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Health-Health Tradeoffs

Cass R. Sunstein†

There are deep and fundamental and intuitively understood grounds for rejecting the view that confines itself merely to checking the parity of outcomes, the view that matches death for death, happiness for happiness, fulfillment for fulfillment, irrespective of how all this death, happiness and fulfillment comes about.

Amartya Sen¹

I. THE PROBLEM

The fiftieth anniversary of the Administrative Procedure Act² arrives at a time when administrative institutions are receiving more serious public attention than in any period since the New Deal. The New Deal was committed to immensely strengthened national institutions and to large and largely independent bureaucratic entities.³ These commitments are now under severe strain. Much of this was signalled by the election of President Reagan in 1980 and, in particular, by his promulgation of a controversial executive order calling for attention to the costs and benefits of regulatory initiatives.⁴ In 1993, it was firmly established that a new direction had been set, when President Clinton issued a new executive order that substantially overlapped with President Reagan's.⁵

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¹ Amartya Sen, *Freedoms and Needs: An argument for the primacy of political rights*, New Republic 31, 32-33 (Jan 10 & 17, 1994).

² 5 USC §§ 551 et seq (1994).

³ For a classic statement, see James M. Landis, *The Administrative Process* (Greenwood 1974).

⁴ Exec Order No 12291, 3 CFR 127 (1981).

⁵ Exec Order No 12866, 3 CFR 638 (1993).

Nor has the national legislature refused to reexamine the legacy of the New Deal. In 1994 and 1995, Congress devoted a good deal of attention to the costs and benefits of government regulation. Before long, it may enact a "supermandate" requiring cost-benefit balancing from all agencies.⁶ In the near future, Congress may well enact legislation that is a mixture of a new Administrative Procedure Act and an Administrative Substance Act.⁷ Such legislation may ultimately be seen as part of a "constitutional moment" involving large-scale revision of fundamental national commitments.⁸

If such a revision does occur, it will be partly a product of an immense wealth of new learning about the nature and performance of the regulatory state. This learning has emphasized the need for better priority setting,⁹ for more flexible tools,¹⁰ for balancing rather than absolutism,¹¹ and for closer attention to the unanticipated adverse effects of regulation.¹² These points do not suggest that the regulatory state has failed. In many areas, things are much better because of regulatory initiatives.¹³ But with better strategies and tools, existing pathologies could be sharply reduced, thus saving many billions of dollars and many lives in the process. For example, a recent study suggests that better allocations of existing health expenditures could save an additional sixty thousand lives with no additional cost—and that

⁶ See HR 9, 104th Cong, 1st Sess (Jan 4, 1995), in 141 Cong Rec H2607-36 (Mar 3, 1995); HR 1022, 104th Cong, 1st Sess (Feb 23, 1995), in 141 Cong Rec H2261-67 (Feb 27, 1995); S 343, 104th Cong, 1st Sess (Feb 2, 1995), in 141 Cong Rec S8795-8806 (June 21, 1995). HR 1022 is incorporated in HR 9, which is the House version of S 343.

⁷ Cass R. Sunstein, *Congress, Constitutional Moments, and the Cost-Benefit State*, 48 Stan L Rev 247, 268, 307-09 (1996).

⁸ See id at 247.

⁹ See Stephen Breyer, *Breaking the Vicious Circle: Toward Effective Risk Regulation* 19-21 (Harvard 1993).

¹⁰ See Bruce A. Ackerman and Richard B. Stewart, *Reforming Environmental Law: The Democratic Case for Market Incentives*, 13 Colum J Envir L 171 (1988).

¹¹ See Robert W. Hahn, *Regulatory Reform: What Do Government's Numbers Tell Us?*, in Robert W. Hahn, ed, *Risks, Costs, and Lives Saved: Getting Better Results From Regulation* (forthcoming Oxford 1996).

¹² See, for example, W. Kip Viscusi, John M. Vernon, and Joseph Harrington, Jr., *Economics of Regulation and Antitrust* 705-06 (MIT 2d ed 1995). For a discussion of regulatory strategies that achieved ends directly opposed to those intended, see Cass R. Sunstein, *Paradoxes of the Regulatory State*, 57 U Chi L Rev 407 (1990).

¹³ See generally the discussion of regulatory successes in Gregg Easterbrook, *A Moment on the Earth: The Coming Age of Environmental Optimism* (Viking 1995). For an overview, see John D. Graham and Jonathan Baert Wiener, *Confronting Risk Tradeoffs*, in John D. Graham and Jonathan Baert Wiener, eds, *Risk versus Risk: Tradeoffs in Protecting Health and the Environment* 1, 6-10 (Harvard 1995).

with better allocations, we could prevent the same number of deaths we now prevent with \$31 billion in annual savings.¹⁴

During the twentieth-century explosion in regulatory activity—including the New Deal and the “rights revolution” of the 1960s and 1970s—there was no effort to create a general mechanism for monitoring regulatory performance. But with new empirical studies of the effects of regulation, it is now clear that the national government has failed adequately to perform the tasks assigned to it and that it has sometimes made things worse. Increasingly it is asked whether the costs of regulation justify the benefits. Hence assessment of regulatory performance has increasingly taken the form of the criterion of cost-benefit analysis, and hence the American administrative state is increasingly becoming a cost-benefit state. This is so despite the fact that there is much controversy about how to value and characterize both costs and benefits.¹⁵

My purpose in this Essay is to discuss a pervasive problem in risk regulation, one that helps account for regulatory failure, that is an intriguing part of cost-benefit assessment,¹⁶ and that is only now receiving public attention.¹⁷ The problem occurs *when the diminution of one health risk simultaneously increases another health risk*. Thus, for example, fuel economy standards, designed to reduce environmental risks, may make automobiles less safe, and in that way increase risks to life and health.¹⁸ Regulations designed to control the spread of AIDS and hepatitis among health care providers may increase the costs of health care, and thus make health care less widely available, and thus cost lives.¹⁹ If government bans the manufacture and use of asbestos,

¹⁴ Harvard Group on Risk Management Reform, *Reform of Risk Regulation: Achieving More Protection at Less Cost* 16 (Harvard 1995), citing Tammy O. Tengs, *Optimizing Societal Investments in Preventing Premature Death* (1994) (doctoral dissertation, Harvard School of Public Health).

¹⁵ See, for example, W. Kip Viscusi, *Fatal Tradeoffs: Public and Private Responsibilities for Risk* 17-98 (Oxford 1992); Elizabeth Anderson, *Value in Ethics and Economics* 190-216 (Harvard 1993).

¹⁶ Health-health analysis can also be seen as a substitute for cost-benefit analysis. See text accompanying notes 60-67.

¹⁷ For the best general discussion, see Graham and Wiener, *Confronting Risk Tradeoffs* (cited in note 13). I owe a general debt to Graham and Wiener throughout.

¹⁸ See Robert W. Crandall, *Policy Watch: Corporate Average Fuel Economy Standards*, 6 J Econ Persp 171, 178 (Spring 1992); Robert W. Crandall and John D. Graham, *The Effect of Fuel Economy Standards on Automobile Safety*, 32 J L & Econ 97 (1989).

¹⁹ See *American Dental Association v Martin*, 984 F2d 823, 826 (7th Cir 1993) (“OSHA also exaggerated the number of lives likely to be saved by the rule by ignoring lives likely to be sacrificed by it, since the increased cost of medical care, to the extent passed on to consumers, will reduce the demand for medical care, and some people may

it may lead companies to use more dangerous substitutes.²⁰ Regulation of nuclear power may make nuclear power safer; but by increasing the cost of nuclear power, such regulation will ensure reliance on other energy sources, such as coal-fired power plants, which carry risks of their own.²¹ When government requires reformulated gasoline as a substitute for ordinary gasoline, it may reduce carbon monoxide emissions but produce new pollution problems from hydrocarbons and smog.²² When government regulates air pollution, it may encourage industry to increase the volume of solid waste, and in that sense aggravate another environmental problem. A ban on carcinogens in food additives may lead consumers to use noncarcinogenic products that carry greater risks in terms of diseases other than cancer.²³

The general problem is ubiquitous. It stems from the fact that government officials, like individual citizens and the public as a whole, suffer from both limited information and (even more importantly) *selective attention*.²⁴ A large current priority is to develop mechanisms that overcome the problems posed by the fact that people—both citizens and regulators—tend to focus on problems that are parts of complex wholes. Such a mechanism should take account of Sen's point in the epigraph to this Essay. Risks to life and health are qualitatively diverse, and because of their origins and nature, some risks warrant greater attention than others.

My goal here is to explore the relation between health-health tradeoffs and the law, in an effort to see how governmental judgments on this topic might be improved. I develop a simple framework for deciding how regulatory agencies should approach such tradeoffs. I suggest that this framework is complicated by reference to some peculiar features of individual and collective rationality in risk assessment.

lose their lives as a result.”).

²⁰ See *Corrosion Proof Fittings v EPA*, 947 F.2d 1201, 1220-30 (5th Cir 1991).

²¹ See Stephen Breyer, *Vermont Yankee and the Courts' Role in the Nuclear Energy Controversy*, 91 Harv L Rev 1833, 1835-36 (1978). See generally Peter Huber, *Electricity and the Environment: In Search of Regulatory Authority*, 100 Harv L Rev 1002 (1987).

²² See Jonathan H. Adler, *Clean Fuels, Dirty Air*, in Michael S. Greve and Fred L. Smith, Jr., eds, *Environmental Politics: Public Costs, Private Rewards* 19, 22-24 (Praeger 1992).

²³ See Richard A. Merrill, *FDA's Implementation of the Delaney Clause: Repudiation of Congressional Choice or Reasoned Adaption to Scientific Progress?*, 5 Yale J Reg 1, 60-61 & n 306 (1988).

²⁴ See Aaron Wildavsky, *But is it True?: A Citizen's Guide to Environmental Health and Safety Issues* 1-2 (Harvard 1995); Howard Margolis, *Dealing with Risk: Why the Public and the Experts Disagree on Environmental Issues* 5-20 (Chicago 1996).

I also deal with the respective roles of courts, Congress, and the President in managing health-health tradeoffs. I urge that often agencies ought to be taken to have legal authority to make such tradeoffs, and that they ought to exercise that authority much more than they now do. To this end I argue for an interpretive principle to the effect that agencies should be allowed to consider health-health tradeoffs in the absence of a clear congressional statement to the contrary. I also urge a modest but far from trivial judicial role in requiring agencies to consider aggregate rather than isolated risks. Thus I claim that agency decisions that increase aggregate risk levels should be found arbitrary or capricious under the Administrative Procedure Act.²⁵

More generally, I urge that Congress should amend the Administrative Procedure Act ("APA") to require agencies to consider ancillary risks and to minimize net risks. I also argue that the Office of Information and Regulatory Affairs ("OIRA") should see the reduction of overall risk as one of its principal missions. Much more than it now does, it should undertake a coordinating function so as to ensure that this mission is carried out.

