British Journal of Political Science (2026), **56**, e59, 1–16
doi:10.1017/S0007123426101793

British Journal of Political Science

ARTICLE

Geoengineering, Moral Hazard, and Disrespect

Alice Baderin and Maxime Lepoutre

Politics and International Relations, University of Reading, UK
Corresponding author: Maxime Lepoutre; Email: maxime.lep@gmail.com

(Received 27 August 2025 UTC; revised 20 January 2026 UTC; accepted 21 July 2026 UTC)

Abstract
Scientists and policy makers are increasingly exploring solar geoengineering as a tool for combatting anthropogenic climate change. Yet these technologies have drawn intense ethical criticism. One of the most influential critiques – the 'moral hazard' objection – holds that pursuing solar geoengineering risks undercutting mitigation efforts; and that, as a result, governments should halt the development of solar geoengineering. This paper argues that the moral hazard objection faces a dilemma: either the proposed solution to the moral hazard effect (that is, stifling geoengineering) is unnecessary, *or* it expresses a morally troubling form of disrespect. Articulating this dilemma serves three purposes. It shows, first, that the moral hazard objection is substantially more difficult to vindicate than it initially appears. Second, it clarifies what would need to be shown, empirically, to overcome this ethical hurdle. Finally, and crucially, it sheds light, more broadly, on what it means to respect people's agency when designing and implementing public policies.

Keywords: climate change; geoengineering; disrespect; objective stance; agency

Introduction

Solar geoengineering (SG) technologies seek to lower the global temperature by reflecting incoming sunlight away from the Earth's surface. SG includes, most notably, stratospheric aerosol injection (SAI) – proposals to disperse large amounts of reflective particles (typically sulphur) into the upper atmosphere – and marine cloud brightening. Attention to SG is growing, as emissions reductions continue to fall substantially short of global targets. For example, the UK Advanced Research Investment Agency (ARIA) recently announced a significant investment into SG research (ARIA 2025); and several governments have commissioned major reports (for example, BEIS 2021; OSTP 2023). While awareness of SG among the general public remains low, media coverage is also rapidly increasing (Bolsen et al. 2023).

This paper addresses a prominent strand within the wide-ranging debate over solar geoengineering: the argument that we should halt SG research and development to avoid weakening climate mitigation efforts.[1] This argument, which is often referred to as the 'moral hazard' objection (MHO), centres around an empirical claim: namely, that pursuing SG will lead to reduced commitment to emissions reductions (Gardiner 2011, 166–7; Lin 2013, 692–3; Lockley and Hoffman 2016, 95). For example, people may be less willing to support mitigation policies, or

[1]While similar concerns have been raised in relation to carbon dioxide removal, we consider the 'moral hazard' concern in relation to *solar* geoengineering. This is a particularly important case for this objection, given the uptick in research, and the complex ethical questions SG raises.

© The Author(s), 2026. Published by Cambridge University Press. This is an Open Access article, distributed under the terms of the Creative Commons Attribution licence (https://creativecommons.org/licenses/by/4.0/), which permits unrestricted re-use, distribution and reproduction, provided the original article is properly cited.

to reduce their personal carbon footprint, if they come to believe that there is an alternative 'technofix' for climate change. From this empirical claim – which we will refer to as the 'moral hazard claim' – the objection draws the conclusion that we should not pursue geoengineering.

Versions of this argument feature widely in academic and public discourse on SG (Gardiner 2011; Royal Society 2009; .Thernstrom 2010; Lin 2013; Pamplany et al. 2020; Svoboda 2017). For example, in a prominent early contribution to the debate, Lin (2013, 711) suggests that '[g]eoengineering endeavors, including research short of full-scale deployment, will likely undermine efforts to mitigate or adapt to climate change. Geoengineering presents a strong economic, political, and psychological temptation to defer difficult and costly actions to future generations'. He concludes that field research should be limited to techniques other than SAI that pose a lesser risk of moral hazard.

More recently, in a response to the US National Academies of Science, Engineering and Medicine (NASEM) 2021 report on SG, Stephens et al. (2023, 163) object that '[e]xpanding research into solar geoengineering legitimizes the promise of a future technological solution and thereby risks further delays in developing plans for urgently needed mitigation action'. They conclude that the United States 'should not be advancing solar geoengineering research but should instead expand efforts to invest directly in the transformative changes that are needed to phase out fossil fuels' (Stephens et al. 2023, 164). Indigenous and environmental groups opposing a planned SAI field experiment in Sweden similarly appealed to moral hazard as a justification for halting outdoor research: 'The [research] plans for Kiruna constitute a real moral hazard, and threaten the reputation and credibility of the climate leadership Sweden wants and must pursue as the only way to deal effectively with the climate crisis' (Saami Council 2021).[2] Moreover, mitigation deterrence has also been cited as one of the main reasons not to pursue SG by the Solar Geoengineering Non-Use Agreement (2022) – a petition signed by hundreds of researchers in the field.

Although the MHO has long been at the fore of critiques of SG research, it is rarely formulated with precision. Moreover (as in the examples above), moral hazard is typically invoked alongside diverse concerns about SG: physical and political risks; global governance challenges; and ethical questions about humanity's relationship with nature in a geoengineered world. Our aim, therefore, is to isolate, clarify, and evaluate the moral hazard argument in order to assess how much weight it can bear in debates about SG.

Scholarly attention to date has overwhelmingly focused on the objection's central empirical claim. However, results have been inconclusive. Some experimental studies find evidence that supplying people with information about SG does weaken mitigation support (Raimi et al. 2019); others find no significant effect (Antoan et al. 2026; Schoenegger and Mintz-Woo 2024); and others still find a 'reverse' moral hazard effect, where encountering SG information *increases* support for mitigation (Cherry et al. 2023; Merk et al. 2016). While the empirical component of the MHO is attracting increased scrutiny, the inference from the moral hazard claim to the conclusion that we should not pursue geoengineering is generally taken for granted, and therefore left implicit. And yet, on closer inspection, this inference proves more morally complex than it might initially appear. In what follows, we aim to expose an important yet neglected ethical challenge associated with this inference, against the backdrop of uncertainty about the empirical premise.

Our argument begins from the observation that the MHO is silent about how exactly pursuing geoengineering might lead to reduced support for mitigation. Put differently, it is silent on the process underpinning the moral hazard effect. This is a striking omission. The moral hazard objection is, at bottom, an argument about the informational impact of pursuing and stifling geoengineering. It asserts that pursuing geoengineering leads to the 'dissemination of information' relating to geoengineering, which in turn leads to bad consequences (Schoenegger and Mintz-Woo

[2]The experiment was cancelled following the public outcry; and the wider Harvard-based research project was closed in 2024. See: https://salatainstitute.harvard.edu/an-update-on-scopex/.

2024). Stifling geoengineering, in this context, is intended to negate this informational impact, and thereby avoid these bad consequences. But it matters precisely *how* pursuing geoengineering disseminates information, and thereby leads to bad consequences – and, by extension, it matters precisely why stifling geoengineering is introduced to negate this informational impact. What the mechanism is – and, in particular, how that mechanism relates to the audience's agency – profoundly shapes what courses of action are morally licensed by these bad consequences.

