

Global Public Goods and the Problem of Global Warming

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I. The Nature of Global Public Goods

A. Background

What great blessings or scourges have befallen humanity? Consider issues as disparate as greenhouse warming and ozone depletion, the Internet and William Shakespeare, the East Asian financial crisis and money laundering, the Black Death and the discovery of antibiotics, terrorism and nuclear proliferation. What do they have in common? Each is an example of a complex system whose effects are global and resist the control of individuals and even the most powerful governments. These are examples of global public goods, which are goods whose impacts are indivisibly spread across the entire globe.

In this lecture, I will discuss the intractable and sometimes frightening issues raised by global public goods. This class of problem is becoming more important in today's world because of trends in economic growth and technological changes, particularly because of the astounding decline in transportation and communication costs.

What makes global public goods different from other economic issues, however, is that there is no economic or political mechanism for resolving these issues efficiently and effectively. If a terrible storm destroys a significant fraction of America's corn crop, the reaction of prices and farmers will help equilibrate needs and availabilities. If France's road system needs modernization, its government can undertake to raise the necessary resources and develop an efficient transportation system. But if problems arise for global public goods, such as global warming, there is no market or government mechanism which contains both political means and appropriate incentives to implement an efficient outcome. Markets can work wonders, but they routinely fail to solve the problems caused by global public goods.

The present lecture analyzes the economic and political dilemmas raised by global public goods. I will proceed in three parts. I begin with a description of the

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nature of global public goods and provide some important examples. I next describe alternative mechanisms for provision of global public goods. The final section investigates the issues raised by one of the most important global public goods, global warming; this third section reviews the science, discusses the Kyoto Protocol, and proposes an alternative approach which might be more efficient and practical.

B. The Character of Global Public Goods

1. Public v. private goods

Most of economic life involves voluntary exchange of private goods, like pommes frites or blue jeans. These are commodities consumed by one person and which directly benefit no one else.

However, many activities involve externalities, which involve involuntary spillovers. A polar case of a positive externality is a public good. Public goods are commodities for which the cost of extending the service to an additional person is zero and for which it is impossible or expensive to exclude individuals from enjoying. In other words, public goods have two key properties: non-rivalry and non-excludability. Non-rivalry denotes that the consumption of the public good by one household does not reduce the quantity available for consumption by another household. For example, suppose that a government provides geopositioning signals. People who find their location are not reducing the value of signals for others.

The second feature of a pure public good is non-excludability. This means that no household can be excluded from benefitting from or being affected by the public good; or it might be that people can be excluded when the provider of the service pays a very high exclusion cost. In the case of smallpox eradication, once smallpox was eradicated, no person can be excluded from the benefits.

The important point about public goods is that private markets generally will not guarantee efficient production. In this respect, then, production of public goods like developing a vaccine for malaria differs from production of pommes frites. Efficient production of public goods requires collective action to overcome the inability of private firms to capture the benefits of a cure for malaria. The inefficiencies are the greatest for global public goods, whose benefits are spread most widely across space and time.

In reality, there are many shades of privateness and publicness - there are "pure" public goods and "impure" « public goods. Consumption of pommes frites probably has some public-good qualities through the fertilizers, the transportation system, and the garbage involved. Few public goods are really pure because most public goods have some privateness at different points of space or time. The international monetary system from Newton's gold standard to today's complicated multiple reserve-currency system (including the new Euro) has public good characteristics. Troubles in tiny Thailand or (economically) tiny Russia can lead to contagions much like those of war or pestilence. But these are "impure" public goods because different interventions have differential systemic impacts. Global public goods are ones that are as close to the theoretical extreme

of pure public goods as can be found in that their impacts affect the entire globe for a long time to come.

2. Stock externalities

One of the distinguishing features of global public goods is that they are generally "stock externalities" This term means that the impact or damage at issue depends upon a stock of capital or pollution which accumulates over a long time. In the case of global warming, the impact of greenhouse gases depends upon the concentrations of greenhouse gases in the atmosphere rather than on the currently flow of emissions. A flow externality would be something like noise pollution or road congestion, which are a function of the "flow," of sound or of road traffic.

Most important global public goods involve some kind of stock - stocks of pollution, stocks of knowledge, biological or genetic stocks, "reputational" stocks in the case of monetary systems, and "institutional stocks" in the cases of market and democratic systems.

