

INEQUALITY AND REGULATION REVISITED

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In a 2023 article in the *American Journal of Law and Equality*, I explored ways that government regulation—environmental regulation in particular—can promote equality. The article sparked critiques from a remarkably able and diverse group of commentators. The 2023 article defended aspects of the current system: the practice of using uniform valuations of life and health, regardless of income, and the use of disparate-impact analysis in rulemaking. The article expressed legal qualms, however, about proposals to directly incorporate race into regulatory design. Instead, the article proposed designing regulations around variations in risk, which are closely tied to an individual's income and race. By using more granular approaches to determining *who* is exposed to risks and their vulnerability to harm, I contended, agencies could do far more to address the needs of disadvantaged communities. In this paper, I defend those conclusions and consider the potential impact of recent developments, such as the Supreme Court's rejection of affirmative action.

INTRODUCTION

Despite growing agreement that the level of inequality is a critical issue, there has been relatively little discussion of how regulations should address it. In the last issue of this journal, I explored ways that government regulation—environmental regulation in

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particular—can promote equality.¹ The article sparked critiques from a remarkably able and diverse group of commentators.²

This article is a response, not merely a rebuttal. The critiques have led me to reframe some of my arguments and pursue some new implications. Perhaps most importantly, I have moved beyond defending the principle that society should devote equal resources to preventing equal harms to discuss how to deal with situations in which that principle, if followed mechanically, could have regressive impacts. That analysis provides an equity argument for using environmental policies other than conventional regulations, such as the Inflation Reduction Act’s massive financial incentives for clean energy. I also raise the possibility of involving communities more directly in decision-making when there is a conflict between equal treatment and unfair incidence of results. I also discuss how my approach to pollution issues in the 2023 paper can be extended to site-specific issues such as climate impacts.

Briefly, that article began with the issue of economic equality, then turned to racial equality, and finally put forward an emphasis on vulnerability as a tool for promoting equality. In terms of economic equality, I defended an important but highly controversial feature of the existing system: the practice of using uniform valuations of life and health, regardless of income, and the use of disparate-impact analysis in rulemaking.³ Rather than relying on arguments for using regulation as a possible form of income redistribution or as endorsing legal problematic targeting of benefits on the basis of race,⁴ I argued that justice requires devoting equal resources to prevent equal harms.⁵ The reality is that low-income communities and communities of color often suffer the greatest harms (and not just by chance). By using more granular approaches to determining *who* is exposed to risks and their vulnerability to harm, I contended, agencies could do far more to implement this principle, identify the needs of disadvantaged communities, and effectively address them.⁶

1 Daniel A. Farber, *Inequality and Regulation: Designing Rules to Address Race, Poverty, and Environmental Justice*, 3 AM. J.L. & EQUAL. 2 (2023). I will refer to this paper as “the 2023 article” in various places in this response.

2 Shaun A. Goho, *Advances in Air Monitoring: Opportunities and Challenges for Addressing Race, Poverty, and Environmental Justice*, 3 AM. J.L. & EQUAL. 53 (2023); Daniel J. Hemel, *The Equality–Equity Dilemma in Cost–Benefit Analysis: Comment on Daniel Farber’s Inequality and Regulation: Designing Rules to Address Race, Poverty, and Environmental Justice*, 3 AM. J.L. & EQUAL. 64 (2023); Douglas A. Kysar, *An Eco-Pragmatic Approach to Inequality and Regulation*, 3 AM. J.L. & EQUAL. 92 (2023); Vivek Maru, *A Pathway to Climate and Environmental Justice*, 3 AM. J.L. & EQUAL. 103 (2023); David A. Weisbach, *Review of Daniel Farber, Inequality and Regulation: Designing Rules to Address Race, Poverty, and Environmental Justice*, 3 AM. J.L. & EQUAL. 150 (2023); Richard J. Lazarus, *Reflections on Dan Farber’s Inequality and Regulation*, 3 AM. J.L. & EQUAL. 414 (2023).

3 Farber, *supra* note 1, at 21–24.

4 For a discussion of the legal issues involved in targeting racial minorities for regulatory protections based on societal discrimination, past or future, see *id.* at 39–44.

5 *Id.* at 44.

6 *Id.* at 43–51.

In the end, despite the thoughtful critiques by commentators, I am largely unpersuaded of the error of my ways. I remain deeply appreciative, however, of their willingness to provide that commentary. This kind of dialogue is not as common as it should be in academia. It has been especially helpful that the commentators represent such a broad range of perspectives and expertise, and I am grateful to the editors for inviting their responses.

A final point: the conflicting views that were surfaced by my 2023 article and the commentators are real and important. But in the debate over principles and strategies, it is important not to lose track of commonalities. You can favor steps to reduce inequality whether you are a believer in pragmatism or a zealous adherent to law and economics or utilitarianism, and whether you work as a conventional environmental advocate or battle for environmental justice. Also, regarding the biggest environmental issue of our time, you can—and should—view climate change as an urgent problem from any of those perspectives.

I. REGULATION AND ECONOMIC INEQUALITY

The basic issue involved in this section is how to take into account the economic burden that regulations place on low-income consumers versus the benefits they receive. Because this was the portion of the article that received most of the criticism, I will also devote the most space to it.

One complication should be noted at the outset.⁷ Much of the discussion of these issues takes place at an abstract level or uses stylized examples because it is quite difficult to understand the incidence of costs even among consumers of a product, let alone spillover costs on employees, investors, and others. Indeed, the federal government has almost never attempted to consider the incidence of costs in reviewing regulations.⁸

Some of the complexities of modeling the impacts of increased vehicle costs on new and used car markets are discussed in the regulatory impact statement for a recent fuel

7 Another complication is that the studies and methodologies that were used to set current VSLs appear to be seriously out of date. See Maureen L. Cropper et al., *Revisiting the Environmental Protection Agency's Value of Statistical Life* (Res. for the Future, Working Paper No. 23-30, July 2023), https://media.rff.org/documents/WP_23-30_rev.pdf.

8 According to Caroline Cecot:

Unfortunately, in the past, the rare times that agencies have conducted distributional analysis at all, they focused on *only* the *benefits* of federal actions to specific demographic groups. In fact, since 2003, only one regulation and its repeal were supported by CBAs that calculated *net* benefits (benefits minus costs) of a regulatory action to an identifiable (arguably demographic) group.

Caroline Cecot, *Efficiency and Equity in Regulation*, 76 VAND. L. REV. 361, 369 (2023).

efficiency standard, which in turn relies on a complex econometric model discussed in an appendix.⁹ In a parallel proceeding, the EPA imposed greenhouse gas standards on new vehicles that in effect required increases in fleet fuel efficiency (in part through increased use of electric vehicles). The increase in upfront car prices due to the EPA regulation was offset by decreases in operating expenses, and after considerable analysis the agency ultimately concluded that “[a]s vehicles meeting the standards enter the used vehicle market, they will retain the fuel economy/GHG-reduction benefits, and associated fuel savings, while facing a smaller portion of the upfront vehicle costs.”¹⁰

Of course, this example involves a product that is subject to resale. But even in the case of a product like electricity, which is generally entirely consumed by the retail purchaser,¹¹ determining who ultimately bears the costs remains complex.¹² Things become more complicated still when we take into account government efforts to adjust cost impacts, such as California’s recent decision to shift more electricity costs to upper-income consumers.¹³ The upshot is that determining the ultimate incidence of regulatory costs may be extremely difficult.

A. The Argument for Current Practice

Cost–benefit analysis now has a long history in the regulatory state. Soon after taking office, President Ronald Reagan signed an executive order that not only required cost–benefit analysis in rulemaking but also made it the dominant consideration.¹⁴ The order

9 NAT’L HIGHWAY TRAFFIC SAFETY ADMIN., PRELIMINARY REGULATORY IMPACT ANALYSIS: CORPORATE AVERAGE FUEL ECONOMY STANDARDS FOR PASSENGER CARS AND LIGHT TRUCKS FOR MODEL YEARS 2027 AND BEYOND AND FUEL EFFICIENCY STANDARDS FOR HEAVY-DUTY PICKUP TRUCKS AND VANS FOR MODEL YEARS 2030 AND BEYOND (July 2023), <https://www.nhtsa.gov/sites/nhtsa.gov/files/2023-08/CAFE-2027-2032-HDPUV-2030-2035-PRIA-tag.pdf>.