In these ways, I hope to connect the question of sensible outcomes—outcomes that do not suffer from the problem of excessively selective attention—with the subject of institutional design. A large problem for government institutions is to devise systems to ensure that problems of myopia or selective attention do not defeat regulatory regimes; the management of health-health tradeoffs is an important part of that project.

Part II of this Essay provides a simple conceptual map, designed to draw some relevant distinctions. Part III offers a first approximation of an approach to health-health tradeoffs; this first approximation is an effort to limit aggregate risks understood in "expected value" terms. I then suggest that this approximation must be qualified by reference to some complexities in ordinary citizen judgments about risk. People care not simply about how many lives are saved, but also about whether risks are involuntarily incurred, especially dreaded, inequitably distributed, potentially catastrophic, faced by the current or by future generations, and so forth. Reflective judgments of this sort diverge from both expert and economic valuations, though in interestingly different ways. These reflective judgments bear a great deal on how we think about the "rationality" of risk regula-

²⁵ 5 USC § 706(2)(A).

tion. They also have consequences for the pervasive issue of incommensurability in law.

Part IV deals with existing law, urging agencies to undertake more health-health tradeoffs than they now do, and explaining how a judicial role could encourage this to happen. Part V deals with how Congress and the President might approach health-health tradeoffs in a way that diminishes the problems associated both with the "pollution of the month" syndrome and with myopia or selective attention.

II. A POLEMICAL NOTE AND A CONCEPTUAL MAP

Discussions of the administrative state—and proposals for improving it—fall into two general categories. Most familiar is the traditional lawyers' approach, reflected in the Administrative Procedure Act and in much of conventional administrative law. Here we find a range of efforts to limit administrative discretion, mostly through procedural requirements and judicial review. On this view, the basic problem for the administrative state is the exercise of policy-making discretion by unelected bureaucrats; the basic solution is to reduce this discretionary authority.²⁶

The second approach is concerned with improving regulatory performance by asking concrete questions about the effects of regulation.²⁷ On this view, administrative discretion is a problem only to the extent that administrative discretion produces bad outcomes.²⁸ And on this view, administrative law doctrines, and reform proposals for the administrative state, should be founded on a concrete understanding of what strategies will make regulation work better by, for example, saving or lengthening lives, reducing cost, increasing employment, and improving education.

In my view, lawyers have focused far too much and far too long on the control of administrative discretion, and far too little on the actual effects of administrative behavior on social well-

²⁶ This approach sees the fall of the nondelegation doctrine as the basic problem and attempts to provide surrogates for that doctrine. See, for example, David Schoenbrod, *Power Without Responsibility: How Congress Abuses the People Through Delegation* 155-91 (Yale 1994).

²⁷ See, for example, Breyer, *Breaking the Vicious Circle* at 9-10 (cited in note 9); Jerry L. Mashaw, *Bureaucratic Justice* 79 (Yale 1983); Viscusi, *Fatal Tradeoffs* at 149-50 (cited in note 15).

²⁸ See Jerry L. Mashaw, *Why Administrators Should Make Political Decisions*, 1 J L Econ & Org 81 (1985) (arguing that administrative discretion is likely to improve regulatory performance).

being. For the future a critical question is the relationship between administrative law doctrines and those effects. If, for example, administrative discretion is in some domain likely to lead to better outcomes than legislative discretion—as is certainly imaginable in technically complex areas, especially those involving the choice of means for achieving given ends—then there ought to be at least a presumption in favor of administrative discretion. Traditional lawyers might be tempted to reject such discretion by reference to large-sounding abstractions involving, for example, legitimacy, *Marbury v Madison*,²⁹ or checks and balances. But if an administrative law doctrine—involving, for example, judicial deference to administrative interpretations of law³⁰—is likely to reduce overall costs and increase the rationality of regulatory law, there is a good argument for that doctrine.

As the twenty-first century approaches, it is, in short, appropriate for administrative law to focus less on large-sounding abstractions, usually rooted in a controversial understanding of the Constitution, and more on questions that are at once more concrete, more empirical, more manageable, and more directed toward real-world consequences. And though I cannot support the point here, I believe that such a shift would point toward new ways of approaching a host of old questions.³¹ Let us turn, then, to the important and pervasive issue of health-health tradeoffs as a case in point, and see how administrative law might be revised to deal with that issue.

A. Regulated and Ancillary Risks

To get a handle on the problem of health-health tradeoffs, we need to make some distinctions. Call the risks that government is trying to control the *regulated risks*. Call the risks that are increased by regulation the *ancillary risks*.³²

Ancillary risks take many different forms, depending on their relationship to the regulated risk. We might say, for example, that the increase in acid deposition is not *within the same do-*

²⁹ 5 US (1 Cranch) 137 (1803).

³⁰ See, for example, *Chevron v NRDC*, 467 US 837, 842-45 (1984).

³¹ For example, the issue of scope of judicial review might be examined largely by asking about what kind of approach will reduce both costs of decision and costs of error. *Chevron* itself could be examined under this rubric. The much debated line between *Londoner v Denver*, 210 US 373 (1908), and *Bi-Metallic Investment Co. v State Board of Equalization*, 239 US 441 (1915), could be understood in similar terms.

³² Compare this with the discussion of target risks and countervailing risks in Graham and Wiener, *Confronting Risk Tradeoffs* at 1-2 (cited in note 13).

main as the risks prevented by regulation of nuclear power plants. This is true in two different ways, legal and factual. First, and for many purposes most importantly, the law does not consider them in the same domain. The agency that regulates one of these risks, the Environmental Protection Agency ("EPA"), has no authority to regulate the other, which falls under the jurisdiction of the Nuclear Regulatory Commission ("NRC"). A pervasive problem in handling health-health tradeoffs stems from organization charts that allocate authority to diverse agencies, frequently in ways that make it difficult or impossible for agencies to coordinate their responses.³³

Second, the risks of acid deposition (mostly from coal-fired power plants) have a different source from the risks created by nuclear power plants as a simple matter of fact. This point suggests that health-health tradeoffs will often require agencies to compile extensive information, possibly in a way that will dwarf existing capacities. Compare a situation in which the regulation of sulfur dioxide emissions increases carbon monoxide emissions. If this happens, we are dealing in any event with air pollution, indeed air pollution from largely the same technologies, and the EPA has the statutory authority to regulate both sources.

It is therefore possible to imagine a complex continuum of relationships between regulated risks and ancillary risks. There are, of course, differences among risks—differences of degree as well as differences in kind—especially in the factual domain, where there may or may not be an element of overlap between relevant inquiries. And, of course, we might describe the domain of the regulated risk in many different ways. For some purposes the best way to define the risk domain is through the relevant law, which, as we will see, sets constraints on the kinds of risk that agencies may consider.

A well-functioning administrative state would seek a measure of coordination among agencies, so that an agency operating in one domain does not inadvertently or unnecessarily increase risks in other domains; and so that risk assessments are made as globally as possible. As a threshold matter, agencies should at the very least coordinate their efforts so as to reduce net or overall risks. But a special problem for coordinated responses is that agencies have quite different standards for deciding when risks require regulation.³⁴ The International Commission on Radiolog-

³³ See Part V for a discussion of suggested solutions.

³⁴ See generally March Sadowitz and John D. Graham, *A Survey of Residual Cancer*

ical Protection, for example, recommends that environmental factors should not cause an incremental cancer risk, for those exposed over a lifetime, of more than about three in one thousand.³⁵ But American agencies do not follow this recommendation. Indeed, their practices vary widely. The NRC sees one in one thousand as acceptable; the EPA's acceptable range varies from one in ten thousand to one in one million.³⁶ The Food and Drug Administration ("FDA") has tried to use a standard of one in one million, but under the Delaney Clause,³⁷ courts have required a standard of essentially zero.³⁸ The Occupational Safety and Health Administration ("OSHA") has interpreted the "significant risk" requirement found in its governing statute to mean a risk of one in one thousand; labor groups have sought a change to one in one million.³⁹

These varying standards make performing health-health tradeoffs a very complex matter. If one agency is using a standard of one in one thousand for risk A, and doing so lawfully, how should it deal with an increase in risk B, when that risk is regulated by a different agency operating lawfully under a different standard? Matters become even more complex when risks from cancer are being compared with other sorts of risk.

I do not urge that judgments about significance must be uniform. Contextual differences justify different judgments about which risks warrant special concern.⁴⁰ But such judgments should be made in a self-conscious and informed way, rather than on an ad hoc basis. I return to this issue below.

There are many different mechanisms by which risk regulation may increase aggregate risks.⁴¹ All of these mechanisms have a degree of complexity, and hence collective judgments that respond to them may well misfire. Consider the following:

—A regulatory ban may result in independent health risks coming from ancillary "replacement" risks. If we ban substance

Risks Permitted by Health, Safety, and Environmental Policy, 6 Risk 17 (1995).

³⁵ Id at 18-19.

³⁶ Id at 20.

³⁷ The Delaney Clause is three separate provisions prohibiting the use of any carcinogen in any food additive. 21 USC §§ 348 (c)(3)(A), 360b(d)(1)(I), 379e(b)(5)(b) (1994).

³⁸ See generally *Public Citizen v Young*, 831 F2d 1108 (DC Cir 1987); *Les v Reilly*, 968 F2d 985 (9th Cir 1992). See also notes 104-05 and accompanying text.

³⁹ Sadowitz and Graham, 6 Risk at 24-25 (cited in note 34). See also *Industrial Union Dep't, AFL-CIO v American Petroleum Inst.*, 448 US 607, 655 (1980).

⁴⁰ See Part III.C.

⁴¹ See Graham and Wiener, *Confronting Risk Tradeoffs* at 23-25 (cited in note 13); Aaron Wildavsky, *Searching for Safety* (Transaction, 1988).

A, the replacement substance B may also be dangerous. If a carcinogenic substance is regulated, perhaps people will use a product that is not carcinogenic but that causes serious risks of heart disease.

—Regulation may produce a new, offsetting risk that is qualitatively similar to or indistinguishable from the target risk. Perhaps regulation of certain substances that threaten to destroy the ozone layer will produce new reliance on other substances that also threaten the ozone layer.