The point that such considerations are morally important is familiar from the ethics of science communication.[3] For one thing, the dissemination of scientific information can be wrongful despite producing positive consequences if, say, it produces these consequences by deceiving or intentionally misleading the audience (thereby undermining or disrespecting their agency) (Keohane et al. 2014).[4] Conversely, considerations of mechanism can also attenuate or counterbalance consequentialist worries associated with the dissemination of information, depending on how that information interacts with the audience's agency. Suppose, for example, that informing a patient of a medical procedure would lead them to make an autonomous but ultimately ill-advised choice. The fact that the choice would be autonomous makes it morally problematic, at least pro tanto, to decide, due to its negative consequences, to withhold this information (Beauchamp and Childress 2001).

Our purpose here, accordingly, is to disentangle different processes through which pursuing SG might engender reduced support for mitigation, with a view to assessing how these mechanisms – and in particular their relationship to the audience's agency – affect the force of the MHO. After clarifying this objection (section 'Clarifying the Moral Hazard Objection'), we suggest that closer attention to the issue of process reveals a dilemma confronting it: either the proposed solution to the moral hazard effect (that is, stifling SG) is unnecessary, or it expresses a morally troubling form of disrespect ('The Moral Hazard Dilemma').

This dilemma is not intended as a definitive reason to abandon the MHO, and we will therefore consider two possible ways out ('Avoiding the Dilemma?'). But our exploration of this dilemma is intended to achieve three things. First, it demonstrates that the MHO is substantially more difficult to vindicate than it initially appears – for it faces a significant and unacknowledged moral hurdle. Second, and more positively, our diagnosis aims to guide future empirical research on geoengineering and moral hazard, by clarifying what would need to be shown, empirically speaking, to overcome this ethical hurdle. Finally – and critically – though we take solar geoengineering as our focal example, our argument is intended to shed light on a broader and pressing ethical issue: namely, what it means to respect people's agency when designing and implementing public policies more generally. We return to these three sets of implications in the Conclusion.

Clarifying the Moral Hazard Objection

Several aspects of the MHO require clarification in order to set up the dilemma. First, we can usefully distinguish between elite-focused and public-focused versions of the objection.[5] The former centres on the behaviour of governments and industry lobbyists, suggesting, for

[3]In suggesting that considerations stemming from the ethics of science communication are relevant to assessing the policy of stifling geoengineering, we do not mean to suggest that this policy is itself a form of communication – at least not in the conventional sense of the term 'communication'. To be sure, some policies *do* constitute forms of communication. For example, Feinberg's (1965, 402) expressive theory of punishment suggests that 'the very physical treatment [involved in punishment] itself expresses condemnation'. But one might be doubtful that this is true of stifling geoengineering. Yet this policy is nonetheless importantly – if indirectly – connected to communication. It causally affects, and (in the logic of the moral hazard argument) is *intended* to affect, what information is issued to the audience and – as we will later discuss – what message is communicated to them. Thus, even if it is not itself communication, it is part of a broader communicative strategy whose ultimate aim is to convey that mitigation is still needed to tackle climate change.

[4]On the importance of attending to agency in technology choice, see also Stirling (2008).

[5]See Lockley and Hoffman (2016, 200) on this distinction. The Solar Geoengineering Non-Use Agreement (2022) mentions governments, businesses, *and* societies more generally when articulating the MHO.

instance, that the availability of geoengineering as a policy option may serve as a pretext for such actors to delay decarbonisation policies. The latter emphasises geoengineering's effect on ordinary people's attitudes towards mitigation. We focus on the public-oriented version in part because much of the recent literature has addressed this variant (Hale 2012, 123; Lin 2013, 678; Raimi et al. 2019, 310; Schoenegger and Mintz-Woo 2024, 2). But there is also a more substantive reason for this focus: namely, that the elite-focused objection is not wholly independent of the public version. Public opinion sets some constraints on what governments can do (and, relatedly, on what industry lobbyists can prevail upon governments to do). Hence, governments' ability to delay decarbonisation depends partly on the extent to which the public supports decarbonisation (and so, on the extent to which geoengineering erodes this public support).

Second, the idea of *pursuing* SG is broader than simply *deploying* these technologies. Accordingly, the Solar Geoengineering Non-Use Agreement (2022) sees the MHO as a reason not simply to refrain from large-scale deployment (a suggestion currently made by very few if any credible sources), but also to prohibit public funding, to ban outdoor experiments, to withhold patents, and to object to proposals that it be considered as a policy option (see also Bierman et al. 2021). We will refer to these measures collectively as proposals for stifling SG. Not all of those who endorse the empirical moral hazard claim conclude that we should take steps to stifle SG. A notable alternative proposition, for example, is to strategically link international mitigation and SG policies, in ways that incentivise emissions reductions (Reynolds 2022). However, we focus here on a prominent argument that treats the moral hazard claim as a very weighty or even all-things-considered moral reason to refrain from pursuing SG.[6]

Third, the inference from the moral hazard claim to the conclusion that we ought to stifle SG depends on the assumption that SG does not obviate the need for emissions reductions; and that, therefore, attempts to tackle climate change would be seriously impaired if support for mitigation declined. Indeed, if the availability of SG meant that mitigation is unnecessary, or far less important to tackling climate change, then the MHO would struggle to get off the ground. For, as Hale notes, it would then be unclear why it is so problematic that pursuing geoengineering reduces support for mitigation (2012, 120; see also Morrow 2014, 3). We grant this assumption in part for dialectical reasons, since we wish to address a distinct ethical challenge embedded in the MHO. But we also note that the assumption that SG is *not* a good substitute for emissions reductions is widely shared by proponents as well as critics of SG research.[7] For example, Keith and MacMartin (2015, 205) emphasise that employing SG as an *alternative* to mitigation 'would be totally ineffective in the long run as greenhouse gas concentrations would rise without limit'. Instead, defenders of SG commonly argue that it may help to 'buy time', or to avoid the most severe climate harms while societies implement radical mitigation and adaptation measures.

The fact that SG does not actually represent effective protection against mitigation failure points to an important disanalogy with classic moral hazard problems in insurance markets. In standard cases of moral hazard, individuals face increased incentives for risk-taking because some or all of the potential costs will be borne by a third party. SG, in contrast, involves what we might call 'illusory' moral hazard: the fear is that people will *mistakenly* come to believe that SG obviates the need to mitigate (or that SG information will, in some other way, sap motivation for necessary

[6]The MHO needn't be committed to the claim that the moral hazard effect will fully disappear if geoengineering is stifled. After all, people might still entertain the possibility of geoengineering even if it is not being actively researched or funded; and entertaining this possibility might conceivably depress their willingness to support mitigation. But the objection suggests that actively pursuing geoengineering will meaningfully exacerbate this effect.

[7]But see, for example, Reynolds (2014), who argues that *some* level of reduction in mitigation in response to geoengineering *could* deliver net benefits.

emissions reductions). This has led some commentators to question the aptness of the moral hazard framework for capturing concerns about mitigation deterrence (for example, Jebari et al. 2021; Reynolds 2014). We continue to use the term 'moral hazard' simply because it is the dominant way in which the substantive argument we are interested in – the claim that we should stifle SG lest it undercut mitigation efforts – has been expressed. It also offers an easy way to link the SG case to other policy contexts in which related concerns are raised about the dissemination of information driving risky behaviour among the public. However, nothing in our argument hinges on this specific choice of language.[8]

The Moral Hazard Dilemma

Unnecessary . . .