10 EPA, *Revised 2023 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions Standards*, 86 FED. REG. 74434, 74445 (Dec. 30, 2021). We would not generally expect an increase in the price of a car to be fully passed through the resale chain because vehicles (and whatever features are required by regulation) are subject to depreciation. *See id.* at 74512. Assuming the new technology depreciates at the same rate as the rest of the car, “a person who buys a new vehicle and sells it after 5 years would incur 60 percent of the upfront costs.” *Id.* In contrast, someone who also owns the car for five years but bought it in year 5 would end up paying only a net 20% of the new-car price for the feature (buying for 60% and selling for 40%), but would get the same five years of benefits from the regulation. *Id.* at 74512 tbl.49. Of course, this calculation involves only the direct cost of the mandated feature and does not include whatever indirect market effects may be involved, which would further complicate the analysis. Poorer individuals are more likely to buy used cars, so it would be misleading to consider only the new-car market in the distributional analysis.

11 The exception would be if the consumer used battery storage and then resold the power back to the grid, but this is still rare enough that we can ignore this complication.

12 I discuss some of these complexities in the 2023 article. *See* Farber, *supra* note 2, at 25–27.

13 Rose Horowitz, *Richer People Pay More: California’s Dramatic Change to Electricity Bills*, THE GUARDIAN (June 6, 2023), <https://www.theguardian.com/us-news/2023/jun/06/california-income-based-electricity-fees-2025>.

14 Exec. Order No. 12291, 3 C.F.R. 127 (1981).

instructed agencies that a major regulation could be issued only if a regulation's potential benefits to society outweighed potential costs and net benefits were at a maximum. Review of agency cost-benefit analyses was assigned to the Office of Information and Regulatory Affairs (OIRA), a White House agency.¹⁵ Subject to some significant modifications, Reagan's embrace of cost-benefit analysis continues to shape the regulatory process today.

The key objection to the dominant framework is that it prioritizes the lives of the rich over those of the poor. If we are measuring the seriousness of risks by how much people are willing to pay to avoid them,¹⁶ the rich are clearly willing to pay more than the poor to avoid identical risks.¹⁷ For this reason, the value of a statistical life (VSL)—a metric for measuring the benefit of reducing risks in dollar terms—tracks the wealth of the affected population. Thus, as a matter of economic theory, cost-benefit analysis should clearly vary the VSL depending on the economic status of the people exposed to a risk. Or more bluntly, in terms of the theory of cost-benefit analysis, the lives of the poor count for less than those of the rich. For instance, all else being equal, the theory implies that we would care more about improving air quality in affluent areas than in impoverished ones.¹⁸ Or to put it another way, under textbook cost-benefit analysis, it is always beneficial to locate toxic waste dumps and other polluting facilities in poor neighborhoods, all else being equal. In contrast, unequal imposition of environmental risks on the disadvantaged is often seen as

15 For a description of the development of OIRA's role in regulatory oversight, see Daniel H. Cole, "Best Practice" *Standards for Regulatory Benefit-Cost Analysis*, 23 *RES. IN LAW & ECON.* 1 (2007). Finally, for an insider's view of OIRA's operation in the Obama administration, see Cass R. Sunstein, *The Office of Information and Regulatory Affairs: Myths and Realities*, 126 *HARV. L. REV.* 1838 (2013).

16 There is a fairly obvious shortcoming in this approach to valuing life: it assumes no one else has an interest in saving the person at risk. This is clearly not true, since people donate significant amounts of money for medical care for the poor and other risk-reduction efforts directed at others. So there should also be what economists call a stated-preference component in the valuation.

17 See Zachary Liscow, *Redistribution for Realists*, 107 *IOWA L. REV.* 495, 515 (2022).

18 There is a utilitarian argument along similar lines:

Lifetime is not a good like a standard good, which could be enjoyed on its own. On the contrary, lifetime is like a "container," whose value depends on what it will allow for—that is, on what lies "within the container" (life events, activities, projects, etc.). As a consequence, the valuation of life-years cannot be made independently from the associated quality of life. A corollary of this is that, when the quality of life varies, the value of the quantity of life cannot remain the same, and, hence, cannot be universal, in opposition to what the intuition of universality recommends.

Marc Fleurbaey & Gregory Ponthiere, *The Value of a Life-Year and the Intuition of Universality*, 22 *J. ETHICS & SOC. PHIL.* 355, 358 (2022) (explaining but not endorsing this argument). Although a discussion of this philosophical issue is beyond the scope of this article, the idea that we should reward people who have good fortune and happy dispositions with longer lives, while writing off the lives of the less fortunate or chronically ill and depressed, strikes me as profoundly unappealing. Although this may be a sound application of utilitarian theory, that would to my mind raise doubts about the underlying theory.

a prime form of environmental injustice. In that sense, environmental justice and cost-benefit analysis can be seen as diametrically opposite perspectives.

While I find this a compelling reason to reject textbook cost-benefit analysis, government practice does not correspond to textbook economics. Instead, the government uses the same value of life for everyone. The government's only effort to use a lower VSL for the elderly was met by a tsunami of political protest, and the government had to beat a hasty retreat.¹⁹ The current insistence on uniformity extends beyond VSL, such as to valuation of the years of life saved by a health measure.²⁰ In addition, in estimating the harm from illnesses such as asthma attacks or nonfatal heart attacks, the government uses fixed dollar amounts rather than adjusting for the wealth of the affected individual or, in the case of children, for the wealth of their parents.²¹ All of this is a basis for anguish among law and economics scholars.

In the 2023 article, I offered a defense of current government practice. I argued that society as a whole, represented by the government, has a duty to give equal respect to the lives of all individuals regardless of wealth or other personal characteristics.²² This principle could be founded on a principle of democratic equality. In a democracy, the government should be impartial toward its citizens rather than valuing them based on wealth: a norm of equal citizenship reflected in the principle of one person, one vote. In the case of government projects intended to save lives, for instance, how much we are willing to spend to reduce a risk should not depend on the wealth of the beneficiaries. It would

19 Daniel Hemel, *Regulation and Redistribution with Lives in the Balance*, 89 U. CHI. L. REV. 649, 717 (2022).

20 White House guidance (Circular A-4) has long advised using the general population's life expectancy rather than adjusting for disability, income, or membership in a "particular demographic or income group." OFF. OF MGMT. & BUDGET, EXEC. OFF. OF THE PRESIDENT, CIRCULAR A-4 (2003).

21 As OIRA conceded in the 2003 Circular A-4, "[t]he valuation of health outcomes for children and infants poses special challenges. It is rarely feasible to measure a child's willingness to pay for health improvement and an adult's concern for his or her own health is not necessarily relevant to valuation of child health. For example, the wage premiums demanded by workers to accept hazardous jobs are not readily transferred to rules that accomplish health gains for children."

22 At least one leading advocate of cost-benefit analysis seems to agree:

Of course it is offensive and wrong to suggest that in principle, poor people are "worth less" than rich people. If poor people are subject to a risk of 1/10,000, they do not have less of a claim to public attention than wealthy people who are subject to the same risk; in fact they may have a greater claim, if only because they lack the resources to reduce that risk on their own.

Cass R. Sunstein, *Valuing Life: A Plea for Disaggregation*, 54 DUKE L.J. 385, 394 (2004). Sunstein went on to say, "But the topic here is regulation rather than subsidy, and the two ought not to be confused." *Id.* The remainder of the paragraph continues on the assumption that the full cost of any regulation is borne by its beneficiaries, though Sunstein then concedes that the cost for using an income-based value of life is weaker when the beneficiaries do not bear all the costs. *Id.* at 395.

be unconscionable for a government to invest more to prevent diseases suffered by the rich compared with those of the poor on the ground that the VSL of the rich is greater.

Although the principle is strongest when the government is the actor, it also applies to private actors who impose nonconsensual risks on others. When the relevant decision-maker is an individual, the equal-resources principle could be viewed as involving respect for the equal moral significance of each individual. To say, for instance, that we should view the death of a rich person as morally weightier than the death of a poor person is a profound affront to human equality. It has been many centuries since the law's penalty for killing (in the form of wergild) depended on the social status of the victim. We (or at least those of us who are not economists) would not think well of a company that justified its failure to protect the lives of its neighbors on the ground that they were poor and not worth the investment.²³ Nor would we think well of someone who justified driving more recklessly in poor neighborhoods because any resulting harms would matter less than the same harms experienced by the wealthy.

In arguing on behalf of the current practice of using equal VSLs, I was partly attempting to rehabilitate cost-benefit analysis in the eyes of equality advocates by showing that in practice, it is not as biased in favor of wealth as it seems. Judging from the commentaries, this effort apparently did not go over well with law and economics readers. Some of their arguments seem to me to miss the mark, but one points up a genuine difficulty with using regulation as a tool for addressing harmful conduct. The imposition of regulatory costs on the poor might overwhelm the benefits of the regulation, leaving them worse off than they would be in the absence of regulation. Because this problem depends heavily on the incidence of costs, it may be better to use tools in those situations that shift the costs to the public. In such settings, at least, the sorts of fiscal incentives offered by the Inflation Reduction Act for clean energy may be superior with respect to equity.