—Regulation may force society to forego “opportunity benefits.” For example, the careful screening procedures that keep drugs and services from prematurely entering the marketplace may also deprive people of certain health benefits. This problem has received recent attention with respect to the Food and Drug Administration, especially with the “drug lag” and the agency’s efforts to control the spread of AIDS.⁴²

—Regulated substances may create health benefits as well as health risks. By eliminating those health benefits, regulation may therefore create a net increase in health dangers.

—Regulation of one risk may protect a certain group of people while imposing a new risk on another group. This would happen, for example, if a ban on a certain pesticide protects consumers, plants, and animals, but simultaneously increases risks to farmers. Perhaps regulations protecting men from certain risks will impose new risks on women.

—Most generally, the economic costs imposed by regulation may create health risks, as I discuss below in Part II.B.

When officials think about health-health tradeoffs, the distributional incidence of the ancillary risk may matter a great deal for policy purposes. Sometimes the ancillary risk falls on the same class of people as the regulated risk; sometimes the ancillary risk burdens an entirely different group. This suggests that *risk redistribution*, rather than risk reduction, is a possible goal and outcome of regulation. Interest groups may well try to exploit this possibility. Hence it should be expected that odd coalitions will develop to reduce risks of a certain kind when the result is to shift risks (and control costs) from some groups to others.⁴³

⁴² A general description can be found in President Bill Clinton and Vice President Al Gore, *Reinventing Drug & Medical Device Regulations* (US GPO 1995). See also Miranda Perry, *Health-Health Analysis and the FDA* (unpublished manuscript on file with U Chi L Rev).

⁴³ See Bruce A. Ackerman and William T. Hassler, *Clean Coal/Dirty Air: or How the Clean Air Act Became a Multibillion-Dollar Bail-Out for High-Sulfur Coal Producers and*

B. "Richer Is Safer"

Thus far we have been discussing cases in which the act of regulating one risk produces ancillary risks through a certain causal chain. There is a particularly controversial possibility here, one that has been receiving much recent attention. Regulations cost money—sometimes a great deal of money—and private expenditures on regulatory compliance may produce less employment and more poverty. People who are unemployed or poor tend to be in worse health and to live shorter lives.⁴⁴ If wealthy people face diminished threats to life and health, and if poor people face greater threats, might not costly regulation increase risks simply by virtue of reducing wealth?

There are several reasons why this might be so.⁴⁵ First, people with more wealth have more capacity to spend their income on health-enhancing goods and activities. There is strong evidence to this effect; for example, poor people have inferior housing and a lower rate of smoke detector installment, and this may well be connected with greater death rates from fire.⁴⁶ Second, people who are poorer also suffer from various stresses that may have adverse health effects. Stress itself can contribute to morbidity and mortality; it can, for example, lead to an increase in heart disease. Finally, greater social wealth seems to be associated with more general social changes in the direction of greater safety, though the relevant mechanism is not well understood.

This possibility has been reflected in legal opinions, perhaps most prominently in Judge Easterbrook's suggestion that a fetal protection policy might "reduce risk attributable to lead at the cost of increasing other hazards," including the hazards stemming from less income, since "there is also a powerful link between the parents' income and infants' health."⁴⁷ The more gen-

What Should Be Done about It 35-41, 118-21 (Yale 1981); see also Adler, *Clean Fuels, Dirty Air* at 19, 25-38 (cited in note 22).

⁴⁴ See Wildavsky, *Searching for Safety* at 59-75 (cited in note 41).

⁴⁵ See John D. Graham, Bei-Hung Chang, and John S. Evans, *Poorer Is Riskier*, 12 *Risk Analysis* 333, 333-35 (1992); Frank B. Cross, *When Environmental Regulations Kill: The Role of Health-Health Analysis*, 22 *Ecol L Q* 729 (1995). See also the discussion of the connection between income and longevity in Jean Drèze and Amartya Sen, *India: Economic Development and Social Opportunity* 59-61, 207-10 (Clarendon 1995). Drèze and Sen show that per capita income is linked with longevity but also that fair distribution is important, since a high per capita income that coexists with large pockets of poverty may be accompanied by high mortality rates. Cross correctly emphasizes the importance of distributional considerations and hence the connection between health-health analysis and environmental justice. See Cross, 22 *Ecol L Q* at 762-64, 782-83.

⁴⁶ Cross, 22 *Ecol L Q* at 733 (cited in note 45).

⁴⁷ *International Union, UAW v OSHA*, 886 F2d 871, 918 (7th Cir 1989) (Easterbrook
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eral question is this: Would it be possible to make precise connections between governmentally required expenditures on risk reduction with shifts in unemployment and poverty?

An incipient literature attempts to do precisely this. A 1990 study attempted to develop a model to quantify the view that "richer is safer."⁴⁸ According to Ralph Keeney, a single fatality might result from a compulsory expenditure of from \$6.49 million to \$7.25 million; with different assumptions about the distributional incidence of the costs, the estimate could range between \$3 million and \$12 million.⁴⁹ In a concurring opinion in a 1991 case involving occupational safety and health regulation, Judge Williams invoked this evidence to suggest that OSHA's refusal to engage in cost-benefit analysis might not be beneficial for workers.⁵⁰ Judge Williams reasoned in the following way. If a fatality results from an expenditure of \$7.5 million, then some regulations might produce more fatalities than they prevent. Many regulations of course cost more than \$7.5 million per life saved. In Judge Williams's view, an agency that fails to measure costs against benefits might be failing to measure mortality gains against losses.

The claimed relationship between wealth reductions and mortality is controversial,⁵¹ but a number of studies have found such a relationship. There is a growing consensus, from diverse studies, that regulatory expenditures can increase mortality. Consider this summary:

dissenting), rev'd, 499 US 187 (1991). See also Mary E. Becker, *From Muller v. Oregon to Fetal Vulnerability Policies*, 53 U Chi L Rev 1219, 1229-31 (1986) (discussing the same point).

⁴⁸ Ralph L. Keeney, *Mortality Risks Induced by Economic Expenditures*, 10 Risk Analysis 147 (1990). See also Ralph L. Keeney, *Mortality Risks Induced by the Costs of Regulations*, 8 J Risk & Uncertainty 95 (1994); Aaron Wildavsky, *Richer is Safer*, 60 Pub Interest 23 (1980); Wildavsky, *Searching for Safety* at 59-75 (cited in note 41).

⁴⁹ Keeney, 10 Risk Analysis at 154-55 & table VI (cited in note 48).

⁵⁰ *International Union, UAW v OSHA*, 938 F2d 1310, 1326-27 (DC Cir 1991). See also *Building and Construction Trades Department v Brock*, 838 F2d 1258, 1267 (DC Cir 1988) (suggesting that "leaning towards safety may sometimes have the perverse effect of increasing rather than decreasing risk"). See also *New York State Ophthalmological Soc'y v Bowen*, 854 F2d 1379, 1395 n 1 (DC Cir 1988) (Williams concurring) (arguing that "extravagant expenditures on health may in some instances affect health adversely, by foreclosing expenditures on items—higher quality food, shelter, recreation, etc.—that would have contributed more to the individual's health than the direct expenditure thereon").

⁵¹ See Paul R. Portney and Robert N. Stavins, *Regulatory Review of Environmental Policy: The Potential Role of Health-Health Analysis*, 8 J Risk & Uncertainty 111, 118 (1994) (arguing that adverse health effects from the cost of regulation are possible but unlikely).

Table 1⁵²

Study	Data	Implicit income gains necessary to avert one death (millions)	Comments
Keeney (1990)	Used income and mortality correlations from Kitagawa and Hauser (1960) data, and others	\$12.3	Cited in <i>UAW v OSHA</i> , as \$7.25 1980 dollars; represents an upper-bound
Joint Economic Committee (1984)	Aggregate U.S. income, employment, mortality and morbidity; 1950-1980	\$1.8 to \$2.7	Reflects income loss from recession of 1974-1975
Anderson and Burkhauser (1985)	4,878 male workers over 10 years, 1969-1979	\$1.9 (wages) \$4.3 (other income)	Older workers aged 58-63; measured effects of wages and of value of one's home on mortality
Duleep (1986)	9,618 white married male workers aged 35-64 over 6 years, 1973-1978	\$2.6	Controls for prior disability, and educational attainment
Duleep (1989)	13,954 white married male workers aged 25-64 over 6 years, 1973-1978	\$6.5	Finds income effects at all income levels
Duleep (1991)	9,618 white married male workers aged 35-64 over 6 years, 1973-1978	\$3.9	Controls for prior disability, educational attainment, and exposure to occupational hazards

⁵² The following table is borrowed from Randall Lutter and John F. Morrall, III, *Health-Health Analysis: A New Way to Evaluate Health and Safety Regulation*, 8 J Risk & Uncertainty 43, 49 table 1 (1994).

Wolfson (1992)	500,000 Canadian workers, over 10-20 years	\$6	Investigates longevity rather than mortality; finds income effects at highest quintiles of income
National Institutes of Health (1992)	1,300,000 Americans, all ages, 1979-1985	\$12.4	Estimate reflects effect of income changes on family mortality; study does not use multiple regression, does not control for prior health status or education
Chirikos and Nestel (1991)	5,020 men, aged 50-64 studied during 1971-1983	\$3.3	Uses two measures of health endowments
Chapman and Hariharan (1993)	5,836 older men over 10 years	\$12.2	Uses four distinct controls for prior health conditions
Graham, Hung-Chang and Evans (1992)	38 years of age-adjusted mortality and income data for the U.S.	\$4	Distinguishes effects of permanent income from those of transitional income

This point leads to a broader one with considerable implications for law. Even if agencies are sometimes prevented, by law, from measuring costs against benefits,⁵³ perhaps they can compare health losses with health gains, and conclude that some regulations are not worthwhile because they cost lives in the aggregate. In fact it can be shown that some regulations fail health-health analysis whether or not they pass cost-benefit analysis. Thus we might be able to agree that such regulations are counterproduc-

⁵³ See, for example, *Tennessee Valley Authority v Hill*, 437 US 153, 172-88 (1978) (holding that the Endangered Species Act prevented agencies from taking actions that would lead to the extinction of a species, whatever the cost); *Lead Industries Association v EPA*, 647 F2d 1130, 1148-51 (DC Cir 1980) (interpreting the national ambient air quality standards under the Clean Air Act, 42 USC § 7409 (1988), to prohibit consideration of economic or technological feasibility in setting air quality standards); *American Textile Manufacturers Institute, Inc. v Donovan*, 452 US 490, 509 (1981) (holding that cost-benefit balancing under the OSHA toxic substances regulations would be inconsistent with the statute, 29 USC § 655 (1988)).

tive even if cost-benefit judgments seem too difficult or too contentious. Consider the following table:

Table 2⁵⁴

Budgeted regulations	Year	Agency	Status	Cost per life saved (millions of 1992 dollars)
<i>Regulations passing HHA vs. BCA tests</i>				
1. Steering column protection	1967	NHTSA	F	0.1
2. Unvented space heaters	1980	CPSC	F	0.1
3. Cabin fire protection	1985	FAA	F	0.3
4. Passive restraints/belts	1984	NHTSA	F	0.4
5. Fuel system integrity	1975	NHTSA	F	0.4
6. Trihalo-methanes	1979	EPA	F	0.4
7. Underground construction	1989	OSHA-S	F	0.4
8. Alcohol & drug control	1985	FRA	F	0.7
9. Servicing wheel rims	1984	OSHA-S	F	0.7
10. Seat cushion flammability	1984	FAA	F	0.8
11. Floor emergency lighting	1984	FAA	F	0.9
12. Crane suspended pers. platform	1988	OSHA-S	F	1.2
13. Child sleepwear flammability	1973	CPSC	F	1.8
14. Side doors	1979	NHTSA	F	1.8
15. Concrete & masonry construction	1988	OSHA-S	F	1.9
16. Hazard communication	1983	OSHA-S	F	2.4
17. Asbestos	1986	OSHA-H	F	2.8
18. Benzene/fugitive emissions	1984	EPA	F	3.8
<i>Regulations failing BCA test</i>				
19. Grain dust	1987	OSHA-S	F	8.8
20. Radionuclides/ uranium mines	1984	EPA	F	9.3

⁵⁴ Lutter and Morrall, 8 J Risk & Uncertainty at 59 table 6 (cited in note 52).