Why would hearing about funding or research into SG lead to reduced support for mitigation? Perhaps the most immediate suggestion is that investing significant time and resources into such technologies risks sending a misleading message. It may give the impression, or suggest the possibility, that geoengineering can address much of the climate crisis, such that it constitutes a 'get out of jail free card'. By extension, it may give the impression, or suggest the possibility, that reducing emissions is not needed, or is needed to a considerably lesser extent than it really is (Lockley and Hoffman 2016, 201).

On this first interpretation of the relevant mechanism, then, the problem is that pursuing SG *misleads* the public. It may imply, and thus rationally license belief in, false propositions (for example, that mitigation is unnecessary). Or, even if it does not rationally license outright belief in falsehoods, it may nonetheless make it rational to abandon beliefs in true propositions (for example, that mitigation is necessary).

This process seems morally troubling. If misleading the public is intentional – say, if elites fund SG hoping that this will cause the public to form inaccurate beliefs about the necessity of decarbonisation – then doing so seems deceptive. But even if conveying an inaccurate message is accidental, and so does not constitute outright deception, doing so still seems negligent. Either way – whether by design or through negligence – misleading the public is liable to impair their understanding of the issue, and with it, their capacity for autonomous decision making. Accordingly, it seems prima facie disrespectful of their capacity for autonomous agency.

In one respect, this first specification of the process through which pursuing SG reduces support for mitigation thus seems to strengthen the case against pursuing these technologies. It suggests that pursuing SG is problematic, not simply because of its negative climate-related consequences, but also because it provokes these consequences in a way that undermines the agency of members of the public.

Yet, at the same time, this first specification critically weakens the MHO, for it casts doubt on the claim that stifling SG is *needed* to avoid the foregoing concerns. Simply put: if the problem is that funding or researching these technologies *implies* or *suggests* inaccurate propositions, why not simply improve our communication so as to cancel these false implicatures, and correct these misleading suggestions? For example, the state might require that, when national funders announce their support for SG research, they also emphasise that SG is not a substitute for mitigation.[9] Insofar as this alternative is possible, responding to the moral hazard effect by withdrawing funding for or banning SG research seems unnecessarily drastic.

[8]We thank an anonymous reviewer for pressing us to consider the complexities involved in translating the moral hazard framework to the solar geoengineering context.

[9]For an example of such messaging, see ARIA (2025).

. . . Or Disrespectful

If it were possible to defuse the moral hazard effect through improved communication, then we would not need to stifle solar geoengineering to address the objection at hand. But proponents of the MHO may respond that improving communication is insufficient: even if SG-related communication is *not* misleading, such that it does not warrant reducing one's support for mitigation, the public will still react to this information by reducing their support. On this second line of thought, the moral hazard effect results, not necessarily from the pursuit of SG conveying misleading information, but rather from the fact that the public will respond defectively to the information they do receive.

This defective response might take different forms. It could conceivably involve a failure of rationality: people may fail to understand (non-misleading) information about what SG might realistically achieve, and therefore mistakenly infer that mitigation is less necessary than it really is. Alternatively, it could involve a failure of moral self-direction. For example, people might believe that mitigation is needed, but assign insufficient moral weight to tackling climate change relative to other goals (such as supporting SG-related industries) (see, relatedly, Lockley and Hoffman 2016, 202). Or people may suffer from 'weakness of will': even if they understand that mitigation is needed, and that they morally should support it, awareness of geoengineering might weaken their resolve to act as they believe they should.

These possibilities are not exhaustive. The common idea that they are intended to illustrate is that the moral hazard effect results from a defective exercise of people's basic capacities as autonomous moral agents: namely, their capacities for rational and moral self-direction – or, as Rawls (1999, §77) calls them, the two 'moral powers' for 'rationality' and 'reasonableness'.

The suggestion that the present case of moral hazard results from a defective exercise of these agential powers – and in particular, that it might involve defective exercise of the capacity for moral self-direction or 'reasonableness' – does not involve any *general* commitment to moralising moral hazard. We think it is an open question – to be determined by exogenous moral considerations – whether increasing one's exposure to risk in the face of insurance is morally problematic. In other words, 'moral hazard [itself] is morally neutral' (Hale 2009, 5).[10] Accordingly, the suggestion that putative moral hazard responses *to SG information* are morally defective depends on two further claims. First, as discussed earlier, we rely on the widely shared assumption that SG is not good insurance against the harms of reduced mitigation. Second, we assume that there are individual-level duties to support emissions reductions. A fuller treatment of debates about individual climate ethics is beyond the scope of this paper. But this assumption is commonly accepted: even those who reject unilateral duties to curb *personal* emissions sometimes acknowledge that individuals are obligated to support mitigation at the policy level (Sinnott-Armstrong 2010).[11]

Appealing to this second family of mechanisms may help avoid the necessity concern articulated in the previous section: if the problem is defective (that is, irrational and/or unreasonable) responses to SG information, then improving communication alone is unlikely to succeed in defusing the moral hazard effect. Hence, one might conclude that banning SG research, funding, and deployment is needed after all. However, this reading of the MHO invites a *moral* concern: namely, that the objection expresses disrespect for people's basic standing as autonomous moral agents. Not pursuing something on the grounds that, if people knew about it, they would respond

[10]See also Pauly's famous remark (1968, 531) that 'the problem of "moral hazard" in insurance has, in fact, little to do with morality'.

[11]The view that moral hazard responses are morally defective does not require us to group members of the public who mistakenly downgrade their mitigation commitments with actors who, in order to protect their financial or political interests, *intentionally* leverage the prospect of SG to push back against decarbonisation measures that they know are necessary. While the former behaviour is morally problematic, the latter actors are clearly more blameworthy. For discussion of this distinction, see Lockley and Coffman (2016).

inappropriately to this knowledge, may seem advisable on consequentialist grounds. But it hardly seems to treat them as moral agents capable of rational and moral self-direction. On the contrary, the objection supposes that, even if people are provided with accurate information, they cannot be trusted to reason competently about the (morally) appropriate course of action and/or to direct themselves accordingly.

Consider an analogy. Suppose Bob is considering whether to take up a very lucrative new job. He is tempted to take it. But he worries that his wife Anna would respond to the news by taking enormous financial risks with their family savings – thinking, incorrectly, that these increased risks would be counterbalanced by their increased household income. Because of this worry, Bob ultimately declines to take the post. There is, we believe, something morally problematic about this decision. In electing, on these grounds, not to take the post, Bob disrespects Anna in her capacity as a moral agent.

We can make sense of this intuition by appealing to Strawson's influential account of what it means to treat another being as a moral agent. Strawson famously distinguishes between two kinds of practical perspectives: the participant stance, and the objective stance (Strawson 2008 [1962]; see also Langton 1992). Treating someone as a moral agent, capable of rational and moral self-direction, requires adopting the participant stance: engaging them as someone to be reasoned or even argued with – as someone, in Rae Langton's (1992, 487–8) phrase, that it is possible 'to work *with*' (as opposed to *on* or *against*). Thus, if Bob is worried that Anna will take excessive risks, the participant stance calls on him to offer her reasons why such risks would be excessive – thereby working *with* her towards addressing the issue. If, instead, Bob forgoes this strategy, and declines the post because he expects that Anna will respond inappropriately to any reasons given, then he has traded the participant stance for the *objective* stance. Rather than trusting that Anna can be accessed and moved by reasons, he treats her as a 'problem to be managed, an obstacle to be avoided, not a person to be argued with' (Strawson 2008 [1962], 9). And this, Strawson (2008 [1962]) emphasises, is a stance unbefitting of a normal moral agent.