I do not want to pretend that the approach I advocate is entirely free from difficulties. But those difficulties pale, in my view, in comparison with those of endorsing a methodology that portrays shifting deaths from the rich to the poor as a regulatory victory.

23 A similar issue arises when the metric used is quality-adjusted life years (QALY) saved by a regulation. In its proposed revision to Circular A-4, OIRA stresses the need to make equitable adjustments in these measures:

When CEA [Cost Effectiveness Analysis] is performed in specific regulatory contexts, you should be prepared to make appropriate adjustments to ensure fair treatment of all segments of the population. Fairness is important in the choice and execution of effectiveness measures. For example, if QALYs are used to evaluate a life-saving regulation aimed at a population that happens to experience a high rate of disability (i.e., where the regulation is not designed to affect the disability), the number of life years saved should not be diminished simply because the regulation saves the lives of people with life-shortening disabilities.

OFF. OF MGMT. & BUDGET, EXEC. OFF. OF THE PRESIDENT, CIRCULAR A-4, at 8 (Apr. 23, 2023), <https://www.whitehouse.gov/wp-content/uploads/2023/04/DraftCircularA-4.pdf> (draft for public review).

B. The Critiques

The critiques make it clear that although current practice is well entrenched, the debate raises some fundamental policy issues. In one sense, as David Weisbach explains, “[t]o a great extent, the argument is academic, because agencies currently use equal VSLs, and there is no move to change that.”²⁴ Yet, given the energy that he and Daniel Hemel have devoted to attacking the equal-harm principle in their commentaries, it seems clear that something more is at stake. Ultimately, the issue is how we should think about the government’s role in protecting people against risks. Is it merely filling gaps in the market because people are unable to purchase risk protection directly (the conventional economic view), or do other moral principles apply based on an obligation to treat all people fairly?

There is a broad general issue about whether regulators should consider anything other than economic efficiency, which I discussed at some length in the 2023 article. Much of Weisbach’s response parallels arguments frequently made on the other side of the debate, including in some of his own earlier work. However, those portions of the response do not raise any new issues, and readers who were unpersuaded by my arguments in the original papers will be unlikely to be persuaded by my reiterating them here. Therefore, there seems little point to adding further to what is already a large academic literature on this general question. Instead, I will focus more specifically on critiques of the equal-harm principle.

One of Weisbach’s arguments is that the harm principle, if taken seriously, would have to be applied more broadly and could not be limited to the regulatory sphere. I think he is right about that. For instance, I would apply the same principle to spending programs. Contrary to what I assume is his view, I think that government funding on public health should not be slanted toward diseases that affect the rich, all else being equal. Yet under Weisbach’s view, the higher VSLs of the rich would require that health issues affecting them receive greater government attention than risks to the poor of equal magnitude.²⁵

Weisbach then suggests that the equal-harm principle would require us to intervene constantly in market transactions to force people to avoid risks even when they might prefer instead to avoid the cost of risk reduction. But if there is a parade of horrors, it is a parade that has already marched past us. Government regulation already encompasses

24 Weisbach, *supra* note 2, at 159.

25 Weisbach is also right that I would not entirely limit the principle to harms caused by the government, though the argument for the principle is especially strong in that setting. For example, I do not think that people should feel free to drive less carefully in poor neighborhoods than in wealthy ones because accident risks to poor people are less costly. Yet the logic of textbook cost-benefit analysis would seem to lead to the contrary conclusion. It would require looser traffic safety regulation for drivers in poor neighborhoods because the poor place a lower monetary value on the harms caused by accidents. By the same token, society as a whole is better off if drivers decide to drive less carefully in poor neighborhoods, where the benefits to them from speeding (especially if they are wealthy) may outweigh the costs to potential accident victims in poor neighborhoods.

consumer safety, drug safety, food safety, workplace safety, traffic safety, and vehicle safety. To the extent cost–benefit analysis is used for these regulations, it currently incorporates the uniform VSL that Weisbach finds so unacceptable. In other words, the regulatory meltdown he envisions has already happened, seemingly without causing much of a ripple.

Although Weisbach seems to me to overstate his case, the core of his argument is one that I take seriously, which is that the equal-harm principle could harm the poor in situations where they bear the regulatory costs.²⁶ Although I did refer to the issue in the 2023 article,²⁷ his comments indicate that at the very least I need to clarify my position. In the course of doing so in the next section, I will have the opportunity to develop my views more fully. But first, I should comment on Hemel’s critique, which raises a similar point but is less dogmatic about economic efficiency.

Much of Hemel’s commentary is devoted to making the same point as Weisbach, though in more nuanced terms and with more sympathy for redistributive regulations. But Hemel adds an important dimension to the debate with an observation about the expressive dimension of the issue. As he puts it,

“it is a bad thing if millions of Americans think that the federal government values their interests less than the interests of other, richer Americans—and bad for reasons beyond the fact that agency officials may endure a few difficult news cycles.” Replace “richer” with “whiter” and the claim becomes even stronger.²⁸

Yet, it seems to me, it is not so clear that this is actually a misunderstanding on the part of the public.²⁹ If society’s willingness to protect us from physical harm depends on our wealth, that seems almost unavoidably to convey a message about our relative value.

Weisbach and Hemel are pointing toward a real problem, but adjusting the VSL is the wrong way to address it—wrong because the problem is primarily not on the benefit side of the equation where VSL resides, but on the cost side of the equation. For that reason, the right solution depends on the incidence of costs, which the benefit side (including the VSL) is blind to. A better solution is the one that the government itself is considering: use

26 See Weisbach, *supra* note 2, at 160–61.

27 For discussions of the problems that could arise when regulatory costs are passed on to regulatory beneficiaries, see Farber, *supra* note 1, at 23 n.112, 25–27.

28 Hemel, *supra* note 2, at 83 (quoting Daniel Hemel, *Regulation and Redistribution with Lives in the Balance*, 89 U. CHI. L. REV. 649, 710–13 (2022)).

29 Hemel quotes another author as remarking, “[T]he suggestion that some people’s lives were less worth saving was understandably heard to say that the people themselves were worth less,” implying this could have been a misunderstanding. *Id.* (quoting Benjamin Eidelson, Comment, *Kidney Allocation and the Limits of the Age Discrimination Act*, 122 YALE L.J. 1635, 1648 (2013)). Yet, this seems to be an accurate interpretation. “We’d save your life if you had more money” carries a stark message about what makes people’s lives valuable.

a uniform VSL but take account of the incidence of regulatory costs on the poor when that information is available.³⁰ In the next section, I explain why I believe this is a better approach, but I then consider a variety of more creative responses to the problem.

C. The Regressivity Issue

Unlike cost–benefit analysis, an economic methodology known as equity weighting takes inequality into account. This methodology also provides a way of better diagnosing the problem that concerns Hemel and Weisbach. The first step in equity weighting is to convert regulatory benefits and costs into monetary terms, scrupulously basing this conversion on individual willingness to pay, just like the approach to cost–benefit analysis favored by Weisbach. The second step then translates these monetary sums into utility units. The same dollar of cost or benefit will translate into more utility units (“utils”) in the case of a poor person than in the case of a rich person. The reason is that money has declining marginal utility: the value of an extra dollar to a rich person is much less than its value to a poor person. The final step is to combine all these individual measurements into a measure of social welfare.

The upshot of this process is that the interests of the poor get additional weight in the analysis. Although implementation could be very difficult, this approach seems far superior in principle to conventional cost–benefit analysis because it attempts to measure outcomes in terms of human well-being rather than dollars. As I indicated in the earlier article, I have some concerns about the practicality of determining the ultimate incidence of regulatory costs in some important contexts, but the abstract appeal of utility weighting (as compared with dollar weighting) is clear.

On the benefit side of cost–benefit analysis, equity weighting might make relatively little difference compared with current practice. To use equity weighting properly, we should abandon the use of fixed dollar values of life and use valuations based on the willingness to pay of various income groups. That would reduce the dollar value of preventing illness or death among the poor while increasing the dollar value for the rich. When we convert these dollar amounts into utility units, however, each dollar of harm to the poor is translated into a greater amount of utility than the dollar amounts for the rich are. Thus, we would be shrinking the measure of harm for the poor in step one and then expanding it in step two. The two changes from current cost–benefit practice are partly offsetting and could be entirely offsetting under some assumptions.³¹

30 *Id.* at 86 n.73, citing OFF. OF MGMT. & BUDGET, *supra* note 23. To be fair, Hemel also favors this solution, though I take it that Weisbach would squarely reject it for the reasons laid out in his comment.