Being stock externalities gives global public goods special characteristics. By their nature, stocks accumulate, often very slowly, so that it may be difficult to recognize the symptoms of the disease until it is too late to cure. Moreover, because stocks accumulate slowly, stock externalities often have long-lasting consequences and are irreversible or near-irreversible. For example, once the stock of a species has disappeared, it is gone forever as a viable biological system. Because of the long time lags, the impacts may arise far in the future, which lends enormous uncertainties to the problem. Our actions today will affect the climate many decades in the future, but who knows where, when, how, or how much? The stock character of global public goods has important implications for the economic and political difficulties in managing these resources.

C. Difficulties in the Allocation of Global Public Goods

Having discussed some of the characteristics of global public goods, I next analyze two major issues that arise in the provision of these goods.

1. Cooperative and Non-cooperative Regimes

The first issue involves the regime. We can envision two general sets of regimes for global public goods. At one extreme is a non-cooperative regime, with no effective international agreements; this is the case for antibiotic resistance and global warming at present. In such cases, individuals and nations are likely to act in their perceived self-interests, and the global equilibrium would therefore be a non-cooperative equilibrium. Where the global public good is quite diffuse, the degree of underinvestment might be severe. Economic modeling indicates that non-cooperative national policies for global warming would be little different from no policies. at all.

The ideal regime for global public goods would be a cooperative regime, in which countries negotiate a binding agreement to ensure efficient provisions of the public good. While perfect cooperation is unlikely ever to be found, the World

Trade Organization and the Montreal Protocol come close to meeting their objectives of promoting free and open trade and of phasing out ozone-depleting chemicals. The nature of a cooperative regime like that for CFCs is that it sets an efficient objective for the global public good; that it incorporates all important countries into the agreement; that there is monitoring of compliance; and that there are strong incentives for compliance.

2. The Westphalian dilemma

The second issue concerns what I call the Westphalian dilemma. National governments have the actual power and legal authority to establish laws and institutions within their territories; this includes the right to internalize externalities within their boundaries and provide for national public goods. Under the governing mechanisms of individual countries, whether they be legislative acts or despotic decrees, they can take steps to raise taxes or armies and command their citizens to clean their air and water.

By contrast, under international law as it has evolved in the West there is no legal mechanism by which disinterested majorities can coerce reluctant free-riding countries into mechanisms that provide for global public goods. Participants of the Treaty of Westphalia recognized in 1648 the Staatensystem, or system of sovereign states, each of which was a political sovereign with power to govern its territory. As the system of sovereign states evolved, it led to the current system of international law under which international obligations may be imposed on a sovereign state only with its consent.

Although nations, particularly the United States, are quite attached to their sovereignty, the Westphalian system leads to severe problems for global public goods. First, the requirement for unanimity is in reality a recipe for inaction. Particularly where there are strong asymmetries in the costs and benefits (as is the case for nuclear non-proliferation), the requirement of reaching unanimity means that it is extremely difficult to reach universal agreements. Second, because the international organizations that are established to provide global public goods are often far removed from national politics, they are generally highly bureaucratic and undemocratic. Even when they are run by democratic governments, as is the case of the International Monetary Fund and the World Trade Organization, they do not have many of the characteristics of a democratic organization, such as openness and accountability.

To the extent that global public goods may become more important in the decades ahead, one of our major challenges is to devise mechanisms that overcome the bias toward the status quo and the undemocratic nature of current international law. It is hard to resist the observation that the Westphalian system is in fact an absurd legal standard - one in which the NATO countries are violating international law because they are taking steps to rescue 2 million victims of genocide. Just as we recognize that consumer sovereignty cannot apply to children, criminals, and lunatics, international law must come to grips with the inapplicability of the Westphalian system for important global public goods.

II Approaches to the Dilemmas of Global Public Goods

Of course, I did not discover global public goods. They have been around for centuries, and nations have been continuously working to improve difficulties posed by such problems. Having described the economic problems posed by global public goods, I now turn to a brief description of how nations have or might deal with them.

A. Non-cooperative (Market) Approaches

One approach to global public goods that is worth careful scrutiny is a market-based technological approach, which develops technologies to overcome the externality. This has been successful for many communicable diseases, where the development of vaccines has led to an inexpensive way of combating disease. In the case of global warming, a technological solution would involve either low-cost alternatives to fossil fuels or geoengineering to remove carbon or offset the radiative forcing from greenhouse gases.

These approaches have the great advantage of making this a low-cost endeavor (say on the scale of the CFCs) rather than an enormously expensive endeavor. Indeed, if the technological solution were to produce substitute fuels that were cheaper than fossil fuels, the non-cooperative market solution would also be the climate-friendly solution. The technological solution would be the happy ending to the global warming story. Unfortunately, at present it is no more than a fairy tale, like cold fusion, and we must therefore contemplate less agreeable approaches.