Strawson develops this distinction in the context of interpersonal relations, in tandem with his account of the reactive attitudes. Moreover, he appears, at times, to identify the objective stance with a policy perspective, suggesting that to 'adopt the objective attitude towards another human being is to see him, perhaps, *as an object of social policy* ... as something certainly to be taken account, perhaps precautionary account, of; to be managed or handled or cured or trained; perhaps simply to be avoided' (Strawson 2008 [1962], 9; emphasis added). There is intuitive force to the connection Strawson draws between social policy and the objective stance: surely policy makers should anticipate likely behavioural responses to policy changes, and consider causal levers that might increase compliance and ward off unwanted side-effects.

Yet simply to assume that (good) public policy uniformly embodies an objective stance, or that such a stance is always unproblematic in a policy context, is too quick. Rather, we can leverage Strawson's core idea – that we should, in general, address others as moral reasoners, rather than attempt to move or avoid them like objects – to diagnose morally troubling features of policy instruments across different domains, and to identify potentially superior alternatives.

Consider, for example, the design of 'welfare to work' policies. Eriksen (2019, 538) argues that the participant perspective's imperative to '[connect] with claimants in terms of reasons' should inform the design and implementation of conditional welfare programmes. It implies, for instance, that street-level bureaucrats should be afforded sufficient discretion such that their interactions with claimants can be based on reason-giving, rather than appeals to the content-independent authority of rules. And it suggests that any sanctions for breaching claimant commitments should be designed to perform a communicative, rather than purely deterrent or retributive, function (Eriksen 2019, 537, 541).

Nor is the point specific to policies involving direct individual interactions between the policy's targets and its implementers (as, arguably, in the welfare policy case). Nelson (2017, 282–3), for instance, argues that vaccine policy should be governed by the participant stance. Accordingly, he

proposes a policy requiring those who do not vaccinate their children to engage in healthcare-related work as compensation. Such a policy would serve, in part, to communicate the *reasons why* vaccine requirements are in place (that is, to protect the community from health risks) (Nelson 2017, 282–3). Insofar as it aims to perform this distinctive communicative function, this policy engages with refusers as agents accessible to reason, and is thus more respectful than other policies (for example, simply fining refusers). The vaccine case is thus illustrative of the broader force of the objective/participant stance distinction beyond the domain of interpersonal relationships. Policy makers too have an imperative 'to deal with people as people, rather than merely as biological or social problems to be managed' (Nelson 2017, 275).[12]

It is this thought that we carry over to the MHO. If we are worried about people forming an inappropriate attitude to mitigation, the participant stance calls on us to offer them reasons why this attitude is inappropriate – for example, by explaining, as suggested in the last section, that geoengineering is no substitute for decarbonisation. If, instead, we abandon this strategy, and adopt a policy of stifling geoengineering because we expect people to respond defectively to any such explanations, then we are no longer treating them as agents to be reasoned or argued with. Rather, we treat them as objects to be manoeuvred, as hazards to be navigated. And just as this objective stance seems disrespectful to Anna, so too it seems prima facie disrespectful to the public.

Now, the distinction between the objective and participant stances is not a strict dichotomy. It is instead better understood as a spectrum: we can fail to treat people as reasoners to a greater or lesser degree (Campbell and Carty 2024; Sars 2024). Suppose that Bob, being suspicious of Anna's reasoning, incessantly offers her unsolicited advice about their life savings. Insofar as Bob's over-arguing conveys that Anna is insufficiently capable of canvassing reasons for herself, it is – as George Tsai (2014) argues – plausibly disrespectful of her agential capacities as a reasoner. Still, one might think that, insofar as Bob is still engaging with Anna's reasoning capacities, this remains reasonably close to the 'ideal' participant stance, and thus only involves minor disrespect. Yet the present version of the moral hazard argument lies, we believe, substantially closer to the objective end of the spectrum. It forecloses the option of geoengineering, and hence gives up on reasoned appeals, based on the assumption that people will respond inappropriately to reasons given. So, while it needn't imply that people are *wholly* inaccessible to reason,[13] it conveys the audience's inaccessibility to reason in a much stronger way (and is thus substantially more disrespectful) than mere over-arguing.

The agency disrespect at hand can arise in failures to treat others as self-interested reasoners *and* in failures to treat them as moral reasoners. The Bob and Anna case arguably runs these together: Bob moves towards the objective end of the spectrum because he presumes that Anna will show reckless disregard for her own economic self-interest *as well as* lack of care for her family's well-being. But the disrespect embodied in the objective stance can also manifest exclusively in failures to engage others as moral reasoners, even while we recognise their capacity

[12]Most of the philosophical literature follows Strawson in exploring the participant/objective stance distinction in the context of interpersonal relations; see, for example, Rini (2020). There is a much smaller body of work applying his distinction to policy issues; see Eriksen (2019) and Nelson (2017). For a related argument in behavioural science (without the explicit Strawsonian framework), see Madsen et al. (2024). They call for a presumption of reasonableness that turns subjects of policy interventions 'from targets into partners' (2024, 585).

[13]To see this, consider that stifling geoengineering could conceivably be construed as a form of 'epistemic paternalism': by foreclosing an option that people risk responding unreasonably to, it aims (on this view) to put them in a better epistemic position to exercise their reasoning capacities. Thus construed, stifling geoengineering recognises people's potential for reasoning, and actually seeks to improve this potential. But this is consistent with the view that stifling geoengineering can still disrespect people in their capacity as reasoning agents, for the reasons outlined above. Indeed, epistemic paternalism, as a general category, is extremely varied, and the extent to which it respects or disrespects people's reasoning capacities depends importantly on *how* it interferes with people's inquiry to promote their epistemic good (for example, through over-arguing, blocking information, foreclosing options, or even coercion and deception) as well as the *evidentiary warrant* for its interference (an issue we will later explore in detail). See Ahlstrom-Vij (2018, 266–9) for related discussion.

for instrumental (self-interested) reasoning. To use the Rawlsian terminology introduced above, such disrespect arises when we treat individuals as *unreasonable*, despite acknowledging their rationality.[14]

Consider, for example, a well-functioning honesty system – say, an open stationery cupboard at work. Suppose that the scheme manager decides to introduce additional controls, so that users are required to sign out notebooks and pens. There is no denial of the capacity for rational self-direction here; indeed, the manager is assuming that users respond to incentives in ways that maximise their own utility. Yet the introduction of these measures (let us assume without any prior evidence of misuse) *does* appear disrespectful. Certain cases in which individuals are offered an economic reward for public-spirited activity invite a similar response. For example, altruistic blood donors might legitimately find the assumption that they would respond to material incentives insulting: we're not doing it for those reasons, they might say, we're doing it to help others.

Note, finally, that we do not mean to suggest that these disrespect-related worries have absolute weight. Hence, stifling SG could in principle still be justified if the expected reduction in support for decarbonisation were large enough. But this does not undermine our main point: namely, that there is a significant moral barrier to vindicating this version of the MHO, which seems intuitively sufficient to outweigh at least *some* meaningful consequentialist considerations.