<i>Regulations failing HHA (and BCA) test</i>	Year	Agency	Status	Cost per life saved (millions of 1992 dollars)
21. Benzene	1987	OSHA-H	F	23.1
22. Ethylene oxide	1984	OSHA-H	F	34.6
23. Uranium mill tail./inactive	1983	EPA	F	37.3
24. Acrylonitrile	1978	OSHA-H	F	50.8
25. Uranium mill tail./active	1983	EPA	F	71.6
26. Asbestos	1989	EPA	F	72.9
27. Coke ovens	1976	OSHA-H	F	83.4
28. Arsenic	1978	OSHA-H	F	125.0
29. DES (cattlefeed)	1979	FDA	F	178.0
30. Arsenic/glass manufacturing	1986	EPA	F	192.0
31. Benzene/storage	1984	EPA	R	273.0
32. Radionuclides/DOE facilities	1984	EPA	R	284.0
33. Radionuclides/elim. phos.	1984	EPA	R	365.0
34. Acrylonitrile	1978	OSHA-H	R	416.0
35. Benzene/ethylbenzene/styrene	1984	EPA	R	652.0
36. Benzene/maleic anhydride	1984	EPA	R	1,107.0
37. Formaldehyde	1987	OSHA-H	F	119,000.00

The idea that "richer is safer" has started to affect public deliberations about risk. In a now celebrated letter written in 1992, James MacRae, the Acting Administrator of OIRA, wrote to the Department of Labor questioning a proposed regulation of air contaminants in the workplace.⁵⁵ OSHA had estimated savings of between eight and thirteen lives per year, at an annual cost of \$163 million. MacRae suggested that there was a significant gap in OSHA's analysis: If a statistical fatality is produced by an expenditure of \$7.5 million, the regulation could actually cause

⁵⁵ See Keeney, 8 *J Risk & Uncertainty* at 96 (cited in note 48), discussing letter from James B. MacRae, Jr., Acting Administrator and Deputy Administrator, Office of Information and Regulatory Affairs, U.S. Office of Management and Budget, to U.S. Department of Labor (Mar 10, 1992).

twenty-two additional deaths. MacRae asked OSHA to investigate the relation between health, wealth, and safety. OSHA responded that existing data to the effect that "richer is safer" seemed highly speculative, but it did call for more comments from the public.⁵⁶

Eventually, a public outcry forced OIRA to retreat. Senator Glenn in particular complained of OIRA's "Alice-in-Wonderland type claim that health and safety regulations cause harm to workers" and objected that the "richer is safer" view "seems to stand logic on its head—to say that controlling a dangerous substance in the workplace makes an increased health hazard to the worker."⁵⁷ Despite the public outcry, further research on the issue suggests that lives can indeed be lost through required regulatory expenditures. At a minimum government ought to consider the problem seriously.

If officials are to consider the fact that "richer is safer," it is important to know whether the burdens of regulation fall on those who are poor and near poor or those who are rich. Simple intuition suggests that a loss in income from relatively poor people will have more severe health effects than a similar loss from the relatively well off. A recent study confirms the intuition.⁵⁸ It suggests that when program costs are borne exclusively by the richest 20 percent of the population, mortality effects are one-half as high as when program costs are borne exclusively by the poorest 20 percent of the nation.⁵⁹ Thus it is necessary to know the distributional incidence of costs in order to see the extent to which "richer is safer."

C. Why Does It Matter?

We have now seen enough to know that an impressive body of work attempts to measure health gains from regulation against health risks from regulation. But why should we focus on this particular question? Would it not be better to attend to the overall gains from regulation and to the overall losses from reg-

⁵⁶ Occupational Safety and Health Administration, Air Contaminants, 57 Fed Reg 26002, 26005-09 (1992).

⁵⁷ Keeney, 8 J Risk & Uncertainty at 96 (cited in note 48), quoting News Release from Senator John Glenn (Mar 19, 1991).

⁵⁸ See Kenneth S. Chapman and Govind Hariharan, *Do Poor People Have a Stronger Relationship between Income and Mortality than the Rich?: Implications of Panel Data for Health-Health Analysis*, 12 J Risk & Uncertainty 51, 58-61 (1996).

⁵⁹ Id at 59. On the need to consider the distributional incidence of compulsory regulatory expenditures, see Cross, 22 Ecol L Q at 762-64 (cited in note 45).

ulation? Cost-benefit analysis is receiving considerable attention in both agencies⁶⁰ and Congress,⁶¹ and cost-benefit analysis, properly conceived, takes account of all of the health-related effects of regulation. Health-health assessments focus on a subset of effects, and refuse to translate those effects into dollars. Such assessments ignore all costs unrelated to mortality and morbidity. But what is special about health-health tradeoffs? Why should analysis focus on such tradeoffs rather than on all relevant effects?

Part of the answer lies in existing public judgments, taken as simple brute facts. People seem to think that regulation is bad if it causes more deaths than it prevents; a demonstration that a particular regulation has this effect would count strongly against its adoption. But people do not always know how to compare health gains (fifteen lives gained, for example) with monetary losses (an expenditure of \$15 million, for example). This uncertainty stems partly from the fact that lives and dollars are not easily made commensurable,⁶² and partly from the fact that the appropriate amount to spend on protection of a (statistical) life depends very much on context.

A deliberative judgment about how to assess net health tradeoffs is easier to reach than a deliberative judgment about how to assess cost-benefit tradeoffs. It may thus be possible to obtain an incompletely theorized agreement⁶³—incompletely theorized in the sense that people from diverse theoretical perspectives can agree—that a net mortality loss is bad. Incompletely theorized agreements on particular results are an important part of democratic deliberation; they are a distinctive solution to the problems of social pluralism and disagreement.

⁶⁰ See, for example, Exec Order No 12866, 3 CFR at 638 (cited in note 5).

⁶¹ See Sunstein, 48 Stan L Rev at 269-86 (cited in note 7). For a valuable overview, see Hahn, *Regulatory Reform* (cited in note 11) (finding that about half of government regulations since 1990 would not pass a cost-benefit test).

⁶² I am therefore rejecting the suggestion in Graham and Wiener that the problem of incommensurability stems from current methods of comparison: "[I]t is chiefly our lack of methods of comparison—of ways of seeing commonality among these risks—that makes these risks seem 'dissimilar' or noncomparable, not an inherent incommensurability. As we improve methods of risk analysis, the idea of calculating the 'net risk' of a risk portfolio, or the change in net risk due to a risk tradeoff, may become more meaningful." *Confronting Risk Tradeoffs* at 33 (cited in note 13). The problem of incommensurability stems not from a lack of methods of comparison, but from human perceptions of qualitative differences among diverse risks. Moreover, incommensurability need not be identified with incomparability.

⁶³ See Cass R. Sunstein, *Incompletely Theorized Agreements*, 108 Harv L Rev 1733 (1995).

It would, however, be inadequate for present purposes to rely on existing public judgments, which may be irrational or confused. Perhaps public uncertainty about cost-benefit judgments depends on an obstinate and counterproductive unwillingness to acknowledge that even (risk to) life has its price and that risks are matters of degree rather than "dangerous or not."⁶⁴

But part of the answer can be found in information costs. The comparative defect of health-health assessment is also its virtue: it involves only a subset of the consequences of regulating. Fewer facts need to be compiled. The assessment may economize on the costs of inquiry into speculative issues about regulatory consequences.

Another part of the answer may lie in attending more closely to problems of incommensurability. We might understand incommensurability to arise when no single metric is available by which to assess the variables at stake in a social decision.⁶⁵ In the area of risk regulation, a single metric is troublesome simply because it blurs qualitative distinctions. The vice and virtue of cost-benefit analysis is that it attempts to provide such a metric. If all effects are reduced to the metric of dollars, it may be possible to make simple assessments, in the sense that comparisons and hence tradeoffs can become easier. But the reduction of mortality and morbidity effects to dollars can erase important qualitative distinctions among diverse risks. These qualitative distinctions matter, and hence it is important for officials to understand them when they make decisions.

It is in the face of qualitative distinctions—distinctions in *how*, not simply *how much*, things are valued—that participants in democratic deliberation often resist a metric of dollars. To say this is not to say that there is a problem of incomparability or that tradeoffs do not have to be made among qualitatively diverse goods. But perhaps people can make choices more easily when the tradeoffs involve things that may seem qualitatively indistinguishable, like lives, rather than qualitatively diverse things, like lives and dollars. Most simply, when it is hard to trade off lives against dollars, the burdens of judgment might be eased when we are trading off lives against lives. A judgment of

⁶⁴ On people's reluctance to acknowledge this, see Donald A. Redelmeier, Paul Orzin, and Daniel Kahneman, *Understanding Patients' Decisions: Cognitive and Emotional Perspectives*, 270 JAMA 72, 72-73 (July 7, 1993).

⁶⁵ See Cass R. Sunstein, *Incommensurability and Valuation in Law*, 92 Mich L Rev 779, 795-99 (1994).

this kind undoubtedly underlies the interest in health-health analysis.

