of each union are at the expense of all other unions, in forcing their members to pay higher prices for products, the whole myth of "labor solidarity" collapses. It is this myth that has kept the strike-threat system going.** It has created sympathy for strikes and tolerance of the public harm they do. **The mass of the working population has been taught to believe that all workers should support every strike, no matter how disorderly or for what unreasonable demands, and always to "respect the picket lines," because "Labor's" interests are unified. The success of any strike is thought to help all labor and its failure to hurt all labor.**

**Prolific strikes undermine economic growth - discourage new investment and innovation**

**Hazlitt 19** (Henry Hazlitt (1894–1993) was a well-known journalist who wrote on economic affairs for the New York Times, the Wall Street Journal, and Newsweek, “How Unions Reduce Real Wages” \*\*\*\*Note ---The Text in the card comes from Chapter 13 of Henry Hazlitt’s 1973 Book “The Conquest of Poverty,” which the Mises Institute posted on 12/17/2019 The Mises Institute cites 12/17/2019 as the publication date, but the text originally appeared in Hazlitt’s book in **1973** the url: https://mises.org/wire/how-unions-reduce-real-wages)

Discouraging Capital Investment This result will follow not only because of the success of previous strikes or strike threats in that particular industry. **When strike threats have become chronic in an industry, and seem likely to be systematically repeated, new capital and new investment will no longer venture into that industry.** **Union tactics may even end by discouraging and gravely reducing new investment everywhere. Hence the strike gains of unions are at best short-run gains.** **In the long run they not only reduce employment but reduce the real wages of the whole body of workers**. For the productivity of industry — and the real wages of workers — are dependent on the amount of investment of capital per head of the working population. It is only because American manufacturing industry has invested more than industry in any other country — some $30,000 for every production worker1 — that American wages so greatly exceed wages in any other country. **Labor unions can only exploit capital already invested, and they can do this only at the cost of discouraging new investment. By discouraging new investment, by discouraging maintenance, expansion, and modernization, labor unions in the long run reduce real wages below what they would otherwise have been.** But this is not the only way in which labor unions reduce real wages. They do so, and they have done so since the beginning of their existence, by jurisdictional disputes, by forcing the employment of more workers than are necessary for a particular job, by systematic hostility to piecework, by forcing slow-downs, soldiering and malingering on the excuse that they are combatting unreasonable speed-ups, and by countless other featherbedding practices. In a famous review of William Thornton's book on labor, John Stuart Mill wrote in 1869: Some of the Unionist regulations go even further than to prohibit improvements; they are contrived for the express purpose of making work inefficient; they positively prohibit the workman from working hard and well, in order that it may be necessary to employ a greater number. Regulations that no one shall move bricks in a wheelbarrow, but only carry them in a hod, and then no more than eight at a time; that stones shall not be worked at the quarry while they are soft, but must be worked by the masons at the place where they are to be used; that the plasterers shall not do the work of plasterers' laborers, nor laborers that of plasterers, but a plasterer and a laborer must both be employed when one would suffice; that bricks made on one side of a particular canal must lie there unused, while fresh bricks are made for work going on upon the other; that men shall not do so good a day's work as to "best their mates"; that they shall not walk at more than a given pace to their work when the walk is counted "in the master's time"—these and scores of similar examples … will be found in Mr. Thornton's book. These depressingly familiar practices, in short, have been going on for more than a century. **The unions, far from "maturing," show not the slightest sign of abandoning them, but create more unreasonable obstacles than ever, still combat the introduction of labor-saving machinery, refuse to accept discipline, and undermine more and more management's ability to manage. To reduce productivity is to reduce wages. These short-sighted practices can only have the long-run effect of keeping real wages far below that they could otherwise be.**

**Medical Turn**

**An unconditional right to strike leads to Doctor and HCW strikes – creates a moral hazard trades off with improved healthcare service**