31 Hemel observes that if the income elasticity of the value of a statistical life is one and welfare is a logarithmic function of income, all lives end up with the same value in units of welfare. Hemel, *supra* note 19, at 681. Thus, the two effects of income-sensitive valuation plus conversion to welfare units would cancel out under those assumptions.

Equity weighting of costs does not go through an equivalent shrinking process and for that reason could be more important than equity weighting of benefits in terms of regulatory policy. Regulatory costs falling on the poor would count for much more than they do currently. One of the commentators on the 2023 paper, Daniel Hemel, suggested in earlier writing that many environmental regulations of the energy sector might fail under equity weighting, though some would survive, either because the benefits massively outweigh the costs³² or because the regulations so disproportionately benefit the poor.³³

Whatever may be said about the practicality of equity weighting, it does highlight a real problem with current regulatory practice. It suggests that the use of a fixed value of life may not be too far off in terms of capturing the welfare benefits of regulation. The problem is on the cost side: to the extent costs fall on the poor, their dollars should carry more weight. In other words, in considering impacts on the poor, the problem is less that the benefits of the regulation are being overestimated but that the costs to the poor are being underestimated, because the same dollar cost translates into a greater welfare cost for them compared with the more affluent. For this reason, contrary to some overly broad statements in my earlier article, it may not always be true that the effect of using equal VSLs is redistributive in favor of the poor; this will be true only when costs to them do not outweigh benefits.

In short, the focus should be on the incidence of regulatory costs, particularly on the poor, not on the benefit side.³⁴ The standard criticisms of using a constant value of life gets this entirely wrong. Consider the following two hypothetical regulations:

Regulation A saves the lives of 100 poor people. The \$800 million cost falls entirely on the rich.

Regulation B also saves the lives of 100 poor people. The \$800 million cost falls entirely on the poor.

This hypothetical assumes that we actually know the ultimate incidence of regulatory costs (or under Hemel's view, net benefits), which might be quite difficult in practice. If we

32 *Id.* at 708.

33 Hemel notes this disproportionate benefit. *Id.* at 707.

34 A point made particularly clearly in Cass R. Sunstein, *Inequality and the Value of a Statistical Life* (Oct. 3, 2022), <https://ssrn.com/abstract=4236366>. For a more recent discussion, see Zachary Liscow & Cass R. Sunstein, *Efficiency vs. Welfare in Benefit–Cost Analysis: The Case of Government Funding* (Oct. 10, 2023), <https://ssrn.com/abstract=4589563>: “[F]unding is relevantly different from regulation, both analytically and in practice. Suppose, for example, that government requires refrigerators to be more energy-efficient. If so, consumers are likely to have to pay more for refrigerators, at least upfront, and it is possible that the regulation could end up hurting poor people. If, by contrast, the government subsidizes energy-efficiency refrigerators, no such effect should be expected.”

are completely uncertain on that score, the default assumption should be that the incidence will be income neutral, given that it is just as likely that the costs are progressive as that they are regressive.³⁵ But let us assume that we do know the incidence, since otherwise we have no reason to think that we need to compromise on the equal-harm principle to avoid a regressive outcome. For simplicity, let's also assume that the "correct" VSL for the rich is \$20 million, about twice the standard government VSL, while the VSL for the poor is about \$5 million, half the standard VSL.

If we use the government's standard VSL (\$10 million), we would approve both regulations, since both would produce net benefits valued at \$200 million (\$1 billion in benefits minus \$800 million in costs). On the other hand, if we apply textbook cost-benefit analysis, we would reject both regulations, finding a net social cost of \$300 million, with 100 lives saved times \$5 million per poor person's life.

But treating the two regulations identically overlooks the key issue. If the primary problem is that the dollars of the poor mean more to them than the dollars of the rich, who pays for the regulation's benefits should make all the difference.³⁶ From this perspective, the difficulty with applying the principle of equal harms, which requires a uniform VSL, is that it can devote resources to benefitting the poor, which is morally justified, yet does so at the expense of a regressive distribution of costs. But this does not mean that the principle of equal harms is wrong; it only means that there is another factor in the balance. The situation would be equally problematic if we had a government public health program

35 It might appear that we should adopt a precautionary attitude toward possible regressive policies, so that we reject policies where the ultimate distributional effect is unknown. We might call it the Distributional Precautionary Principle, or DPP. This is a subject that certainly deserves fuller exploration, but I am inclined to reject the DPP.

One argument is based on the paradoxical implications of the DPP. Suppose that we have no way of knowing how switching between a policy and its absence would impact the income distribution. Under the DPP, we would reject the proposed policy because of the risk that adopting it would be regressive. But for the same reasons, we would reject repeal of the policy to avoid the risk that repeal would be regressive. Thus, the DPP implies inconsistent preferences regarding the policy.

We might also get to the same conclusion another way. Consider an action whose distributional effects are equally likely to increase or decrease social welfare. Should we avoid that action? The answer seems to be no. If we have a 50/50 gamble between alternatives that have an equal chance of increasing welfare from W to $W + x$ or decreasing it from W to $W - x$, expected social welfare will be W . Thus, we are indifferent between the revenue-neutral policy and a situation where the other two policies are equally likely. The implication is that we should not be risk averse about changes in social welfare.

If this reasoning is correct, whatever rule applies to distributionally neutral regulations also applies in the absence of any information about distributive effects. When distributional consequences are unknown, we should feel free to apply the equal-harm principle without worrying about distributive consequences.

36 We can see this all the more clearly if we add a *Regulation C* to the mix, which saves only the lives of the rich while all the costs are on the poor. This regulation passes muster under cost-benefit analysis whether or not we use a uniform VSL yet is clearly normatively troubling and might well fail to survive equity weighting.

designed to benefit the poor but funded by a regressive sales tax. We would have to decide whether the regulatory benefits outweigh the adverse distributional effects.

This analysis suggests a different way of thinking about the potential conflict between use of a uniform VSL and the potentially adverse impacts on the poor of regulatory costs. Rather than adjusting VSLs for income, we need to focus more on the cost side. If the costs have a regressive impact, we have an equity problem, but one that can be addressed in a variety of ways. Rather than leaving us with a simple dilemma, it also suggests a series of constructive responses for policymakers to explore.

Under this analysis, Regulation B is troublesome, but Regulation A is not. In response to this problem, the government has several choices. To begin with, as I made clear in the 2023 article, the equal-harms principle is a *principle*—an important value—rather than an ironclad rule.³⁷ For that reason, this principle (as incorporated in the use of a uniform VSL) can be weighed against the regressive impact of regulatory costs. The agency can decide that the regressivity problem is severe enough to outweigh the general principle of equal resources for equal risks.³⁸ Or it might decide otherwise, depending on how it balances the two considerations. As mentioned earlier, this is the White House proposal as of this writing, and it has much to recommend it.

Alternatively, the government can revamp the regulation so as to shift more regulatory costs to the rich or improve benefits to the poor. This could involve tinkering with the details of regulations so that, for example, utilities with more affluent customers end up carrying more of the burden of pollution reduction. More interestingly, the government could decide that conventional regulation is the wrong tool for addressing a problem and consider a wider range of alternatives.

For example, rather than limiting harmful emissions directly, the government could auction a limited number of permits and use the proceeds to benefit the poor in other ways. This is the strategy that California and a number of other states have used in their emission trading systems for carbon dioxide.³⁹ This potential equity advantage of emission trading systems over conventional regulation has featured far less than it should have in debates about their adoption. Economists do not emphasize it because, except in the context of tax policy, they consider distributional concerns to be tangential to their

37 See Farber, *supra* note 1, at 29–30.

38 Even if the costs are not regressive, in that the poor do ultimately pay a lower proportion of income than the rich, we might still worry about situations where the poor would be unwilling to pay even that reduced cost for a risk reduction of that magnitude in private market transactions—the situation that Weisbach focuses on, though he provides no evidence of its prevalence. What I say in the text about possible responses to regressivity applies equally to this situation.

39 Details can be found on the websites of the agencies charged with carrying out these laws in California, New York, Oregon, and Washington.

professional remit. Environmental justice advocates view conventional emissions regulation as much better with respect to guaranteeing pollution reductions for disadvantaged communities, but they overlook the significant economic costs that traditional regulations impose on communities.

Even further from the use of conventional regulation, the government could finance the emissions reduction directly, using taxpayer money since the federal income tax system is somewhat progressive. This is the strategy adopted by the Inflation Reduction Act, which is by far the most important federal program relating to climate change.⁴⁰ The downside of using subsidies is that it is hard to target them with precision, but that problem could be outweighed by their equity benefits.