There is considerable truth to this suggestion. But it is a bit too crude. As we shall see, lives are themselves not commensurable, in the sense that a single metric—"lives saved"—is itself too coarse-grained to account for people's considered judgments. We do not reason well if we think that two lives should always be traded for, say, two and a half lives. A great deal depends on the context in which those statistical lives are put at risk (and on what those lives would be like).⁶⁶ For this reason problems of incommensurability cannot be eliminated so easily. They play a large role in health-health comparisons too.

What solutions are possible? It may be possible to reduce these problems by looking not at total lives lost or gained, but at the effects of regulation on the number of quality-adjusted life years.⁶⁷ A regulation that saves thirteen children while jeopardizing fifteen elderly people may well be worthwhile, at least if the thirteen children are likely to have decent life prospects. Government might thus focus on statistical years rather than statistical lives. Through attending to years rather than lives saved, and also by making judgments about the nature of years saved, problems of incommensurability can be reduced though certainly not eliminated.

III. INCORPORATING HEALTH-HEALTH COMPARISONS

A. First Approximation

Let us try, in a simple, intuitive way, to identify the factors that should enter into deliberative judgments about health-health tradeoffs. Begin with a simple case in which the costs of information and inquiry are zero. If this is so, all agencies should investigate all risks potentially at stake. Agencies should always take account of ancillary risks and always try to limit overall or aggregate risks.

Of course the costs of investigation and inquiry are never zero; to the contrary, they are often very high. We can readily imagine that agencies could spend all their time investigating ancillary risks and never do anything else—a disaster for regulatory policy.⁶⁸ (This is a potential problem with cost-benefit anal-

⁶⁶ See note 1 and accompanying text.

⁶⁷ Richard Zeckhauser and Donald Shepard, *Where Now for Saving Lives?*, 40 *L & Contemp Probs* 5, 11-32 (Autumn 1976).

⁶⁸ This may be the goal of some proposals for regulatory reform. See Sunstein, 48

ysis: cost-benefit analysis may itself fail cost-benefit analysis—if the costs of undertaking cost-benefit analysis are high and the benefits lower.) When the costs of inquiry are not zero, the obligation to inquire into ancillary risks might be a function of several factors. *First* is the cost of delay, understood as the cost of not controlling the regulated risk until more information has been compiled. To assess this cost, it is necessary to explore the seriousness of the regulated risk and the length of time necessary to investigate the ancillary risk. *Second* is the cost of investigating the ancillary risk, where this cost is understood as a product of the cost of compiling and evaluating the relevant information. *Third* is the benefit of investigating the ancillary risk, with the benefit understood as the likelihood of uncovering information that might help to produce a different and better result.

Under this view, it is of course (and unfortunately) important to know at least something about the possible extent of the ancillary risk and the costs of discovering it. Hence there is a problem of circularity: it is impossible to know whether to undertake health-health analysis without first doing a bit of health-health analysis, at least by making some initial judgments about the ancillary risk—a risk that, by hypothesis, the agency has not yet explored. Before the actual investigation has occurred, there will be a good deal of intuition and guesswork; the full facts cannot be known until inquiries have been completed, and the real question is whether it is worthwhile to complete the inquiries or even to embark on them.⁶⁹

But even at an early stage, it is possible to know that some ancillary risks are likely to be high, while others are likely to be trivial or low. Moreover, some ancillary risks can be investigated at low cost, while others depend on scientific and predictive judgments that require enormous investments of time and resources. There is an analogy here to the question of whether and when agencies must explore alternatives under either the National Environmental Policy Act or the APA. Here courts have indicated that some, but not all, alternatives must be investigated, and the outcome turns on considerations like those I have been discussing.⁷⁰ Of course, an agency might be reluctant to inquire into

Stan L Rev at 271 (cited in note 7).

⁶⁹ Compare *Vermont Yankee Nuclear Power Corp v NRDC*, 435 US 519, 551-55 (1978) (holding that agency need not address every alternative, but only those realistically available within the time frame of the proposal).

⁷⁰ See id. See also William H. Rodgers, Jr., *Environmental Law* § 9.8 at 957-63 (West 2d ed 1994) (detailing judicial responses to *Vermont Yankee*).

ancillary risks on the theory that, if it does so, it will be unable to regulate the risk at issue within a reasonable period of time. It seems clear that the extent and nature of the regulated risk are crucial factors for those deciding whether to explore ancillary risks.

On this simple, intuitive view, an agency might reason in the following way: If it would be enormously expensive to investigate whether fuel economy standards would really produce smaller and more dangerous cars, if the fuel economy standards would themselves do a lot of good, and if the likelihood of a high ancillary risk seems small, then it makes sense to proceed with the fuel economy standards without investigating ancillary risks.⁷¹ On the other hand, it is easy to imagine scenarios in which investigation of ancillary risks would be reasonable and the failure to investigate would be irrational. Thus, the National Highway Transportation Safety Administration's ("NHTSA") actual position with respect to fuel economy standards and safety is that the ancillary risk is worth investigating.⁷²

Compare the question of how to handle ancillary risks created by the prohibited manufacture of asbestos. One ancillary risk arises because asbestos appears to be the safest and thus best product for use in brake linings. Whether this is true, and how serious the ancillary risk is, can be investigated at the present time. But other ancillary risks involve the eventual substitutes for asbestos in products for which no substitutes are now available. On the view of the EPA, the ban on asbestos will force technological innovation, producing new substances that do the work now done by asbestos.⁷³ This may be a reasonable though speculative view. If so, the government has reason to regulate asbestos now and to wait before evaluating the risks posed by substitutes.

B. Existing Law and its Rationale

How should we understand existing law in light of this first approximation? Congress has apparently forbidden health-health analysis in many settings by directing agencies to focus on cer-

⁷¹ Compare this, however, with the EPA's position in *Corrosion Proof Fittings v EPA*, 947 F2d 1201, 1220 (5th Cir 1991) (proceeding with a ban on asbestos despite the possibility of ancillary risk from substitutes on the theory that new substitutes will develop because of the ban). See also note 73 and accompanying text.

⁷² See text accompanying notes 114-20

⁷³ *Corrosion Proof Fittings*, 947 F2d at 1220.

tain health problems to the exclusion of all others.⁷⁴ Questions naturally arise about what understanding, if any, accounts for these prohibitions.

Some of the relevant statutes might be seen to reflect *categorical, rule-bound judgments* reflecting factors of the kind just discussed. Congress might think, for example, that the NRC should not ask whether regulation of nuclear power will cause a shift to coal-fired power plants and thus aggravate the problem of acid deposition (a) because the problem of unsafe nuclear power is an especially urgent one and (b) because it would be very hard for the NRC, given its limited budget and expertise, to make the necessary extrapolations. Under the considerations I have discussed, Congress might plausibly exempt the NRC from the duty of exploring ancillary risks, or even ban it from doing so.

Alternatively, the problems posed by ancillary risks might be solved by a healthy *division of labor*. The problems posed by coal-fired power plants are the EPA's responsibility. Any effects on automobile safety that come from air pollution regulation producing smaller cars might be controlled by NHTSA. Perhaps NHTSA has the authority to make sure that the ancillary risk does not come to fruition. Perhaps the two agencies will coordinate their efforts to ensure that aggregate risks are minimized. Or consider the health risks from regulation inducing unemployment and poverty. It might be thought that these adverse effects are or should be addressed by other governmental institutions, including those entrusted with the power to reduce unemployment and poverty.

Of course there are serious problems with the division-of-labor strategy. Coordination of risk regulation is difficult to achieve, and in modern government, it has not been pursued in any systematic way.⁷⁵ In any case it would be extravagant to suggest that a healthy division of labor accounts for existing practice. If there were such a division of labor, agencies would systematically respond to increases in ancillary risk created by other agencies; but there is no evidence of such responses.

⁷⁴ See note 53 and accompanying text.

⁷⁵ However, some efforts at coordination are prescribed in Exec Order No 12866, 3 CFR at 638 (cited in note 5). For example, § 1(b)(10) directs agencies to "avoid regulations that are inconsistent, incompatible, or duplicative with its other regulations or those of other Federal Agencies." Id at 640. Similarly, § 2(b) emphasizes that the Office of Management and Budget ("OMB") is to review and coordinate all agency rulemaking, in part to ensure "that regulations . . . do not conflict with the policies or actions taken or planned by another agency." Id.

Another explanation for why existing law makes relevant some risks but not others points to the important role of *interest groups* in the regulatory process.⁷⁶ On this view, selective attention and disparities in regulatory strategies are attributable to the fact that well organized groups are able to obtain legislation in their interests and to fend off regulation that would be harmful to their interests. It should be unsurprising that the statute regulating agricultural practices allows for a form of open-ended balancing;⁷⁷ the agricultural groups are in a good position to fend off draconian legislation. Some environmental groups work very hard to obtain severe restrictions on carcinogenic substances.⁷⁸

In fact, interest groups might work together so as to redistribute risks, and the resulting coalitions might well ban agencies from engaging in health-health analysis for fear that the result will be decreased redistribution. If, for example, corn producers attempt to obtain an ethanol requirement for gasoline, they will not be disturbed to find that ethanol itself imposes environmental risks. Or if it happens that electric cars produce environmental hazards because of waste disposal problems, the redistribution of the risk may not be bothersome to those who favor electric cars on self-interested grounds. It would even be possible to imagine cases in which the redistributed risk was affirmatively sought, if, for example, those who face the new risk are competitors. Undoubtedly, an investigation of the political economy of risk regulation would reveal many diverse cases in which interest groups pursue their own interests rather than overall risk reduction.⁷⁹

Other explanations would point to *myopia*, *selective attention*, *sensationalism*, *loss aversion*, *credit-claiming*, and *random agenda selection*.⁸⁰ Some statutes stem from sensationalistic events—the Love Canal scare is one example of this tendency—that encourage legislators to hold hearings, enact legislation, and claim credit for fixing problems that are either not very large

⁷⁶ See the discussion of “omitted voices” in Graham and Wiener, *Confronting Risk Tradeoffs* at 34-36 (cited in note 13).

⁷⁷ The Federal Insecticide, Fungicide, and Rodenticide Act (“FIFRA”) directs the EPA to regulate pesticides that have “unreasonable adverse effects on the environment.” 7 USC § 136a(a) (1994). FIFRA defines these “unreasonable effects” to include “any unreasonable risk . . . taking into account the economic, social, and environmental costs and benefits of the use of any pesticide.” 7 USC § 136(bb) (1994).

⁷⁸ For a discussion of health-health tradeoffs under the Delaney Clause, see Merrill, 5 Yale J Reg at 74-88 (cited in note 23).

⁷⁹ See note 22.