Together, the arguments deployed in this section and the last suggest that the MHO faces a dilemma. If pursuing geoengineering leads to reduced support for mitigation simply *because it sends out a misleading message* to the public, then the solution proposed by the MHO – that we stifle geoengineering – seems unnecessarily drastic. If the problem is a defective message, then improved communication, which corrects potentially misleading implicatures, should suffice. If one responds that the moral hazard effect would persist *even if* adequate information were given, then a different problem arises. The issue, on this specification of the mechanism underpinning the moral hazard effect, is that the objection manifests a morally weighty form of disrespect embodied in Strawson's objective stance. It proposes treating the public, not as agents to be reasoned or worked with, but as objects to be manoeuvred.

Avoiding the Dilemma?

How serious a problem does this dilemma constitute? In what follows, we consider two possible replies: that the dilemma at hand overlooks the non-ideal informational environment in which climate-related communication takes place; and that people are not actually capable of sufficiently competent rational and moral self-direction. We show that these objections fail to fully disarm the preceding dilemma, though they do help qualify its empirical and normative implications.

The Informational Environment

The dilemma at hand focuses on two kinds of reasons why pursuing solar geoengineering might drive moral hazard. First, pursuing SG may send out a misleading message about the necessity of mitigation. Alternatively, people may exercise their capacities for rational and moral self-direction defectively when they encounter information about the pursuit of SG. A first response suggests that we are too quick to conclude that stifling SG is unnecessary on the former reading of the MHO, given the informational context in which real-world climate communication occurs.

Public discourse on climate change is rife with misinformation, including misinformation regarding SG. Thus, political actors with a vested interest in derailing decarbonisation might

[14]And vice versa. We focus on the question of rationality vs. reasonableness as it was put to us by a reviewer: is it really disrespectful to treat others as objects, insofar as this merely involves assuming that they will respond to incentives in ways that maximise their own utility?

actively fuel the misperception that SG renders decarbonisation unnecessary. And this misinformation, in turn, might be shared widely across people's social networks.

The fact that public communication about geoengineering takes place in such a misinformation-rich environment provides reason to think that it is not enough for those pursuing geoengineering simply to improve their communication on the issue, in the way outlined earlier. Even if SG researchers and funders explicitly emphasise that this technology does not obviate the need for decarbonisation, people might still be led astray by other sources; and it may not be possible effectively to counter these other sources – misinformation is notoriously difficult to correct (Cepollaro et al. 2023).

There is something importantly right about this response. In particular, we agree that misinformation relating to climate change is common, and can be difficult to counteract. Yet this response nonetheless proves too much. If we assume that the discursive environment is *so* bad that attempts at correcting misinformation are ineffective, then this *also* casts doubt on the likely effectiveness of stifling geoengineering as a way of avoiding the moral hazard effect.

Just as there can be misinformation about the necessity of mitigation, so too there can be – and there in fact *is* – misinformation about whether SG is being pursued (for example, King and Silva 2024; Thomas 2025). So, even if SG is stifled, people might still be led astray by sources falsely claiming that it *is* being pursued. And if – as the current response is assuming – these other sources cannot be effectively corrected by fact-checking or other forms of 'counterspeech', then it is unclear that stifling geoengineering will help avoid the moral hazard effect.

Our main point here is conditional: it is that *if* we assume that climate-related misinformation is pervasive, and cannot effectively be corrected, then this may *also* undercut the argument for stifling geoengineering.[15] One might of course, deny the antecedent – either because one is sceptical that climate-related misinformation is so pervasive, or because one thinks there *are* effective ways of countering misinformation. But if one does so, then the 'necessity' horn of the dilemma resurfaces: for if misinformation is after all not pervasive or can readily be corrected, then the 'improved communication' proposed earlier may be viable after all.

Public (In)competence

The preceding response challenges the dilemma's 'necessity' horn, by highlighting the difficulty of correcting misinformation. A second and more challenging reply focuses instead on the disrespect charge, suggesting that while the MHO may indeed advocate adopting the objective stance, this needn't be disrespectful. Rather, it can be a fitting response to our limited agency.

The basic idea is that we *are*, in fact, morally and epistemically fragile. In many contexts, people are prone to errors of reasoning, weakness of will, etc. How we treat each other – and, relatedly, how we shape public policy – should be sensitive to these limitations. So, while there should be a *presumption* in favour of treating people as moral agents capable of competent rational and moral self-direction (a presumption of 'competence', for short), that presumption can be defeated if we have sufficient countervailing evidence.

This is an important point. Without acknowledging it, our argument might have implausibly restrictive implications for policy. Earlier we cautioned against viewing public policy as synonymous with a (full-fledged) objective stance; instead, we suggested, Strawson's distinction offers a useful

[15]The argument here assumes that the difficulty of correcting misinformation about whether SG is being pursued is at least comparable to that of correcting climate-related misinformation about whether SG renders mitigation unnecessary. There is, to our knowledge, no evidence directly comparing efforts to correct these two forms of misinformation. But we take this assumption to be prima facie plausible. For one thing, some of the main obstacles to correcting misinformation – for example, that corrections tend to increase the salience, and thus the fluency, of misinformation – apply to both. For another, misinformation about whether geoengineering is being pursued often takes the form of conspiracy theories, and there is evidence that conspiracy theories are especially difficult to counter. See Cepollaro et al. (2023) on challenges to countering misinformation, and Lepoutre (2024) on the specific difficulty of countering conspiracy theories.

critical lens on some policy debates. However, we concede that a (full-fledged) objective stance seems appropriate in *some* policy settings. Insofar as this does not seem disrespectful, this may be because such policies are deployed in conditions where the presumption of competence has been defeated: if there is strong evidence, in a particular context, that people are insufficiently responsive to reasons, then an unequivocally objective stance may be a fitting response to the way things are.

Consider, for example, restrictions on controlled drugs in hospitals, which limit staff access to addictive medications; or physical barriers preventing non-ticket-holders from entering public transport systems. These controls make subjects more 'thing-like', relative to conceivable alternative systems that rely to a greater degree on reason-giving measures. Yet they do not seem disrespectful, since we are warranted in believing that, without the objectifying controls, many transport users *would* dodge fares (Cantillo et al. 2022); and more hospital staff *would* misuse medicines (Fan et al. 2019). Importantly, the claim here is not simply that worries about disrespect are outweighed by consequentialist considerations. Rather, the disrespect charge may be dissolved when we have robust evidence, in a particular context, that the objective stance is fitting.[16]

This response nonetheless raises several worries. First, it may license ways of treating the public that seem intuitively impermissible. If we assume that, in a particular context, the presumption in favour of treating people as competent moral agents is defeated – such that we can permissibly treat them as objects to be manoeuvred – then why not withhold information from them (for example, by pursuing SG in secret) or even deceive them (for example, by telling them that SG is not being pursued)? Insofar as the case against deceiving or keeping secrets from the public depends on the thought that doing so disrespects them as self-directing moral agents, the present response undercuts this case. To the extent that scientific deception and non-transparency are considered impermissible (Keohane et al. 2014), this implication might thus seem like a reductio of the present argument.