A final, in some ways more radical, proposal would be to give the people in the affected community information about how the agency views the costs and benefits of the proposed regulation and its incidence on people in their community, let them discuss the issue, and ask how they would vote. Advocates of textbook cost–benefit analysis assume that the community’s views would be dictated by their risk preferences as expressed in the labor market. If this is so, the decision will be the same as textbook cost–benefit analysis would recommend, but the community would also gain a sense of control, having made the decision for themselves. On the other hand, textbook cost–benefit analysis might be wrong about the equivalence of the public and private choice situations. Members of the community might think that the public affirmation of the equal value of their lives (or what they would see as such) is worth taking at least a bit of a hit to their private risk preferences.

We cannot know the answer to this question unless we ask them. If these individuals make an informed choice to support the regulation, we would no longer need to worry about the regressive impact. If they reject the regulation because of its impact on them, we should think hard before concluding that benefits elsewhere outweigh the regressive effect.

Some of these options could require new legislation, but there is no reason why that should leave them off the table entirely. On the other hand, if we simply adjust the VSL for poorer beneficiaries, we have no reason to think about creative alternatives. And in fact, these alternatives may be much more appealing in equity terms than simply issuing the

40 For further discussion of the IRA, see Daniel A. Farber, *Turning Point: Green Industrial Policy and the Future of U.S. Climate Action*, 11 TEX. A&M L. REV. 303 (2024). Some advocates of using cost–benefit analysis argue that it is unclear how much any spending program is actually financed through progressive taxes. The argument seems to be that if regulations are seen to be redistributory, existing redistributory programs such as food stamps will be cut. One might equally well argue that if advocates of redistribution are seen to have won a regulatory victory, that will strengthen the political support they receive from the beneficiaries. But there seems to be no empirical support for either theory. Most likely, pollution regulations (including their distributive implications) are considered completely independently in Congress from the budget for food stamps.

regulation, something that that should be considered by environmental justice advocates who might otherwise favor strict pollution limits as a solution.

D. Closing Thoughts on the Debate

The debate over the role of equity in cost–benefit analysis has been heated, which may seem odd given that the result of the cost–benefit analysis is a fairly obscure technical document whose production is overseen by a White House office most members of the public have never heard of. The reason, I think, is that this debate is a symptom of a more fundamental argument over the role that democracy and expertise should play in the regulatory process. Cost–benefit advocates swing the balance heavily toward expertise, at the expense of political actors in Congress and the White House.

A helpful starting point is provided by Hemel’s description of the institutional role of cost–benefit analysis, which reflects a widespread view among its advocates. He argues that cost–benefit analysis is “a mechanism that allows the president and his advisers to monitor agencies across the executive branch” because “the discipline of cost–benefit analysis” makes regulatory trade-offs “transparent to White House officials.”⁴¹ In short, “quantification forces regulators to put their decisionmaking into a format that can be evaluated by generalist superiors.”⁴² Indeed, he says, scholars have argued that cost–benefit analysis “can and should play a parallel function vis-à-vis Congress and the courts, enabling lawmakers and judges to comprehend and critique choices made by expert agencies.”⁴³

This is a peculiar perspective in more than one respect. The most obvious incongruity is the idea that cost–benefit analysis increases the transparency of regulatory decisions for policymakers. There is no reason to think that monetizing costs and benefits makes the trade-offs any clearer to government leaders than would simply providing concrete information, such as lives saved, illnesses prevented, compliance costs, and lost jobs. To think that an abstruse economic analysis will increase transparency is akin to believing that if people fail to understand some aspect of science, adding equations will clear up the problem.⁴⁴

41 Hemel, *supra* note 2, at 90.

42 *Id.* (quoting Jonathan S. Masur & Eric A. Posner, *Cost–Benefit Analysis and the Judicial Role*, 85 U. CHI. L. REV. 935, 940 (2018)).

43 *Id.*

44 Hemel’s description illustrates how cost–benefit analysis obfuscates agency decision-making in another respect, since it encourages even sophisticated observers like Hemel to assume that any trade-offs are entirely the responsibility of the executive branch—forgetting that agencies are charged with carrying out statutes that reflect judgments by Congress about regulatory goals. This problem is exacerbated by the practice of performing cost–benefit analysis even when the agency has no discretion to consider the costs, which creates the impression that executive branch bureaucrats are entitled to pass judgment on Congress’s choices.

The view described in Hemel’s paragraph makes much more sense if we replace “generalist superiors” with the Council of Economic Advisors or the head of OIRA. They are the “generalist superiors” for whom it actually is true that cost–benefit analysis makes a decision more transparent. Perhaps in some general way their views will reflect the broad regulatory philosophy of the president who appointed them. Still, the decision would be up to these experts (albeit experts who may share the president’s regulatory biases.) Although Hemel suggests that cost–benefit analysis could be useful for Congress and judges, it is again hard to see why monetizing benefits and ignoring distributional impacts makes the analysis useful for either set of decision-makers.

Even if at some point noneconomic judgments are injected into the process, economic purists like Weisbach can only find that regrettable given their view that noneconomic values are irrelevant to regulatory decisions. What makes it possible to think of regulatory decisions as, ideally, merely exercises in technical expertise is the belief that they can be reduced to a single variable that can be objectively measured, such as net monetized benefits in Weisbach’s case. In both cases, the variables are independent of any democratic decision about values. Indeed, Hemel’s account depicts the agency as responsible for all trade-offs, as if Congress had nothing to say about the matter.

It is here that I most fundamentally part ways from the purist view of cost–benefit analysis represented by Weisbach.⁴⁵ Though I had not actually thought about the paper in those terms, Douglas Kysar’s comment highlights the linkage between the 2023 article and my general philosophy of regulation. At the heart of that view is an acceptance of normative complexity and a corresponding belief in the democratic process as a way of making decisions in the face of conflicting values. For that reason, I view cost–benefit as one type of expertise that decision-makers can use as part of the process of applying public values to a regulatory decision, rather than as an objective means of determining the correct regulatory decision. If it is to be useful to decision-makers, it should track the moral

45 This issue is familiar in the setting of cost–benefit analysis. As Douglas Kysar says in his response paper,

The narrow version of cost–benefit analysis promoted by bean counters imperiously defines society’s value criterion according to individual willingness to pay. . . .

The critical analytical move lies in selecting the value criterion, because that move determines what ends are given the favored designation of “efficiency,” as opposed to being labeled “equity” and shunted off to the tax-and-transfer system.

Kysar, *supra* note 2, at 101.

judgments that they and the public share, rather than provide information that they find morally irrelevant.⁴⁶

II. RACE AND REGULATION

The foundational executive action on environmental justice was a 1994 executive order by President Clinton.⁴⁷ Section 1–101 of the order directed each agency to address “disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.”

President Biden recently replaced the 1994 executive order with a more extensive one.⁴⁸ The order sets forth a policy that “[t]o fulfill our Nation’s promises of justice, liberty, and equality, every person must have clean air to breathe; clean water to drink; safe and healthy foods to eat; and an environment that is healthy, sustainable, climate-resilient, and free from harmful pollution and chemical exposure.”⁴⁹ It proclaims that environmental justice requires people to be “fully protected from disproportionate and adverse human health and environmental effects (including risks) and hazards, including those related to climate change, the cumulative impacts of environmental and other burdens, and the legacy of racism or other structural or systemic barriers.”⁵⁰

Accordingly, the Biden order imposes a list of obligations on agencies, beginning with a mandate to “address disproportionate and adverse human health and environmental effects (including risks) and hazards of Federal activities, including those related to climate change and cumulative impacts of environmental and other burdens on communities with environmental justice concerns.”⁵¹

I share Biden’s belief in the importance of correcting the burdens that pollution imposes on poor communities and communities of color—and of more generally addressing the shockingly worse health outcomes in those communities. My focus, however, will be on the extent of regulators’ legal authority to pursue these goals rather than on a defense of the goals themselves.

46 Besides being wrong normatively, their approach also flies in the face of the regulatory schemes that Congress has tasked agencies with implementing. *See Lazarus, supra* note 2, at 416–18. As Kysar puts it, “Whether based on protective health standards or best available technologies, the statutory approach typically rejects the idea that people should receive only the level of protection they are individually willing to pay to acquire.” Kysar, *supra* note 2, at 100. In a democracy, that should be a trump card.

47 Exec. Order No. 12898, 59 FED. REG. 7629 (Feb. 11, 1994).

48 Exec. Order No. 15096, 88 FED. REG. 25251 (Apr. 26, 2023).

49 *Id.* § 1.

50 *Id.* § 2(b)(1).

51 *Id.* § 3(i).

Given the newly formed conservative supermajority on the Supreme Court, a looming question is how far the Court will go in enforcing its vision of color blindness. Predicting the Court's future trajectory is obviously perilous.