⁸⁰ These are important points in Breyer, *Breaking the Vicious Circle* (cited in note 9).

or that are just a part of a complex whole. Such statutes are likely to reflect myopia or selective attention.⁸¹ The result may well be a form of random agenda selection that bans health-health tradeoffs, that does not adequately reduce risks, or that even increases some risks. Moreover, people are pervasively averse to losses from the status quo—more so than they are favorably inclined to improvements from the status quo—and loss aversion may account for apparently irrational judgments about how to trade off health risks.⁸²

Finally, some statutes might reflect *public judgments* about how to conduct health-health tradeoffs. Perhaps the public believes that an increase in a certain risk is not a relevant factor in the assessment of another risk. This could be a product of simple confusion, as in the well-established refusal, on the part of some of the public some of the time, to acknowledge any need for tradeoffs.⁸³ Such judgments should not be given any weight in law. Nevertheless, Congress, responsive as it is to the wishes of the electorate, appears to disagree with this proposition. Or public judgments might be based on heuristics of certain kinds, productive of errors,⁸⁴ or on gripping anecdotes that make draconian regulation of a certain risk seem quite sensible. In these ways, public judgments could be confused; we might prefer a form of expert judgment that would produce more in the way of regulatory rationality.⁸⁵

These judgments might, however, result from something other than confusion. They might depend on judgments about sensible regulatory priorities and about qualitative differences among risks. I take up this point below.

C. Incorporating Complexities

Our first approximation has suggested that all risks should be aligned along a single metric—expected annual deaths, aggregate mortality benefits—and hence measured against each other. Both expert and economic approaches attempt to do this, though in interestingly different ways. Experts tend to look at expected

⁸¹ Wildavsky, *But is it True?* (cited in note 24), is a set of variations on this theme.

⁸² See Roger G. Noll and James E. Krier, *Some Implications of Cognitive Psychology for Risk Regulation*, 19 J Legal Stud 747, 752-72 (1990).

⁸³ See Sarah Lichtenstein, et al, *When Lives Are In Your Hands: Dilemmas of the Societal Decision Maker*, in Robin M. Hogarth, ed, *Insights in Decision Making: A Tribute to Hillel J. Einhorn* 91, 95 (Chicago 1990).

⁸⁴ See Noll and Krier, 19 J Legal Stud at 748-72 (cited in note 82).

⁸⁵ See Breyer, *Breaking the Vicious Circle* at 59-61 (cited in note 9).

annual deaths and to assess risks accordingly.⁸⁶ But ordinary people base their judgments on something quite different. They look, for example, at whether the risk is faced voluntarily or involuntarily; whether it is distributed equitably; whether it is faced by future generations; whether it is potentially catastrophic; whether it involves a type of death that is especially dreaded; and whether it is new and poorly understood. Consider the following summary:

Table 3

Risk characteristic	Aggravating factor	Mitigating factor
nature of risk	dreaded	acceptable
permanence	irreversible/uncontrollable	reversible/controllable
duration	faced by future generations	faced by those now living
equity	unfairly distributed	fairly distributed
source of risk	man-made	found in nature
freedom	voluntarily incurred	forced exposure
existing understanding	known to science	unknown
relation to status quo	new	old

If aggravating and mitigating factors are taken into account, it might well be the case that people would find, say, 300 cases of cancer less acceptable than 350 cases of heart disease, given certain assumptions about what causes each. In contingent valuation studies, people purport to be willing to pay far more to prevent cancer deaths (from \$1.5 million to \$9.5 million) than they would to prevent unforeseen instant deaths (from \$1 million to \$5 million).⁸⁷ It is similarly possible that people might therefore accept a regulated risk involving 100 annual fatalities even if the ancillary risk involves 110 annual fatalities; perhaps the ancillary risk is less severe because it is voluntarily run, not especial-

⁸⁶ See Paul Slovic, Baruch Fischhoff, and Sarah Lichtenstein, *Characterizing Perceived Risk*, in Robert W. Kates, Christoph Hohenemser, and Jeanne X. Kaspersen, eds, *Perilous Progress: Managing the Hazards of Technology* 91, 112 (Westview 1985); Richard H. Pildes and Cass R. Sunstein, *Reinventing the Regulatory State*, 62 U Chi L Rev 1, 36-39, 55-58 (1995).

⁸⁷ See George Tolley, Donald Kenkel, and Richard Fabian, *State-of-the-Art Health Values*, in George Tolley, Donald Kenkel, and Richard Fabian, eds, *Valuing Health for Policy* 323, 341-42 & table 15.5 (Chicago 1994).

ly dreaded, and well understood. The democratic decision to look at something other than quantity is easy to defend. It is fully rational.

We come, then, to a complication for the initial approximation: risks should be evaluated in accordance with the various qualitative factors deemed relevant by ordinary people who are evaluating risk.⁸⁸ Of course, it would be possible to assign numbers to these factors if this step aided analysis.

Economic approaches promise to avoid some of the problems of expert valuations. Most important, private willingness to pay should incorporate some or even all of the factors that underlie ordinary lay judgments. It might be possible to ascertain private willingness to pay from studies of actual market behavior and from contingent valuation studies.⁸⁹ And from these results it would be possible to derive the diverse valuations of diverse social risks. Consider the following table:

Table 4: Mortality Values by Cause of Death⁹⁰
Category (per statistical life) Value Estimates in Million \$
Low, Medium, High

Category	Low	Medium	High
Unforeseen instant death	1	2	3
Asthma/bronchitis	1.3	2.5	5.5
Heart disease	1.25	2.75	6
Emphysema	1.4	3.5	9
Lung cancer	1.5	4	9.5

⁸⁸ This proposition is defended in detail in Pildes and Sunstein, 62 U Chi L Rev at 55-95 (cited in note 86). Some complications are discussed in Cass R. Sunstein, *Which Risks First?*, 1997 U Chi Legal F (forthcoming 1997) (on file with U Chi L Rev) (exploring problems in ordinary valuations and arguing that voluntariness and control should not be taken as clear categories, but as pointing to low costs of risk avoidance).

⁸⁹ See Tolley, Kenkel, and Fabian, *State-of-the-Art Health Values* at 323-44 (cited in note 87); Viscusi, *Fatal Tradeoffs* at 34-74 (cited in note 15).

⁹⁰ Tolley, Kenkel, and Fabian, *State-of-the-Art Health Values* at 342 table 15.5 (cited in note 87).

There are, however, enormous difficulties in the idea that officials can get, from private willingness to pay, an adequate sense of how to order the risks at stake in regulation. Health-health tradeoffs cannot easily be based on surrogates for market valuation. Actual choices are "noisy"; from a market decision—to take a job, to buy a Volvo, to get a smoke alarm—it is not easy to derive a consistent valuation of life. Such decisions are highly geared to the context in which they are made; it is not clear that one can infer from actual choices in one context people's valuations about other choices in different contexts.

Contingent valuation studies can build in a sense of context, but the answers may not be reliable. They may well be a product of strategic behavior, of questions and answers not thought meaningful in real life, or of a perceived purchase of moral satisfaction rather than any commodity. Valuation is greatly affected by whether the good is offered alone or in connection with other goods. Wildly different responses can be elicited depending on the sequence of questions; and people often give the same amount to reflect their willingness to save twenty thousand or two million members of a certain species.⁹¹ In any case, democratic choices should reflect a process of reason-giving in which it is asked what policies are best to pursue, rather than a process of preference-satisfaction in which each person is asked how much he is willing to pay for a certain result.⁹² Deliberative outcomes should not be confused with aggregated willingness to pay.

Government officials must, in these circumstances, proceed pragmatically and experimentally, perhaps by taking aggregate numbers based on expert judgments as a starting point, focusing on number of quality-adjusted life years saved rather than simply lives saved, and invoking the supplemental considerations involving democratic convictions that I have described here.

IV. COURTS AND EXISTING LAW

I now turn to existing law. If an agency takes account of ancillary risks, has it behaved unlawfully? If an agency refuses to consider such risks, should courts require it do so?

⁹¹ See Richard B. Stewart, *Liability for Natural Resource Injury: Beyond Tort*, in Richard L. Revesz and Richard B. Stewart, eds, *Analyzing Superfund: Economics, Science, and Law* 219, 236 (Resources for the Future 1995).

⁹² See Amartya Sen, *Rationality and Social Choice*, 85 Am Econ Rev 1, 15-18 (1995); Anderson, *Value in Ethics and Economics* at 197-216 (cited in note 15).

A. Voluntary Agency Consideration of Ancillary Risks

Suppose first that an agency actually considers health-health tradeoffs. Is it permitted to do so under existing law? Agencies have considerable flexibility here, since under current doctrine, agencies have discretion to interpret ambiguities in their governing statutes as they see fit.⁹³ If the governing statute is ambiguous, agencies should be permitted to consider health-health tradeoffs.

Sometimes, however, statutes are unambiguous on this point, and ancillary risks are excluded as reasons for regulatory action or inaction. Under the Delaney Clause,⁹⁴ for example, the FDA is generally believed to be banned from considering the possibility that the exclusion of foods with carcinogens will increase risks from heart disease. The FDA is apparently prohibited from considering this or any other ancillary risk.⁹⁵ A similar problem arises under the toxic substances provision of the Occupational Safety and Health Act, which probably bans OSHA from asking whether richer is safer, or even from balancing workplace risks against ancillary risks created by regulation.⁹⁶

But sometimes agencies are given sufficiently broad authority, and they may, if they choose, consider ancillary risks. For example, the Federal Insecticide, Fungicide and Rodenticide Act ("FIFRA") provides that agencies must ask whether pesticides produce "unreasonable adverse effects on the environment,"⁹⁷ and this term requires the agency to take "into account the economic, social, and environmental costs and benefits of the use of any pesticide."⁹⁸ Thus FIFRA certainly authorizes the EPA to consider the possibility that a regulation will create aggregate harms. The Toxic Substances Control Act ("TSCA") reads in similar terms.⁹⁹ The Clean Air Act allows the government to consider a broad range of good and bad environmental effects in requir-

⁹³ See *Chevron v NRDC*, 467 US 837, 842-45 (1984) (holding that courts should defer to reasonable agency interpretations whenever statutory language is ambiguous).

⁹⁴ 21 USC §§ 348(c)(3)(A), 360b(d)(1)(I), 379e(b)(5)(B).

⁹⁵ See *Public Citizen v Young*, 831 F2d 1108, 1117-18 (DC Cir 1987); *Les v Reilly*, 968 F2d 985, 988-90 (9th Cir 1992).

⁹⁶ On the other hand, it should be lawful to weigh health risks in the allocation of enforcement priorities.