**Chima 13** (Sylvester C Chima MD, LL.M, LLD Associate Professor and Head: Program of Bio & Research Ethics and Medical Law, College of Health Sciences, UKZN Professor Chima, who was born in Nigeria, spent more than 15 years of his academic career in the United States, the United Kingdom, and the Caribbean. After qualifying as a medical doctor in Nigeria, Professor Chima practiced for many years in that country before going to Howard University, Yale University and Mount Sinai School of Medicine of New York University in the USA where he trained as a Pathologist and Neuropathologist. Apart from being a qualified Pathologist, in 2006 Professor Chima received a Master of Laws in Medical Law from Northumbria University, Newcastle-upon-Tyne in England. Professor Chima has worked around the globe in various prominent institutions such Yale-New Haven Hospital in Connecticut, the National Institute of Health in Bethesda, Maryland and Mount Sinai Medical Center in New York, USA. Prior to joining UKZN, he was Professor of Pathology and Medical Law at the International American Medical University in St Lucia, West Indies. Professor Chima has published papers in International journals such as BMJ, BMC Medical Ethics, Journal of General Virology, Human Biology, Nigerian Journal of Clinical Practice etc., and he is an author/co-author three books on Medical Law and Ethics and African Health issues. His latest book is entitled “A Primer on Medical Law, Bioethics and Human Rights for African Scholars”. Currently, Professor Chima is Associate Professor and Head, Programme of Bio & Research Ethics and Medical Law, School of Public Health, Nelson R Mandela School of Medicine, University of KwaZulu-Natal, Durban, South AfricaArticle number: S5 (2013)"Global medicine: Is it ethical or morally justifiable for doctors and other healthcare workers to go on strike?" **Background** <https://bmcmedethics.biomedcentral.com/articles/10.1186/1472-6939-14-S1-S5>)

**Doctor and HCW strikes have become a global phenomenon with increasing incidence in many countries [1, 2] and the potential to impact negatively on the quality of healthcare service delivery and the doctor-patient relationship which is based primarily on the fiduciary duty of trust** [3, 4]. **HCW strikes are not limited to any society, group, or country regardless of their level of socio-economic development**. In most democratic societies, strikes are a legitimate part of collective bargaining during labour negotiations [2–4]. Doctor and HCW strikes have been reported in highly developed countries such as USA [2, 5–7], UK [8]; New Zealand [9–11], Germany and France [2, 12]; middle income countries such as Israel [13, 14], India [15], Czech Republic [16], and South Africa [17–19]. Also in less developed countries such as Nigeria [20–22], Malawi [23] and Zambia [24] to name but a few. While HCW strikes occur globally, it appears the impact of strikes are more severely felt in less developed countries because of the poorer socio-economic circumstances and embedded infrastructural deficiencies. Such countries are generally confronted by issues of inadequate manpower, poor wages and working conditions [25], poor organizational ethics [26–28], and lack of viable alternative means of obtaining healthcare for the general population [29], thereby fulfilling the international criteria for vulnerability as defined by UNAIDS and other authorities [29, 30]. It **has been suggested that doctor and HCW strikes can create a tension between the obligation on doctors and other HCWs to provide adequate care to current patients versus the need to advocate for improved healthcare services for future patients and for society in general [2, 31]. There is also a potential conflict between doctors' role in advocating for improved healthcare service for others versus the need to advocate for justifiable wages for self and the fulfilment of basic biological needs like all humans [4, 32].** It has been suggested that since strikes are considered a fundamental right or entitlement during collective bargaining and labour negotiations [33]. Therefore to deny any employee the right to strike would be an argument for enslavement of such an employee, because this would simply mean that whatever the circumstances-such an individual must work! A situation deemed to be both ethically and morally indefensible [4]. It is pertinent to observe that there is an on-going paradigm shift in the organization of healthcare services and doctors' employment options with a change in the role of doctors from self-employment, and medical practice based on benevolent paternalism, to consumer rights and managed healthcare [2]. Historically, doctors had the sole responsibility within the doctor-patient relationship, to determine the costs of medical care to their patients, however, current trends show that doctors are increasingly becoming employees of managed healthcare organizations (HCOs) or employees of public health services [2, 34–36]. These changes in physicians' practices and methods of payment may impact on patient trust, physician behaviour and decision-making, thereby permanently altering the doctor-patient relationship [3, 37]. It has been observed, especially in advanced capitalist societies like the United States, that there is an on-going shift in doctors practice options from self-employment as owners of their own practices [34–36], to doctors becoming employees of HCOs in a managed healthcare environment [2, 34, 35]. The factors driving this sea change in physicians employment options have been ascribed to "the complex corporate environment coupled with the stress of high malpractice rates, the struggle for reimbursement, administrative duties and the general risks and burden of solo or small group practice" [35, 38]. One can therefore anticipate that in the near future there could be more wage negotiations and collective bargaining between doctors as employees and the employing HCOs [35, 36]. This will be similar to the practice in systems where medicine is centralized or socialized, and where doctors and HCWs are mostly public service employees [7, 10, 11, 14, 16, 18, 20]. These ongoing changes in the organization of healthcare services and modern medical practice may denote a change in the Hippocratic tenets of the medical profession, creating ethical and moral dilemmas [2, 39], which could permanently alter the nature of the relationship between doctors and patients [3, 37], and the putative 'contract' between medicine and society [10, 40].