Although environmental justice has reached new prominence, so have criticisms of disparate-impact analysis. Fifth Circuit Judge James Ho put the conservative argument against disparate impact theory in a nutshell: "Prohibiting racial discrimination means we must be blind to race. Disparate impact theory requires the opposite[,] . . . advanc[ing] some people at the expense of others based on their race."⁵² He added: "There's a big difference between prohibiting racial discrimination and endorsing disparate impact theory. . . . It's the difference between securing equality of opportunity regardless of race and guaranteeing equality of outcome based on race."⁵³

Despite Judge Ho's arguments, the upshot of my analysis in 2023 was that a successful constitutional attack on the disparate-impact provision seems unlikely. Such an attack would in effect require the Court to classify disparate-impact analysis as a form of affirmative action. Only one current member of the Court (Justice Thomas) has endorsed a broad condemnation of disparate-impact analysis, and even he has not couched the issue in constitutional terms.⁵⁴ If the Court *were* to hold disparate-impact analysis unlawful in situations like employment involving selecting individuals for benefits, it would still require a further doctrinal step to extend that condemnation to facially neutral regulations where one individual's gain does not necessarily mean another's loss.

A more difficult question is whether the agency can go beyond avoiding policies that disproportionately harm communities of color to actively seek out policies that disproportionately benefit them. Can an agency adopt a race-neutral regulation with the goal of reducing racial disparities—or, put another way, because the regulation benefits communities of color more than white communities? Such a regulation might be considered a form of affirmative action subject to strict scrutiny, which would require that an agency show that the policy was narrowly tailored to a compelling government interest.⁵⁵ Moreover, the Court does not consider that eliminating the effects of societal racism, past or present, counts as a compelling interest for these purposes.

52 Rollerson v. Brazos River Harbor Navigation Dist. of Brazoria Cnty., 6 F.4th 633, 648 (5th Cir. 2021) (Ho, J., concurring in part and concurring in the judgment).

53 *Id.* at 648. Recently, a Louisiana district judge held that the EPA's fifty-year-old disparate-impact regulation was invalid under the "major question doctrine," despite Supreme Court precedent upholding disparate-impact regulations under Title VI. Louisiana v. EPA, No. 2:23-CV-00692, 2024 WL 250798 (W.D. La. Jan. 23, 2024). In addition to its extremely broad interpretation of the major-question doctrine, the case presents serious standing issues as well as a possible statute-of-limitation barrier. I am skeptical that the ruling will survive appeal.

54 See Farber, *supra* note 1, at 35–38.

55 See Fisher v. Univ. of Tex. at Austin, 136 S. Ct. 2109 (2016); City of Richmond v. J.A. Croson Co., 488 U.S. 469 (1989).

Since my earlier article was written, the Supreme Court has taken a more definitive position on affirmative action. In June 2023, a bitterly divided Roberts Court ended the practice of affirmative action in higher education in *Students for Fair Admissions, Inc. v. President & Fellows of Harvard College* (“*SFFA*”).⁵⁶ Writing for the six conservatives, Chief Justice Roberts emphasized that the “core purpose” of the Equal Protection Clause is to end all race discrimination imposed by government and that “[e]liminating race discrimination means eliminating all of it.”⁵⁷ “Any exception to the Constitution’s demand for equal protection,” he wrote, “must survive a daunting two-step examination known in our cases as ‘strict scrutiny,’”⁵⁸ which Roberts thought neither admissions program came close to satisfying. In the Court’s view, “[b]oth programs lack sufficiently focused and measurable objectives warranting the use of race, unavoidably employ race in a negative manner, involve racial stereotyping, and lack meaningful end points.”⁵⁹

The *SFFA* decision clearly raises the threat level for some agency efforts at environmental justice. Still, the resemblance between affirmative action and the use of race in designing regulations to reduce racial inequality may be overstated. Affirmative-action programs make race a factor in each individual’s admission decision. In contrast, a pollution regulation designed to reduce environmental harms to minority communities would be facially color blind. This poses a key constitutional question: are regulations targeting racial disparities in exposure to environmental and health risks subject to strict scrutiny?

A recent Fourth Circuit decision, *Coalition for TJ v. Fairfax County School Board*,⁶⁰ highlighted judicial divisions about how to assess race-neutral means of pursuing racial equity. In a challenge brought by Asian students, the court upheld a race-neutral

56 *Students for Fair Admissions, Inc. v. President & Fellows of Harvard Coll.*, 600 U.S. 181, 143 S. Ct. 2141 (2023).

57 *Id.* at 2161.

58 *Id.* at 2162 (quoting *Adarand Constructors, Inc. v. Peña*, 515 U.S. 200, 227 (1995)).

59 *Id.* at 2175.

60 *Coal. for TJ v. Fairfax Cnty. Sch. Bd.*, 68 F.4th 864 (4th Cir. 2023), *cert. denied*, 2024 WL 674659, 601 U.S. ____ at *7–8 (2024). Even though the percentage of Asians among admitted students declined under the new admission system, the likelihood of an Asian applicant being accepted was higher than that for any other racial group. Consequently, the court held that the new system lacked a disparate impact on Asian students. *Id.* at 879–82. In addition, the court observed there was no direct evidence that the policy was adopted “‘because of’ a specific intent to reduce the number of Asian American students at TJ or to otherwise bring hardship to bear on those students.” *Id.* at 883. Judge Heytens’s concurring opinion stressed that the new policy was race neutral on its face and as implemented and that there was no evidence of a desire to reduce the number of Asian students. *Id.* at 889. The dissent by Judge Rushing, *id.* at 891, emphasized the school board’s desire to increase access for underrepresented groups in the school.

Justices Alito dissented from denial of certiorari, joined by Justice Thomas. According to Alito, it was sufficient to prove a disparate impact that “[u]nder the old policy, each Asian-American applicant had a certain chance of admission,” but “[u]nder the new policy, that chance has been significantly reduced, while the chance of admission for members of other racial and ethnic groups has increased.” *Coal. for TJ v. Fairfax Cnty. Sch. Bd.*, No. 23-170, 2024 WL 674659, at *4, 601 U.S. ____ at *7–8 (2024) (Alito, J., dissenting).

admission scheme designed to increase racial diversity at a public magnet school. The court emphasized that the admission scheme did not reduce the Asian students' admission rate below that of other groups and the motivation was not to decrease the Asian share of the student body. An analysis along similar lines would allow race-neutral regulations designed to improve health in minority communities so long as the regulation did not leave white people with poorer health outcomes than others and was not motivated by a desire to limit health benefits to white communities. But the panel was divided, highlighting the unsettled nature of the issue. The Supreme Court declined to hear the case, though with two Justices dissenting. Thus, the constitutionality of using race-neutral means to improve the position of racial minorities remains undecided.⁶¹ There is at least a reasonable prospect that the Court will decline to extend its antipathy toward affirmative action to this situation, but it would be foolhardy to bet heavily on that outcome.

While the constitutional risk of adopting environmental regulation as a strategy to close the racial health gap may be manageable, there remain statutory issues. Those issues depend, of course, on the specific statute. For instance, section 111 of the Clean Air Act requires the EPA to set pollution standards for new sources based on “the best system of emission reduction which (taking into account the cost of achieving such reduction and any nonair quality health and environmental impact and energy requirements) . . . has been adequately demonstrated.”⁶² It seems at least questionable whether EPA can use the desirability of reducing existing racial health disparities unrelated to pollution as an argument for selecting a more rigorous standard.

Substantial legal risks face an agency that seeks to justify a regulation based on its ability to close the health gap between disadvantaged communities and the nation at large. It seems advisable to consider other, less legally fraught options. This pragmatic concession to legal constraints, however, falls short of the full aspirations of the environmental justice movement. As Kysar puts it, “[e]nvironmental justice advocates seek to address more than just the unequal distribution of environmental burdens and benefits. They also seek to address racism and colonialism.”⁶³ Direct routes to that goal may not be feasible in today's judicial environment. The next section defends an alternative approach.

61 The Biden administration's environmental justice mapping does not use race as a factor, a decision that continues to evoke controversy. See Naveena Sadasivam, *Why the White House's Environmental Justice Tool Is Still Disappointing Advocates*, GRIST (Feb. 27, 2023), <https://grist.org/equity/white-house-environmental-justice-tool-cejst-update-race/>. Direct use of race as a factor in making specific choices between projects or communities to fund seems much more legally vulnerable. For that reason, even if use of race in crafting regulations is permissible, it might still be better to avoid its use in creating environmental-justice maps that will be used in allocating benefits to groups or individuals or for site-specific decisions. As the *Grist* article notes, “[b]y analyzing criteria such as proximity to traffic, linguistic isolation, and proximity to hazardous waste sites—factors which are all strongly correlated with race—the tool was able to account for race by proxy.” *Id.*

62 42 U.S.C. § 7411(a)(2).