⁹⁷ 7 USC § 136a(a).

⁹⁸ 7 USC § 136(bb).

⁹⁹ 15 USC §§ 2601(c), 2605(a), 2605(c)(1)(C) (1994). See also *Corrosion Proof Fittings v EPA*, 947 F2d 1201, 1214-23 (5th Cir 1991) (explaining that under the TSCA the EPA must consider effects on the environment, health, and the economy as well as the availability of substitutes).

ing technologies to reduce air and water pollution.¹⁰⁰ Outside of the context of toxic substances, the Occupational Safety and Health Act defines occupational safety and health standards as those "reasonably necessary or appropriate" to the goal of ensuring "safe or healthful employment and places of employment."¹⁰¹ OSHA may reasonably decide that a standard is not "reasonably necessary or appropriate" if the effect of the regulation is to lose aggregate lives. It is permitted to consider the effects of regulation in causing risks to life and health through poverty and unemployment.

We might go further. As noted, courts generally defer to reasonable agency interpretations of law. In addition, statutes are generally interpreted so as to avoid absurdity, even in the face of apparently clear text.¹⁰² For the modern regulatory state, it would make sense for courts to adopt a new interpretive principle to the effect that *agencies are permitted to minimize net risks to life and health, a principle that Congress can overcome only with a clear statement to the contrary*. This principle makes particular sense in light of the fact that the agency is in the best position to decide whether consideration of health-health trade-offs would be feasible, or instead a barrier to successful implementation of the underlying statute. Compared with courts, agencies are both technically expert and democratically accountable; they are also in a uniquely good position to obtain a systematic overview of the statutes they administer, and that position can enable them to counteract unintended harmful consequences.¹⁰³

There is a pervasive choice, central to administrative law, between comprehensive rationality on the one hand and limited information on the other. If an agency tries to administer the statute so as to move in the direction of comprehensive rationality by ensuring that ancillary health risks are considered, it should be allowed to do so. Congress should not lightly or inadvertently be taken to have forbidden agencies from ensuring that

¹⁰⁰ See, for example, 42 USC §§ 7411(a)(1), 7521(a)(3)(A) (1994).

¹⁰¹ 29 USC § 652(8) (1994).

¹⁰² See, for example, *Riggs v Palmer*, 115 NY 506, 22 NE 188 (1889) (statute clearly requiring execution of a testator's will is interpreted not to require execution if it would benefit the testator's murderer); *Church of the Holy Trinity v United States*, 143 US 457 (statute clearly prohibiting the importation of any foreigners to perform "labor or service of any kind" is interpreted not to apply to religious organizations or services).

¹⁰³ See Cass R. Sunstein, *Law and Administration After Chevron*, 90 Colum L Rev 2071, 2087-91 (1990).

regulations do not create net harm and that they create the greatest possible net benefit.

This idea casts some doubt on the courts' approach to the Delaney Clause. In *Les v Reilly*, the EPA sought to create a de minimis exception to the Clause insofar as it prohibits the use of any food additive that has been found to "induce cancer."¹⁰⁴ The FDA had made a similar argument in *Public Citizen v Young*, where the agency sought to exempt substances that created a one-in-a-million lifetime risk of cancer—the same risk that would be run if a consumer ate one peanut with the FDA-permitted level of aflatoxins once every 250 days, and a risk less than one two-hundredth the lifetime risk incurred by the average male smoker.¹⁰⁵ In both cases, the government urged in essence that "de minimis non curat lex." But in *Les*, part of the EPA's rationale came close to a suggestion that the exception may well, on balance, decrease risks to life and health. According to the EPA, the Clause might allow substances on the market that are actually less dangerous than other substances that are permitted because they do not concentrate in processed foods.

In neither case did the government seriously press the claim that the Delaney Clause, if interpreted literally, would increase health risks. Many people so urge.¹⁰⁶ If the government had done so, and offered a convincing factual demonstration to that effect, it should have been permitted to interpret the Clause so as to decrease risk on balance. The practice of statutory construction is pervaded by interpretive principles designed to give reason and justice the benefit of the doubt.¹⁰⁷ To existing principles, the courts should add a suggestion that if at all possible, statutes will not be construed so as to block agencies from taking account of health-health tradeoffs.¹⁰⁸

¹⁰⁴ 968 F2d 985, 986 (9th Cir 1992).

¹⁰⁵ 831 F2d 1108, 1111 (DC Cir 1987).

¹⁰⁶ See, for example, Merrill, 5 Yale J Reg 1 (cited in note 23).

¹⁰⁷ For a catalogue of existing principles, see William N. Eskridge, Jr., *Dynamic Statutory Interpretation* 323-33 appendix 3 (Harvard 1994).

¹⁰⁸ The strongest argument to the contrary would borrow from the idea of the penalty default in the law of contract. See Ian Ayres and Robert Gertner, *Filling Gaps in Incomplete Contracts: An Economic Theory of Default Rules*, 99 Yale L J 87 (1989) (arguing for "penalty default rules" that would manifestly not be what the parties would want in the hopes of encouraging them to make their contracts explicit). Sometimes, rules of contract law and statutory interpretation are designed to create incentives to force parties to speak clearly. Perhaps a literal interpretation of the Delaney Clause would force Congress to think in a more systematic way; perhaps an interpretive principle of the sort I have suggested would decrease that incentive. It is unlikely, however, that penalty defaults work very well in the context of statutory interpretation, and there is no good evidence that

B. Refusal To Consider Ancillary Risks

Now suppose that an agency refuses to consider, or to make decisive, the fact that its decision to reduce one risk increases another risk. Perhaps a new regulatory initiative from the NRC would increase the risks from coal-fired power plants. Is the NRC's refusal to consider such risks unlawful? The first question is whether the statute requires consideration of ancillary risks. The second question is whether, if the statute does not do so, the agency's decision is nonetheless arbitrary or capricious.

As we have seen, many statutes do not require agencies to consider ancillary risks. In any case, courts defer to reasonable agency interpretations of statutes,¹⁰⁹ so in many instances the agency will have the authority to decide whether to consider ancillary risks. If the agency has the statutory authority not to consider ancillary risks, it is unlikely, under current law, to be held that its decision not to do so was arbitrary. The judgment about arbitrariness should and probably would be based on a framework like that set out in Part III above.¹¹⁰ In an extreme case, failure to consider risks that are likely to be large, and that are not terribly costly to investigate, might be seen as arbitrary within the meaning of the APA.¹¹¹ Indeed, I believe, for reasons to be elaborated shortly, that courts should be less reluctant than they now are to find agency action arbitrary on this ground.

A great deal, of course, turns on existing information. When the data about ancillary risks are speculative or unreliable, agencies are probably not required to consider such risks.¹¹² OSHA could lawfully conclude—as it has in fact concluded¹¹³—that the evidence that “richer is safer” is too speculative to be used at this

literalism has led or is leading Congress to be more attentive to the problem of unintended bad consequences.

¹⁰⁹ See *Chevron v NRDC*, 467 US 837, 842-45 (1984).

¹¹⁰ See *Vermont Yankee Nuclear Power Corp v NRDC*, 435 US 519, 549-55 (1978) (holding that some but not all alternatives must be explored); *Motor Vehicles Mfrs. Ass'n v State Farm Mutual Auto. Ins. Co.*, 463 US 29, 46-57 (1983) (applying the “arbitrary and capricious” standard).

¹¹¹ See *NRDC v Morton*, 458 F2d 827, 833-38 (DC Cir 1972) (finding Department of Interior's environmental impact statement insufficient given the lack of investigation into alternatives and environmental consequences when the proposed action had such a large risk of negative environmental consequences). See also *California v Block*, 690 F2d 735, 765-69 (9th Cir 1982) (finding Forest Service environmental impact statement inadequate for failure to consider viable alternatives).

¹¹² See *Vermont Yankee*, 435 US at 551-55 (reaching this conclusion for energy conservation alternatives).

¹¹³ See note 56 and accompanying text.

time. Its decision to this effect ought not to be found arbitrary or capricious unless it can be shown that the evidence is in fact solid and that the costs of incorporating it are reasonable. The relevant provision of the statute—the “reasonably necessary or appropriate” language—gives OSHA discretion to do with this evidence as it chooses. Under FIFRA, by contrast, an agency that fails to consider ancillary risks would probably be violating the statute, at least on a showing that the ancillary risks are real and the costs of investigation are not excessive.

Consider in this regard the principal case involving the issue of health-health tradeoffs, *Competitive Enterprise Institute v NHTSA* (“CEI”).¹¹⁴ NHTSA establishes fuel economy standards; in doing so, NHTSA is required to consider the issue of “feasibility.” In deciding the question of feasibility, NHTSA has taken account of passenger safety, including risks created by regulation, and while there is a possible statutory issue here,¹¹⁵ everyone in *CEI* accepted NHTSA’s views on this point. The question in the case was whether NHTSA acted lawfully in refusing to relax its fuel economy standards for certain model years. Automobile companies urged that relaxation was required in order to save lives—because the existing standards would lead to “downsizing” and hence to smaller and more dangerous vehicles—and they presented strong evidence to this effect.

The agency responded that this evidence was unconvincing and that “domestic manufacturers *should be able* to improve their fuel economy in the future by . . . technological means, without outsourcing their larger cars, without further downsizing or mix shifts toward smaller cars, and without sacrificing acceleration or performance.”¹¹⁶ The court held that this explanation was inadequate. The agency failed to claim or show that manufacturers would actually fail to downsize their cars. In any case downsizing would be costly and that “cost would translate into higher prices for large cars (as well as small), thereby pressuring consumers to retain their old cars and make the associated sacrifice in safety.

¹¹⁴ 956 F2d 321 (DC Cir 1992).

¹¹⁵ The relevant statute required NHTSA to promote fuel economy “to the maximum extent feasible.” 15 USC § 2002(a)(4) (1988), repealed by Pub L No 103-272, § 7(b), 108 Stat 1379 (1994). It is not clear that this provision allows NHTSA to consider safety effects as part of its judgment about feasibility. Compare *American Textile Manufacturers Institute, Inc. v Donovan*, 452 US 490, 509 (1981) (interpreting “feasible” in 29 USC § 655(b) as not requiring cost-benefit analysis).

¹¹⁶ *CEI*, 956 F2d at 324, quoting NHTSA, Passenger Average Automobile Fuel Economy Standard for Model Year 1990, 54 Fed Reg 21985, 21966 (1989).

The result would be effectively the same harm that concerns petitioners and that the agency fails to negate or justify."¹¹⁷ The court therefore remanded to the agency for a better explanation or a change in policy.