This first worry is intended less as a decisive objection, and more as a call for further elaboration. There may after all be further reasons, unrelated to disrespect, why the use of secrecy or deception in science is problematic; and why, therefore, the response under examination can license the stifling of geoengineering, but not deception or secrecy about its pursuit.[17] This is an important question for proponents of the MHO, who tend to assume, either implicitly or explicitly, that pursuing SG research in secret is not a live option (see, for example, Lin 2013, 709).

Yet there is a second and more significant problem. The response being considered does not deny that there should be a presumption in favour of treating people as moral agents endowed with capacities for rational and moral self-direction. It simply says that this presumption can be defeated, in a particular context, by sufficiently strong evidence that people's agential powers are incapacitated or inadequate.

The problem, however, is that there *is* no such evidence when it comes to solar geoengineering. We might be tempted to point to evidence suggesting that people are 'addicted' to fossil fuels or otherwise unresponsive to information about climate harms. However, to avoid the disrespect charge, something more specific is needed: not just evidence that people are incompetent in how they deal with climate change information, but data to suggest that exposure to SG information further depresses mitigation support. As explained in the Introduction, empirical studies of this latter issue have produced mixed results, including null findings, evidence of 'reverse moral hazard', and some evidence of moral hazard effects. Importantly, the most compelling evidence of moral hazard has been elicited in response to *misleading* information: Raimi and colleagues (2019, 303) find that survey respondents downgrade their support for mitigation when told that SG would be a 'great solution' that 'can manage most of the impacts of climate change'; and 'we

[16]Exponents of the participant/objective stance acknowledge this point; see Langton (1992, 487), Strawson (1962 [2008], 9–10, 13).

[17]For a (critical) assessment of different arguments against scientific secrecy and deception, see John (2018) and Lepoutre (2025).

wouldn't have to do much more to stop the worse effects of climate change'. This result is proof of concept for the claim that *some* SG information can undercut public support for mitigation. But it does not robustly support the expectation of moral hazard responses to non-misleading information, which conveys the ongoing necessity of mitigation.

So, even if we accept that the presumption of competent moral agency can be defeated, it has not been defeated in the present case. This highlights more clearly what goes wrong with the MHO. It is not simply that it treats people as inaccessible to reason. Rather, it is that it *presumes* people's inaccessibility to reason, and thus takes the objective stance as a default.

This observation can be extended beyond our focal case to other policy contexts where the objective stance might be embraced too quickly. Consider the argument, voiced in the early stages of the Covid-19 pandemic, that extended lockdown measures should be avoided because the public would be insufficiently motivated to comply. Without evidence to support this behavioural assumption, such an argument similarly embodies an unwarranted shift to the objective stance: rather than offering people reasons why longer-term restrictions might be required, we simply presume that they cannot be trusted to respond properly to those reasons, and prematurely abandon this policy option (cf. Madsen et al. 2024). Or consider potential (ex ante) moral hazard responses to health insurance. While economic theory points to incentives for individuals to reduce health precautions in response to insurance, empirical research has uncovered little evidence of this behaviour (for example, Courtemanche et al. 2018). Thus, to argue for the withdrawal of healthcare coverage on moral hazard grounds would again risk expressing a problematic form of agency disrespect.

One might perhaps object that, in some cases, a presumption of *incompetence* is warranted. On this view, the default stance we should adopt is sensitive to what is at stake. If the risks involved in mistakenly presuming that people are properly accessible to reason are too great, we may therefore be warranted in adopting the objective stance as a default.

The problem with this reply, however, is that the stakes are high on *both* sides. Mistakenly presuming that people will respond appropriately to information about geoengineering would indeed have highly undesirable consequences (that is, lowered support for climate mitigation). But so too would unnecessarily stifling geoengineering research – for doing so would unnecessarily deprive us of a potentially useful tool for combatting climate change.[18]

A second line of response concedes that there should be a presumption of competence, and that this presumption has not been defeated by existing empirical evidence. But it wonders whether this undermines the significance of our ethical critique. After all, why worry about the ethical implications of the MHO if its empirical foundations are so shaky? Why not simply point out that the empirical basis for the MHO is flawed?

This objection would have more force if the MHO's empirical claim were obviously implausible or if it had been decisively challenged by empirical research. Instead – as in many areas of contemporary political philosophy – we are dealing with a case of significant empirical uncertainty: there are several plausible theoretical accounts that underpin the moral hazard expectation; and the experimental research to date has returned variable findings.[19] Accordingly, our aim is to expose an underappreciated ethical difficulty – grounded in considerations of disrespect – associated with pressing the MHO against the background of this empirical uncertainty.[20]

Still, one might worry that the 'disrespect' charge is redundant. *If* future evidence were to support the moral hazard claim, *then* the presumption of competence would be defeated – and

[18]The stakes may not be high on both sides if it were shown, in line with some of the concerns noted in the Introduction, that SG is actually not a potentially helpful tool for combatting climate change. Yet if *this* were shown, we would already have sufficient reason not to pursue SG, rendering the MHO superfluous.

[19]Two important recent studies have returned null results (Antoan et al. 2026; Schoenegger and Mintz-Woo 2024). However, one open question is whether more vivid and accessible types of SG information have a greater impact on respondents' mitigation attitudes. For discussion, see Schoenegger and Mintz-Woo (2024, 9).

[20]Thanks to the editor and an anonymous reviewer for pushing us to address this question of significance. See our discussion later in this section for an explanation of how our argument can also help direct future empirical research.

thus, it would not be disrespectful to stifle geoengineering. Accordingly, the disrespect charge (and the moral hazard dilemma it gives rise to) merely return us to the empirical challenge with which we started: the challenge of showing that pursuing geoengineering would produce a moral hazard effect. If we can address *that* challenge, we can address the moral hazard dilemma.

This last reply is too quick. Crucially, the moral hazard dilemma does not leave the empirical challenge unchanged. First, it affects how *strong* the evidence of a moral hazard effect must be. As discussions of 'inductive risk' have shown, scientific evidence almost never definitively confirms or disconfirms a hypothesis. Hence, when deciding whether evidence of a moral hazard effect warrants acting on it, we must decide whether that evidence, though incomplete, is strong enough. And, as alluded to above, what counts as 'strong enough' – what constitutes the appropriate evidentiary threshold – depends on what is at stake (for example, Douglas 2009; John 2017).

This matters, because the disrespect charge raises the moral stakes. If we stifle geoengineering out of an ungrounded concern that people would respond incompetently to its pursuit, then not only have we forgone a potentially useful tool for combatting climate change, but we have also disrespected people, by adopting the objective stance when this stance is unwarranted. So considerations of disrespect raise the moral cost of unwarrantedly concluding that a moral hazard effect would occur. This added moral risk, in turn, raises the appropriate evidentiary threshold for concluding that there is a moral hazard effect.

To be sure, in practice, balancing these considerations of disrespect against other kinds of moral considerations, such as risks of environmental harm, is very difficult – for these moral considerations are radically different in kind, and thus very difficult to compare. Accordingly, it is likely to be challenging to determine exactly *how* much the risk of disrespect raises the appropriate evidentiary threshold.