**Essential Workers Turn**

**An unconditional right to strike compromises essential services – endangers public health, safety, and property**

**Reiff 20** (Mark R. Reiff, received a JD from Georgetown University and obtained his PhD in Legal and Political Philosophy from the University of Cambridge in 2003, "In the Name of Liberty: The Argument for Universal Unionization" Page 200 3.3 The Essential Services Argument https://books.google.com/books?id=axfeDwAAQBAJ&pg=PA200&lpg=PA200&dq=%22essential+services+argument%22+%22right+to+strike%22&source=bl&ots=AktKUOvqjh&sig=ACfU3U1zK6q\_CU0R8f89UY6f5d2AFpGdnA&hl=en&sa=X&ved=2ahUKEwjFz\_353fDzAhUuTTABHc1tB3gQ6AF6BAgvEAM#v=onepage&q=%22essential%20services%20argument%22%20%22right%20to%20strike%22&f=false)

**One of the obvious differences between the public and private sector is that many workers in the public sector provide essential services; that is, services that we cannot do without, even for short periods. This makes any interruption to such services by a strike of the relevant workers a kind of threat that not only endangers the health, safety, and property of the community as a whole but also that of each of its individual members**. It also represents, of course, a threat to liberty, because threats to life and property are seen as threats to the very things that liberty entails. Because of the dire consequences of a strike by those tasked with providing such essential services, in turn, public employees have a degree of bargaining power far greater than that can be brought to bear on private employers. So much bargaining power, in fact, that if public employees were ever in a position to strike, they could effectively subject the public purse to hold up and extortion. The first thing to note about essential services argument is that it is not really an argument against public unionization per se, although we will see in a moment how its advocates attempt to extend it in this way, but an argument against the right to strike. And of course, as an argument against the right to strike, it does express some valid concerns. Which is why even when public employees are permitted to unionize, most public sector union members (in fact, about 80 percent) do not have a legally recognized right to strike. But while this ban on strikes is ridiculously overinclusive - nothing like 80 percent of public employees provide services to which a mere temporary, disruption could threaten lives and property - my argument does not claim that unionized public employees must have a right to strike. This is a matter for post-institutional regulation and is to be considered on a case-by-case basis depending on the nature of the services provided. For example, **fire, police, and emergency services would be essential in the relevant sense, and therefore the employees of such services should not be given the right to strike. Garbage collection and many other services would not be, or at least would not be unless a certain degree of disorder was reached, and thus unions of such employees could be permitted to strike until that degree of disorder was reached and employees ordered back to work by the declaration of the relevant executive official, a kind of authority that the executive holds now even with regard to strikes in the private sector.**  And some public employees would not raise this specter of disruption of essential services at all, and therefore would have the right to strike and stay out as long as they saw fit subject to the usual rules about continuing to be willing to engage in good-faith negotiations. 135 Moreover, even unions of public employees that have a right to strike may and often will bargain away the right for contractual concessions from the relevant employer, and these contractual bans may then be unions that do not have the right to strike is proof that unionization does not have to entail this right when it puts essential service at risk.