On remand, the agency offered a somewhat better explanation. NHTSA pointed to what it saw as the absence of clear indications that fuel economy standards had caused any manufacturer to price consumers out of the market for larger, safer cars. NHTSA referred as well to an absence of manufacturer claims about the specific design standards that would result from the standards. The court found this explanation sufficient.¹¹⁸ In doing so, it applied a highly deferential standard of review.

In light of the record, however, and the predictable pressures on an agency like NHTSA, the result in the case might well be questioned. NHTSA may well suffer from a form of "tunnel vision," especially in dealing with fuel economy standards, for which there is a powerful constituency.¹¹⁹ The interests that call for attention to ancillary safety risks are typically poorly organized, and when the claims come from the automobile manufacturers, NHTSA may be too ready to distrust them. To say this is not to say that NHTSA should be required to relax its fuel economy standards. But it is to say that a demonstration of the sort made by the automobile manufacturers might well serve as a kind of warning signal to the court, requiring a solid response from the agency. In *CEI*, the agency's response could not qualify as solid, as the court itself, while affirming the agency, seemed to suggest.

A promising model for the future is provided by an important court of appeals decision holding that under a statute that required open-ended balancing of relevant factors, an agency was required to ask whether the risks that would substitute for asbestos would lead to even greater risks.¹²⁰ Thus the court emphasized that asbestos was the safest material for brake linings and that safe substitutes might not be found in other areas as well.¹²¹

The point I am making here might well be generalized. Agencies ought to be required to show that they are doing more

¹¹⁷ Id at 325 (citation omitted).

¹¹⁸ *Competitive Enterprise Institute v NHTSA*, 45 F3d 481, 484-86 (DC Cir 1995).

¹¹⁹ See Robert W. Crandall, et al, *Regulating the Automobile* 117-54 (Brookings 1986).

¹²⁰ *Corrosion Proof Fittings v EPA*, 947 F2d 1201, 1221-22 (5th Cir 1991).

¹²¹ Id at 1224. I do not mean to endorse the court's rejection of the EPA's effort at technology forcing. See note 71.

good than harm.¹²² This does not mean that courts should engage in independent review of agency judgments on this score. But it does mean that courts should take a "hard look" at agency decisions failing to undertake health-health comparisons.¹²³

V. NEW INSTITUTIONS

A. Congress

In its present form, Congress is ill equipped to consider the problem of health-health tradeoffs. Its committee structure ensures a high degree of fragmentation and does not allow for deliberation on such tradeoffs. On the contrary, that structure makes ancillary risks difficult to evaluate or, much worse, to see. Often ancillary risks are thought to be subject to the jurisdiction of another committee, which means, in practice, that coordination is extremely difficult. In these circumstances, I offer two simple suggestions for legislative reform.

First, Congress should create a new legislative committee entrusted specifically with the power to assess aggregate risk levels, to compare risks, and to initiate revision of statutes that increase net risks. This committee should have the authority to introduce corrective legislation when a statute, or agency action under a statute, has been shown to increase aggregate risks. Congress's current efforts in this regard are far too modest. Speaker Gingrich's introduction of a regular "Corrections Day"¹²⁴ may provide some modest deterrence and offer protection against abuses, but it is far too irregular to provide the sort of coordination that is needed. No institution in Congress is in a position to ensure against selective attention in lawmaking; a new committee could help solve this problem.

Second, Congress should address the problem of health-health tradeoffs through a new directive in the Administrative

¹²² See generally Edward W. Warren and Gary E. Marchant, *"More Good Than Harm": A First Principle for Environmental Agencies and Reviewing Courts*, 20 *Ecol L Q* 379 (1993).

¹²³ For an early application of the "hard look" doctrine, see *Scenic Hudson Preservation Conference v FPC*, 354 F.2d 608 (2d Cir 1965) (explaining that the court's duty is "to see to it that the Commission's decisions receive the careful consideration which the statute contemplates" and holding that the FPC had failed to compile a record sufficient to support its decision).

¹²⁴ "Corrections Day" was suggested by Speaker of the House Newt Gingrich as a separate calendar to "correct" ambiguous, arbitrary, or ludicrous laws and regulations. See *Establishing a Corrections Calendar in the House of Representatives*, H Res 168, 104th Cong, 1st Sess (June 16, 1995), in 141 *Cong Rec* H6104-16 (June 20, 1995).

Procedure Act. Notably, recent initiatives designed to require cost-benefit balancing say almost nothing about this problem. The principal exception is a House bill introduced in 1995, which contains a subsection entitled "substitution risks." This subsection says that "[e]ach significant risk assessment or risk characterization document shall include a statement of any significant substitution risks to human health, where information on such risks has been provided to the agency."¹²⁵

But this is a strikingly modest initiative. It does not require agencies to investigate ancillary risks on their own. Nor does it say that agencies may not proceed unless the regulation yields net benefits. I suggest instead a new amendment to the Administrative Procedure Act: "*Agencies shall ensure, to the extent feasible, that regulations do not create countervailing risks that are greater than those of the regulated risk.*" A modest forerunner of this idea can be found in the "clean fuels" provision of the Clean Air Act, which says that the Administrator of the EPA may not prohibit the use of a fuel or fuel additive "unless he finds . . . that in his judgment such prohibition will not cause the use of any other fuel or fuel additive which will produce emissions which will endanger the public health or welfare to the same or greater degree than the use of the fuel or fuel additive proposed to be prohibited."¹²⁶ This idea should be generalized. The words "to the extent feasible" are necessary because some investigations are too costly and speculative to be worthwhile.

B. Executive Branch

OIRA has been entrusted with the power to coordinate regulatory policy and to ensure reasonable priority setting.¹²⁷ In the Clinton administration, OIRA appears to have become an advisory body, more limited in its power than it was in the Bush and Reagan administrations. In view of the absence of good priority setting, and the enormous room for saving costs and increasing regulatory benefits, this is highly unfortunate.

¹²⁵ HR 1022, § 105(4), in 141 Cong Rec at H2263 (cited in note 6). HR 1022 was incorporated into HR 9 with this language fully intact. See 141 Cong Rec H2623, H2633, H2639 (Mar 3, 1995).

¹²⁶ 42 USC § 7545(c)(2)(C) (1994).

¹²⁷ See Exec Order No 12291 §3, 3 CFR at 128-29 (cited in note 4) (organization under Reagan); Exec Order No 12866 §§ 4, 6, 3 CFR at 642-44, 644-48 (cited in note 5) (organization under Clinton).

OIRA should see, as one of its central assignments, the task of overcoming governmental tunnel vision, by ensuring that aggregate risks are reduced and that agency focus on particular risks does not mean that ancillary risks are ignored or increased. This is a more modest and particularized version of Justice Breyer's larger suggestion that OIRA should have a power to set priorities by diverting resources from smaller problems to larger ones.¹²⁸ It also fits with the emerging interest in "common sense government."¹²⁹ No body in government is now entrusted with the authority of ensuring that risk regulation is managed so as to ensure global rationality and coherence. OIRA is well situated to take on that role, at least by attending to the possibility that regulation of some risks may make risk levels higher on balance.¹³⁰

CONCLUSION

On the fiftieth anniversary of the Administrative Procedure Act, it would be far too simple to say that the administrative state has been a failure. In many ways, it has been a substantial success. Risks to safety and health are much lower than they have been in the past, partly because of regulatory safeguards.¹³¹ But current programs are far more costly, and far less effective, than they should be. Reforms to the APA, as that Act was originally envisaged, would be much too modest to provide adequate correctives. Existing difficulties cannot be solved by weakening or intensifying standards of judicial review, or by increasing or decreasing the procedures that are required before agencies undertake regulatory action.

As the twenty-first century approaches, it is especially important to design regulatory institutions that counteract the identifiable problems of modern regulation. These problems usually stem from selective attention in the form of inadequate concern for setting priorities, for providing good incentives, and for minimizing harmful side-effects. The relevant reforms would

¹²⁸ See Breyer, *Breaking the Vicious Circle* at 59-72 (cited in note 9).

¹²⁹ See Al Gore, *Common Sense Government: Works Better and Costs Less* (US GPO 1995) (Third Report of the National Performance Review).

¹³⁰ See also the suggested role for the President's science advisor in integrating risk management in Harvard Group on Risk Management Reform, *Reform of Risk Regulation: Achieving More Protection at Less Cost*, 1 Human & Ecological Risk Assessment 183, 190-93 (Amherst Scientific 1995).

¹³¹ See the evidence in Easterbrook, *A Moment on the Earth* (cited in note 13); Graham and Wiener, *Confronting Risk Tradeoffs* at 6-10 (cited in note 13).

justify an Administrative Substance Act of the general sort that is receiving considerable current attention in Congress.¹³²

Among the principal side-effects, not well addressed in current proposals or existing law, is the increased risk sometimes produced by risk regulation. Selective attention of this kind is a natural outcome of the cognitive limitations of human beings; sometimes it is the product of self-conscious efforts by well organized private groups. In any case, selective attention can easily be exploited by such groups intent on redistributing resources in their favor. This is a significant problem, and through some simple steps, something can be done about it.

I have emphasized that tradeoffs among risks ought not to be based on a unitary metric, for reasons of both law and basic principle. Lives are not commensurable with costs; lives are not even commensurable with lives. The context in which life is put at risk matters a great deal. But tradeoffs must nonetheless be made. The problem is that public institutions do not undertake this task in a self-conscious manner. New institutions should be designed so as to overcome the cognitive problems and to ensure that the relevant tradeoffs are made in a way that entails more knowledge and more deliberation. Above all, institutions should be created to ensure that risk reduction is pursued more frequently than risk redistribution. To accomplish this task, it is necessary to take steps to limit the effects of myopia, selective attention, and interest-group influence in the regulatory process.

I have suggested several possible steps. Under existing law, agencies should often be understood to have the authority to engage in health-health tradeoffs, and they should exercise that authority far more often than they now do. Courts should play a modest but catalytic role in encouraging agencies to increase aggregate risk reduction. They should do so, above all, by adopting an interpretive principle authorizing agencies to perform health-health analysis unless Congress has expressly forbidden them from so doing. Congress should create a new committee designed to rank risks and monitor risk regulation for overall coherence; it should also add to existing legislation a general requirement that agencies consider all risks, to the extent that this is feasible. Finally, OIRA (or some similar institution) should undertake the process of scrutinizing risk regulation to ensure that agency action does not suffer from the kinds of tunnel vi-

¹³² See S 343 and HR 9, discussed in Sunstein, 48 *Stan L Rev* at 269-86 (cited in note 7).

sion, and susceptibility to both anecdotes and interest groups, that are exemplified by so much of modern risk regulation.