This challenge, however, is not specific to our argument. On the contrary, it is symptomatic of much broader problems of commensurability in ethics. Policy making very often involves trading off very different kinds of moral considerations, both consequentialist (for example, lives saved, habitats preserved) and deontological (for example, respect for personal autonomy and individual rights). Such balancing acts regularly feature, moreover, in *other* cases involving inductive risk. For example, a government deciding, under uncertainty, whether the available evidence warrants implementing lockdowns needs to balance very different kinds of moral risk: for instance, risks relating to lives, economic costs, associative rights, as well as unfairness in the distribution of lockdown costs. In all of these cases, balancing these considerations is extremely challenging. But this does not entail that we should not *try* to balance them: we are epistemically better off trying to do so than ignoring the difficult trade-offs altogether. Returning to the moral hazard case: even if it is very difficult to know how *much* considerations of disrespect should raise the evidentiary standard, we are still better off knowing that the standard should be higher, other things being equal, than not knowing this at all.

The moral hazard dilemma speaks not just to the strength of the evidence we need, but also to what that evidence should be evidence *of.* Indeed, the dilemma shows that it matters, morally, *why,* or *through what process,* people reduce their support for mitigation. If reduced support arises because pursuing geoengineering sends a misleading message, then, as explained previously, stifling geoengineering may be unnecessary. Relatedly, if *this* is why the moral hazard effect arises, then the moral hazard effect does not warrant believing that people cannot be reasoned with – such that the presumption in favour of the participant stance is defeated. So, the moral hazard dilemma shows that proponents of the MHO must establish something more specific: namely, that the moral hazard effect arises *even if non-misleading information about geoengineering is provided* – for example, information that explicitly acknowledges that geoengineering does not render mitigation unnecessary. As discussed above, existing empirical research on geoengineering and moral hazard has not established such a claim.

Let us take stock. The objection considered in this section rightly observes that the presumption in favour of treating people as rationally and morally self-directing agents *can* be defeated. But

given the limited evidence of moral hazard, this presumption has in practice not been defeated. Crucially, moreover, this point does not simply take us back to the original empirical challenge to the MHO. Instead, the moral hazard dilemma precisifies and deepens this challenge by clarifying the *nature* and *strength* of the evidence needing to be adduced.

Conclusion

The moral hazard objection to geoengineering encounters an unacknowledged dilemma, depending on *how* pursuing geoengineering is expected to depress support for climate mitigation. If this effect results from the fact that pursuing geoengineering conveys a misleading message – for example, that geoengineering renders mitigation unnecessary – then stifling geoengineering seems unnecessarily drastic: there are other ways to prevent the misleading message. If, instead, the worry is that people will respond inappropriately even if given non-misleading information, the problem becomes one of disrespect: not pursuing geoengineering on this basis treats people not as agents capable of competent rational and moral self-direction, but as objects to be manoeuvred, problems to be managed.

The ethical dilemma does not immediately entail that the MHO should be abandoned. But it *does* clarify what would need to be shown, empirically, to vindicate it. The first point concerns the relevant evidentiary threshold. Our argument raises the moral stakes: stifling geoengineering because one unwarrantedly expects a moral hazard effect would be problematic, not just because doing so would unnecessarily jettison a potential tool for combatting climate change, but also because doing so would be disrespectful. These heightened moral stakes matter, because they raise the epistemic standard for what counts as *strong enough* evidence of a moral hazard effect.

The second point concerns what the evidence should be evidence *of*. To show that the MHO is actually *not disrespectful,* its proponents need to show not simply that there is a moral hazard effect, but that the presumption of agential competence has been defeated. They might do so, for instance, by showing that a moral hazard effect arises *even when* people are provided with precise and non-misleading information concerning the relationship between geoengineering and mitigation.

While our argument centres on geoengineering, it has broader implications. In particular, the argument sheds light, more generally, on what it means to respect people when designing and implementing public policies – for example, as we have seen, when implementing Covid-19 lockdowns, designing healthcare coverage systems, enforcing vaccine requirements, or enacting restrictions on controlled drugs.

There is usually a presumption, we have argued, in favour of treating people as agents to be reasoned with. To respect moral agents is, in part, to be willing to offer them reasons, and to trust that they can be accessed and moved by them. But it is also important to recognise, as discussed, that this presumption can be defeated. Indeed, doing so helps explain why many policy interventions (for example, restrictions on controlled drugs in hospitals) seem to involve the objective stance, yet are not clearly disrespectful. The upshot is that determining how strong the presumption of competence should be in particular policy contexts, how this presumption might vary according to the stakes, and, relatedly, whether existing evidence is sufficient to defeat it, is critical to specifying the complex requirements of respect in public policy making.

Acknowledgements. For helpful suggestions, comments, and discussion, we are grateful to Jacob Barrett, Joanna Demaree-Cotton, Jamie Draper, Stephen John, David Marshall, and Jonny Pugh, as well as audiences at the LSE, University of Southampton, University of Reading, UEA, Leeds, University of Edinburgh, and University of Oxford. The reviewers and editor for the *British Journal of Political Science* also provided extremely helpful comments, which have helped improve the paper.

Author contribution. The authors have contributed equally to this article.

Financial support. This research was supported by the Journal of Moral Education Trust through the British Academy/Leverhulme Small Research Grant Scheme (SRG2324\240498: 'Geoengineering and Moral Hazard'); and a 2024 Philip Leverhulme Prize.

Competing interests. None to disclose.

References

Ahlstrom-Vij K (2018) Epistemic paternalism. In Grill K and Hanna J (eds.), *The Routledge Handbook of the Philosophy of Paternalism*. London: Routledge, pp. 261–74.

Antoan D, Chiang N, Dearman S, Espejel S, Fajors M, Huang D, Husseman E, Lavigne J, Lin I, Maheshwari N, Marinez Z, Nottley G, Perce J, Santos E, Sokhi N, Sole C, Tuchler A, Udinsky J, Li Z and Eggers AC (2026) Balanced messaging about solar geoengineering does not reduce average support for emissions reductions. *Journal of Experimental Political Science* **13**, 203–216.

ARIA (2025) Exploring climate cooling, advanced research + intervention agency. Available at: https://www.aria.org.uk/opportunity-spaces/future-proofing-our-climate-and-weather/exploring-climate-cooling.

Baderin A and Lepoutre M (2026) Replication data for: Geoengineering, moral hazard, and disrespect. https://doi.org/10.1017/S0007123426101793, Harvard Dataverse, V1.

Beauchamp T and Childress J (2001) *Principles of Biomedical Ethics*. Oxford: Oxford University Press.

BEIS (2021) *The UK government's view on greenhouse gas removal technologies and solar radiation management*. Available at: https://assets.publishing.service.gov.uk/media/5eb13050e90e0723bad30a11/geoengineering-position-statement.pdf.

Biermann F, Oomen J, Gupta A, Ali SH, Conca K, Hajer MA, Kashwan P, Kotzé LJ, Leach M, Messner D, Okereke C, Persson Å., Potočnik J, Schlosberg D and Scobie M (2021) Solar geoengineering: The case for an international non-use agreement. *WIREs Climate Change* **13**(3), 1–8.

Bolsen T, Palm R and Luke R (2023) Public response to solar geoengineering: How media frames about stratospheric aerosol injection affect opinions. *Climatic Change* **176**, 112.

Campbell N and Carty A (2024) Avoiding Strawson's crude opposition: How to straddle the participant and objective stances. *Acta Analytica* **39**, 117–41.

Cantillo A, Raveau S and Carlos Muñoz J (2022) Fare evasion on public transport: Who, when, where and how? *Transportation Research Part A: Policy and Practice* **156**, 285–95.