63 Kysar, *supra* note 2, at 102.

III. TAKING RISK SERIOUSLY

It is no surprise that the poor and people of color are often located in areas with high pollution levels. But they also have greater vulnerability to the resulting health risks. As Hemel points out, the empirical evidence shows that any given pollution level causes more illness and death among the poor.⁶⁴ Thus, the disadvantaged are more vulnerable to ill effects, even controlling for exposure, perhaps because of poor medical care for conditions caused by pollution, because existing health conditions are exacerbated by the pollution, or because the poor are more likely to be exposed to multiple pollutants that have synergistic effects.⁶⁵

It seems undeniably appropriate for regulators to consider not only exposure levels but also differences in vulnerability.⁶⁶ Such a focus on vulnerability is commonplace in related settings such as protection against natural disasters, where certain groups (racial and ethnic minorities, women, the elderly, children, and the disabled) disproportionately suffer from disaster impacts.⁶⁷ In my view, a heightened focus on differences in exposure and vulnerability offers the most promising path forward for environmental justice to expand protection for the goals of environmental justice. It is also consistent with the norm that I defended earlier: devoting equal protection to the prevention of equivalent harms.

After estimating the extent to which a pollutant raises the risk of mortality or illness, an EPA methodology then uses this estimate as a multiplier of the existing risk level in a particular locale. In other words, it treats pollution as a risk multiplier rather than simply an add-on to existing health risks. The greater the existing health risk in a locale, the greater the impact of the multiplier. So, if discrimination and structural racism are harming health in a particular locale, the formula automatically takes that effect into account when determining the harm resulting from pollution.⁶⁸

Note that race and low income enter the analysis via two channels. In the vulnerability channel, they translate into higher baseline mortality, which then becomes a factor in determining the incremental risk caused by the regulated pollutant. Part of the link could be physical, if low income or racial discrimination result in comorbidities or predisposing conditions relevant to the pollutant. The link could also be societal, perhaps due to poorer

64 Hemel, *supra* note 19, at 707.

65 Some of these issues are discussed in Robert R. Kuehn, *The Environmental Justice Implications of Quantitative Risk Assessment*, 1996 U. ILL. L. REV. 103, 116–25 (1996).

66 See Clifford J. Villa, *Remaking Environmental Justice*, 66 LOY. L. REV. 469, 515 (2020).

67 See DANIEL A. FARBER ET AL., *DISASTER LAW AND POLICY* ch. 5 (3rd ed. 2015).

68 See Farber, *supra* note 1, at 44–46. As Maru points out, state laws in some states strengthen regulatory protections in areas with high existing environmental burdens. Maru, *supra* note 2, at 141 n.90. That could also be seen as an implementation of this principle, if we assume that the impacts of high pollution levels also make people more vulnerable to further increases in pollution.

access to healthcare or to lower quality healthcare when it is available. In essence, the vulnerability factor reflects the many ways in which life is worse for people with low incomes and people of color.

The second channel through which race and low income enter the analysis involves exposure. Although total exposure levels compared with the average level are involved in the first instance, determining the effect of the pollutant involves a calculation of the difference between the level of exposure with or without regulation.

For instance, suppose that the average national exposure is 100 but the exposure level for the community in question is 200, while the baseline mortality rate for the community is ten percent above average. Then we calculate the current risk level due to the pollutant in the district as 2.0 times 1.1, or 2.2 times the national average risk level. Note that this is ten percent higher than it would be if we ignored the vulnerability factor.

The 2023 article argued that greater granularity in exposure data would be helpful in applying this method. We have learned quite a bit about localized pollution hotspots, which often correlate with vulnerability factors. Shaun Goho's response paper discusses the advances in monitoring that have already taken place and their implications. Among the advances are satellite monitoring, low-cost ground-level monitors, mobile monitors, and community monitoring systems.⁶⁹ Goho points out, however, that changes in legal requirements for EPA use of monitoring information may be required for it to take full advantage of these advances. Still, using more granular modeling, which now seems to be possible, would allow regulators to respond to the fact that race is a predominant factor in explaining exposure level because it would be possible to identify the high-exposure population directly.⁷⁰

As commentators pointed out, the 2023 paper did not address environmental justice issues that are site specific and involve permitting or enforcement rather than regulatory design.⁷¹ Those important issues are largely outside the scope of this article and its predecessor. Nevertheless, the interplay between vulnerability and exposure is highly relevant to such site-specific issues. This is true of such classic environmental justice issues as the siting of toxic waste sites or air pollution sources. But it is also true of climate resilience

69 Goho, *supra* note 2.

70 See Wang et al., *Air Quality Policy Should Quantify Effects on Disparities*, 381 *SCIENCE* 272 (2023). For a comprehensive survey of the literature showing that race has independent explanatory power in predicting particular exposure levels, see Richard L. Revesz, *Air Pollution and Environmental Justice*, 49 *ECOLOGY L.Q.* 187, 215–23 (2023). Revesz notes that “[a]lthough PM_{2.5} disproportionately affects low-income communities, it is critical to note that income does not serve as a proxy for race. In other words, at every level of income stratification, race remains an independent, statistically significant variable predicting disproportionate exposure to PM_{2.5}.” *Id.* at 218. Revesz also provides evidence that disadvantaged communities are more vulnerable to health effects from pollution. *Id.* at 224–27.

71 See Goho, *supra* note 2, at 60–61; Lazarus, *supra* note 2, at 9–10.

issues caused by the need to adapt to the risks posed by climate change. Seeking much more granular pictures of exposure and vulnerability seems likely to be very helpful in those contexts as well. It would allow more appropriate prioritizing of enforcement actions. In permitting situations, it would clarify disparities in impacts and clarify the environmental stakes. It could also potentially assist project sponsors to locate sites where localized impacts would be less severe.

One of my concerns in the 2023 article was whether race could lawfully be used as a factor (independent variable) in statistical models to determine vulnerability in situations where direct measures of the background death or morbidity rate are not sufficiently granular.⁷² The need for modeling stems from major gaps in available data. Except for special populations like Medicare patients, medical information may be difficult to access in a granular way on a national scale, making reliance on modeling the factors determining mortality necessary to correlate census data (often at the county or zip code level) with exposures and mortality risks. I concluded that the courts would probably find use of race as an independent variable in models permissible, although the issue was not clear-cut.

Some comfort about the indirect use of race as an explanatory factor can be found in the *SFFA* case. At the end of Roberts's opinion, he explained that "nothing in this opinion should be construed as prohibiting universities from considering an applicant's discussion of how race affected his or her life, be it through discrimination, inspiration, or otherwise."⁷³ He immediately added, however, that "universities may not simply establish through application essays or other means the regime we hold unlawful today."⁷⁴

Roberts emphasized that "[a] benefit to a student who overcame racial discrimination . . . must be tied to *that student's* courage and determination," and "a benefit to a student whose heritage or culture motivated him or her to assume a leadership role or attain a particular goal must be tied to *that student's* unique ability to contribute to the university."⁷⁵ Put differently, he stated, "the student must be treated based on his or her experiences as an individual—not on the basis of race."⁷⁶ Thus, race itself cannot be the basis for a distinguishing between individuals, but it can be an explanatory factor to the extent that it relates to nonracial factors that *are* relevant to the decision.

Thus, if the government could show in detail for each Black person how racism contributed to their vulnerability to risk, *SFFA* would allow the use of that information in risk analysis. In reality, we can at best make use of racial information only in statistical terms. As I discuss in the 2023 article, courts have been very tolerant of such statistical uses of

72 Farber, *supra* note 1, at 49–51.

73 *Students for Fair Admissions, Inc. v. President & Fellows of Harvard Coll.*, 600 U.S. 181, 143 S. Ct. 2141, 2176 (2023).

74 *Id.*

75 *Id.*

76 *Id.*

race in many contexts, even in making decisions such as the amount of damages that can be collected for wrongful death. The use of statistical information based on race seems all the easier to justify when the result will be a race-neutral regulation.