Cepollaro B, Lepoutre M and Simpson RM (2023) Counterspeech. *Philosophy Compass* **18**, 1–11.

Cherry TL, Kroll S, McEvoy DM, Campoverde D and Moreno-Cruz J (2023) Climate cooperation in the shadow of solar geoengineering: An experimental investigation of the moral hazard conjecture. *Environmental Politics* **32**, 362–70.

Courtemanche C, Marton J, Ukert B, Yelowitz A and Zapata D (2018) Early effects of the affordable care act on health care access, risky health behaviors, and self-assessed health. *Southern Economic Journal* **84**(3), 660–91.

Douglas H (2009) *Science, Policy, and the Value-Free Ideal*. Pittsburgh: University of Pittsburgh Press.

Eriksen A (2019) Reclaiming responsibility: The case of welfare-to-work policy. *Journal of Social Policy* **48**(3), 529–46.

Fan M (2019) Diversion of controlled drugs in hospitals. *Journal of Hospital Medicine* **14**(7), 419–28.

Feinberg J (1965) The expressive function of punishment. *The Monist* **49**, 397–423.

Gardiner S (2011) Some early ethics of geoengineering the climate. *Environmental Values* **20**, 163–88.

Hale B (2009) What's so moral about moral hazard. *Public Affairs Quarterly* **123**, 1–25.

Hale B (2012) The world that would have been: Moral hazard arguments against geoengineering. In Preston CJ (ed.), *Engineering the Climate*. New York: Lexington Books, pp. 113–32.

Jebari J, Táíwò O, Andrews TM, Aquila V, Beckage B, Belaia M, Clifford M, Fuhrman J, Keller DP, Mach KJ, Morrow DR, Raimi KT, Visioni D, Nicholson S and Trisos CH (2021) From moral hazard to risk-response feedback. *Climate Risk Management* **33**, 100324.

John S (2017) From social values to P-Values: The social epistemology of the intergovernmental panel on climate change. *Journal of Applied Philosophy* **34**(2), 157–71.

John S (2018) Epistemic trust and the ethics of science communication: Against transparency, openness, sincerity, and honesty. *Social Epistemology* **32**, 75–87.

Keith D and MacMartin D (2015) A temporary, moderate and responsive scenario for geoengineering. *Nature Climate Change* **5**, 201–6.

Keohane R, Lane M and Oppenheimer M (2014) The ethics of scientific communication under uncertainty. *Politics, Philosophy & Economics* **13**, 343–68.

King S and Silva M (2024) No, UK weather is not being manipulated. *BBC News*. Available at: https://www.bbc.co.uk/news/articles/ckmmkdr0m2po.

Langton R (1992) Duty and desolation. *Philosophy* **67**, 481–505.

Lepoutre M (2024) Narrative counterspeech. *Political Studies* **72**, 570–89.

Lepoutre M (2025) Educational falsehoods. *Ergo* **12**, 1421–58.

Lin A (2013) Does geoengineering present a moral hazard. *Ecology Law Quarterly* **40**, 673–712.
Lockley A and Coffman D (2016) Distinguishing morale hazard from moral hazard in geoengineering. *Environmental Law Review* **18**, 194–204.
Madsen JK, de-Wit L, Ayton P, Brick C, de-Moliere L and Groom CJ (2024) Behavioural science should start by assuming people are reasonable. *Trends in Cognitive Science* **28**(7), 583–5.
Merk C, Pönitzsch G and Rehdanz K (2016) Knowledge about aerosol injection does not reduce individual mitigation efforts. *Environmental Research Letters* **11**, 054009.
Morrow D (2014) Ethical aspects of the mitigation obstruction argument against climate engineering research. *Philosophical Transactions: Mathematical, Physical and Engineering Sciences* **372**(2031), 1–14.
Nelson JL (2017) Hope and resentment. *Perspectives in Biology and Medicine* **60**(2), 275–84.
OSTP (2023) *Congressionally-mandated report on solar radiation modification*. Available at: https://www.whitehouse.gov/ostp/news-updates/2023/06/30/congressionally-mandated-report-on-solar-radiation-modification/.
Pamplany A, Gordijn B and Brereton P (2020) The ethics of geoengineering: A literature review. *Science and Geoengineering Ethics* **2020**, 3069–119.
Pauly M (1968) The economics of moral hazard: Comment. *American Economic Review* **58**(3), 531–7.
Raimi KT, Maki A, Dana D and Vandenbergh MP (2019) Framing of geoengineering affects support for climate change mitigation. *Environmental Communication* **13**, 300–19.
Rawls J (1999) *A Theory of Justice*. Revised edn. Cambridge: Belknap Press.
Reynolds J (2014) A critical examination of the climate engineering moral hazard and risk compensation concern. *The Anthropocene Review* **2**(2), 174–91.
Reynolds J (2022) Linking solar geoengineering and emissions reductions. *Climate Policy* **22**(3), 285–300.
Rini R (2020) Contingency inattention: Against causal debunking in ethics. *Philosophical Studies* **177**, 369–89.
Royal Society (2009) *Geoengineering the climate: Science, governance, and uncertainty*. Available at: https://royalsociety.org/-/media/policy/publications/2009/8693.pdf.
Saami Council (2021) Open letter to the SCoPEx advisory committee. Available at: https://static1.squarespace.com/static/5dfb35a66f00d54ab0729b75/t/603e2167a9c0b96ffb027c8d/1614684519754/Letter+to+Scopex+Advisory+Committee+24+February.pdf.
Sars N (2024) Relational objectivity. *Theoria* **91**, 1–9.
Schoenegger P and Mintz-Woo K (2024) Moral hazards and geoengineering: Evidence from a large-scale online experiment. *Journal of Environmental Psychology* **95**, 1–11.
Sinnott-Armstrong W (2010) It's not my fault: Global warming and individual moral obligations. In Gardiner S et al. (eds.), *Climate Ethics: Essential Readings*. Oxford: Oxford University Press, pp. 332–46.
Solar Geoengineering Non-Use Agreement (2022) Open letter. Available at: https://www.solargeoeng.org/.
Stephens JC, Kashwan P, McLaren D and Surprise K (2023) The dangers of mainstreaming solar geoengineering: A critique of the national academies report. *Environmental Politics* **32**(1), 157–66.
Stirling A (2008) 'Opening Up' and "Closing Down". *Science, Technology, & Human Values* **33**(2), 262–94.
Strawson P (2008) Freedom and Resentment. *Freedom and Resentment and Other Essays*. London: Routledge.
Svoboda T (2017) *The Ethics of Climate Engineering*. London: Routledge.
Thernstrom S (2010) What role for geoengineering? American Enterprise Institute. Available at https://www.aei.org/articles/what-role-for-geoengineering/.
Thomas J (2025) Fact-checking claims about the UK's geoengineering experiments. *Yahoo! News*. Available at: https://uk.news.yahoo.com/fact-checking-claims-uks-geoengineering-054635843.html.
Tsai G (2014) Rational persuasion as paternalism. *Philosophy and Public Affairs* **42**(1), 78–112.

Cite this article: Baderin A and Lepoutre M (2026) Geoengineering, Moral Hazard, and Disrespect. *British Journal of Political Science* 1–16. https://doi.org/10.1017/S0007123426101793