Goho raises an important issue about the approach I propose, one that resonates with Kysar's argument about the expressive benefits of legally risky race-conscious strategies. Goho agrees that "[b]y evaluating environmental policies using the neutral terms of exposure and vulnerability, Farber's proposal can achieve changes in material circumstances that promote environmental justice."⁷⁷ Yet, he adds, "its expressive function is very different from an analysis explicitly framed in terms of race or income."⁷⁸

As Goho points out, the shift in expressive function has both pluses and minuses. On the one hand, he says, "[t]he explicit consideration of racial disparities in rulemaking is currently a topic of significant legal and political disputes in the United States. Using the neutral vocabulary of geography, exposure, and vulnerability, regulators can avoid inflaming those disputes."⁷⁹ Yet, Goho says:

For many environmental justice advocates . . . this strength of Farber's proposal could also be its greatest weakness. The mission of the environmental justice movement is to not only eliminate material environmental disparities but also to call attention to the decades or centuries of discriminatory practices that have produced those disparities. From this perspective, masking the true nature of discriminatory actions and their consequences through the use of value-neutral language means that agencies are not addressing the full range of harms—both physical and emotional—caused by environmental discrimination.⁸⁰

This is an entirely fair point. Its force depends partly on the weight placed on the expressive and political aspects of environmental justice versus concrete results. It also depends on the extent to which more direct discussion of race and income is actually an option for regulators. Agencies are certainly free to discuss income in rulemaking to the extent it is relevant to regulatory benefits or regulatory costs, but that can easily be accommodated in the section on exposure and vulnerability. Reference to race may pose greater risks. As discussed in both the 2023 article and in the previous section of this one, it remains very unclear how much agencies can make explicit use of race in justifying regulatory decisions. In particular, reliance on past injustices or systemic racism is very unlikely to receive judicial approval as a basis for regulation except to the extent that it

77 *Id.* at 61.

78 *Id.*

79 *Id.* at 62.

80 *Id.*

is tied to factors more directly relevant to regulatory costs or benefits, and even then there could be litigation risks. Moreover, if we are going to consider the expressive benefits of race-conscious actions, we also need to consider their expressive costs, which could well result in a backlash against regulation.

Richard Lazarus offers a different critique. His argument is based on a general desire to minimize any weighing of regulatory benefits in setting standards, and relatedly to a desire to minimize the burden on the agency of presenting detailed scientific support for its rulings.⁸¹ I am sympathetic to this line of argument but am ultimately left unpersuaded.

I have spent time recently looking through hundreds of pages of EPA analysis of regulations involving greenhouse gas emissions from power plants and vehicles, as well as the Biden administration's justification for regulating toxic emissions from power plants. It seems clear to me that this train has already left the station: each rule is at pains to demonstrate regulatory benefits in great detail, often featuring discussion of impacts on disadvantaged groups. It is not clear how my proposal would make the agency's regulatory burdens noticeably worse.

Moreover, even apart from cost-benefit requirements imposed by the White House, the Supreme Court made it clear in *Michigan v. EPA* that some sort of comparison of costs and benefits is needed except where clearly precluded by statute.⁸² The statute in question made no specific mention of costs, merely calling on the EPA to determine if regulating toxic emissions from power plants was "appropriate and necessary."⁸³ "Read naturally in the present context," the Court said, "the phrase 'appropriate and necessary' requires at least some attention to cost. One would not say that it is even rational, never mind 'appropriate,' to impose billions of dollars in economic costs in return for a few dollars in health or environmental benefits."⁸⁴ And in a previous case where the statute required use of the "best" technology to minimize environmental harm, the Court upheld as more than reasonable the agency's view that costs could not be "significantly disproportionate" to benefits.⁸⁵ In response to these decisions, it behooves the EPA to show that its rules will produce significant benefits.

Finally, Lazarus may be overlooking the political benefits of detailed information about who is exposed to and harmed by pollution. We now live in a different world politically

81 Lazarus, *supra* note 2, at 419–22.

82 *Michigan v. EPA*, 576 U.S. 743 (2015). In addition, Lazarus focuses solely on pollution reduction requirements based on pollution control technology. Important parts of environmental regulation are based on assessment of environmental risk—most notably, national ambient air quality standards and requirements keyed to those standards, such as restrictions on interstate polluters. Consideration of the science relating to regulatory benefits is unavoidable in that setting.

83 Clean Air Act, 42 U.S.C. § 7412(n)(1)(A).

84 *Michigan*, 576 U.S. at 752.

85 *Entergy Corp. v. Riverkeeper, Inc.*, 556 U.S. 208, 226 (2009).

than the one in which the major regulatory statutes were passed. Lazarus may be right that in the 1970s, when the major federal environmental laws were passed, the public's passionate desire to eliminate pollution rendered specific information about regulatory benefits superfluous. Fifty years later, environmental regulation is no longer a consensus issue, and the public is much less willing to give regulators a blank check. And if nothing else, it is surely useful for environmental justice advocates to be able to show in detail how their communities are disproportionately harmed by pollution.

I share Lazarus's concern about increasing the burdens on the EPA to produce additional data and evidence, along with his concern that cost-benefit analysis disfavors regulation since environmental benefits are often not quantifiable. In the end, though, I am unconvinced that providing more detailed evidence of how pollution harms disadvantaged groups will hinder the regulatory process or undermine the EPA's ability to defend regulations.

A final critique is offered by David Weisbach, who argues that considering vulnerability may not turn out to improve environmental justice. Weisbach seems to agree that "background conditions, including but not limited to prior exposure to pollution, seem to lead to greater vulnerability to pollution."⁸⁶ He also agreed that differences in vulnerability would be relevant in setting standards, though he questions whether differences in exposure are relevant.⁸⁷ He argues, however, that if we use cost-benefit analysis, other factors might confound the relationship between these factors; in particular, issues relating to the incidence of costs.⁸⁸ He also speculates the improving pollution levels may not benefit current pollution victims because they may lack the power to obtain vigorous enforcement of standards or because reduced pollution will lead to harmful gentrification.⁸⁹

In short, although Weisbach "agrees with the suggestion to use good data when performing CBA, including data that takes different exposures and vulnerabilities into account," he thinks we would need much more data before deciding that reducing health impacts in disadvantaged communities is cost justified and would actually benefit them.⁹⁰ Part of this argument assumes that cost-benefit analysis controls regulatory decisions and that protecting disadvantaged communities may not be cost justified although protecting

86 Weisbach, *supra* note 2, at 154.

87 *Id.* Weisbach set up a hypothetical in which marginal changes in exposure are unrelated to current exposure levels. This hypothetical model seems a poor fit for actual pollution regulations. If a pollution source's existing emissions create hotspots, we would generally expect that changes in incremental pollution would also be most concentrated in the hotspots. Of course, in any specific regulation, we would expect the EPA to use detailed modeling to trace the impact of emission changes on local concentrations of pollutants. However, there is no reason to think that such modeling would show uniform dispersion of incremental pollutants.

88 *Id.* at 157.

89 *Id.* The enforcement point seems irrelevant from an economic perspective: regulations that are not enforced may lack benefits but they also lack costs.

90 *Id.* at 158.

wealthier communities from the same harm would be justified. That issue was discussed at length earlier. Rightly or wrongly, I remain convinced that this argument is misplaced.

The other part of Weisbach's argument is correct in pointing to complicating factors whose impact is hard to assess.⁹¹ Where I think Weisbach is wrong is the next step of the analysis. The existence of unresolved uncertainties does not by itself justify the conclusion that we should do nothing.⁹² Perhaps, since Weisbach seems to agree about the benefits of using more granular data, he means that we should ignore its apparent effect of benefiting disadvantaged groups because further research might conceivably find the contrary. But this is the kind of counterargument that can always be made in response to any policy argument: there are always potential second-order, third-order, and *n*th-order effects that have not yet been taken into account.

From the point of view of an ultracautious social scientist, it may seem premature to conclude that improving pollution in disadvantaged neighborhoods is actually to the benefit of the people living there. Similarly, from the point of view of some economists, my acceptance of uniform valuations for mortality risks may seem naïve. And on the other side, environmental justice advocates may consider my views too tepid and compliant with an unjust legal system.

This places me in the uncomfortable, intellectually impure center of the spectrum. Douglas Kysar would probably not go wrong if he were to attribute my position on these issues to my deep belief in pragmatism and respect for the plurality of values that underlie public policy.

91 Weisbach's analysis focuses on possibilities that might undercut regulatory benefits to disadvantaged communities. This is not uncommon because the possible perverse effects of an intervention are always the first to attract attention. However, his analysis ignores other possible effects that might actually amplify benefits to disadvantaged communities. Here are two examples in the latter category. We tend to think all poor people live in rental housing, but that is not always true. If people own their own homes, they benefit from an increase in property values. Also, since healthcare funding for the poor is limited, reducing one health problem frees up medical resources for more effective treatment of others, potentially doubling the health benefits to the poor.

There are other mechanisms that might mute some of the factors Weisbach discusses, such as anti-gentrification programs to protect residents from being displaced. In addition, if better-resourced people move into disadvantaged areas because of environmental improvements, they are necessarily moving out of other places, reducing prices and making those areas more affordable for the current residents of the disadvantaged community.

92 Since Weisbach agrees that we should have better exposure and vulnerability data anyway, delaying my proposal does not save costs, so from a cost-benefit perspective, there are no potential benefits from delaying the use of improved data on exposure and vulnerability.