B. Voluntary (Non-binding) Agreements

A second and relatively inexpensive approach is voluntary and non-binding agreements between states. For example, the first phase of climate-change policies (after the Framework Convention of 1992 and before the Kyoto Protocol takes effect) relied upon voluntary and nonbinding measures.

Voluntarism generally has a bad reputation among economists because voluntary agreements have no incentives for compliance and are an invitation to free riding. In certain circumstances, however, voluntary agreements may be a reasonable approach. They have the advantage of being low-cost and governments are generally less reluctant to join them than to join binding agreements. They are often a way of developing information systems and of harmonizing the activities of governments, who already have domestic policies in this area. A non-binding agreement that appears to have been modestly successful is the system of prior informed consent (PIC) on the trade in hazardous chemicals and pesticides. This system has been embraced by industry as less burdensome than a mandatory approach and appears to have been successful in its "informed consent" arrangements.

C. Limited Contractual Approaches

The standard approach to dealing with global public goods is the "limited contractual" approach we call treaties. I will postpone a full discussion of this issue until later in this lecture.

D. Embedding in Broader Agreements

One of the major difficulties with managing global public goods is that they impose costs on the current generation while the benefits may come far in the future. This is a major problem for stock externalities like global warming, where the impacts are not only highly uncertain but likely to become of major concern only after several decades. From a political point of view, this implies that any bargain is a negative sum game (i.e., that there is no Pareto-improving solution) for the current generation. The negative-sum-game characteristic can be finessed when the current costs are relatively low and the future benefits are arguably large (as was the case for the ozone agreements). But when the current costs are high and the cost-benefit balance is not so obviously favorable, as in the case of policies to slow global warming, putting together a regime that effectively combats free riding is a daunting challenge. Simply put no present-oriented decision maker will want to participate.

One possible approach in this situation is to embed the agreement within a larger regime that itself has large benefits. This approach has been successfully employed in international trade agreements, both domestically and internationally. The idea is that because the gains from trade (and the losses from reverting to a highly restricted regime) are so large, unpleasant components can be inserted into the larger agreement. For example, developing countries like India were forced to accept unwelcome agreements on intellectual property rights (giving patent protection for Western companies) in return for getting most-favored-nation access to rich-country markets for their manufactured goods.

Similarly, a natural way to induce participation in global environmental agreements is to embed them in a larger and highly beneficial regime, such as the international trade regime. This raises many issues, however, for once the agreement is included, then inefficient protocols can be inserted without the usual checks and balances of voluntary participation. The issues involved are very similar to the problems that arise from bundling together different provisions in logrolling, where there is potential for both gains from bundling and losses from inclusion of inefficient provisions.

E. Delegate Decision Making Powers to Supranational Bodies

Moving toward a more radical approach, countries might consider delegating powers to an international body which was authorized to make substantive decisions about the global public good. While most treaties have provisions for substantive decisions by the body set up to administer the agreement, in fact the powers of the body are quite limited.

The most interesting development in the evolution of supranational organizations are those associated with the European Union, particularly the European Central Bank (ECB). The ECB has been delegated responsibilities for managing the Euro, and in these responsibilities in effect the ECB reports to no

legislature and requires no ratification of governments for its decisions. There are no supranational environmental bodies with equivalent power, although the recent Sanitary and Phytosanitary Convention lodges limited powers to establish regulations on food safety that are binding on member countries.

The appeal of a supranational body is that it can in principle weigh the global costs and benefits of different regimes for managing global public goods and can impose an efficient and universal approach on free-riding countries. At

III. Climate Change as a Global Public Good

A. Background Discussion

I began by discussing some of the general issues surrounding global public goods. In the balance of this analysis, I will focus primarily on global warming, which is the most prominent of the global public goods outside of maintaining peace.

1. The Scientific Background

Most people have a rudimentary understanding of the greenhouse effect and the prospect of global warming. The greenhouse effect is the process by which atmospheric gases selectively absorb radiation at different points of the spectrum and thereby warm the surface of the earth. Concern about the global warming arises because human activities are currently raising atmospheric concentrations of greenhouse gases (GHGs). The most important GHG is CO₂, most of which is emitted from combustion of fossil fuels. There is no doubt about the accumulation of CO₂ and little scientific doubt today about the strong likelihood of global warming over the next century and beyond if current trends in atmospheric concentrations of GHGs continue.

While the basic physics is well understood, the processes that govern the atmosphere are extremely complex. There is therefore great uncertainty not only about emissions and concentration trends but also about the consequent amount and timing of the climate change and the regional distribution of the climate change. Of particular concern is the potential for abrupt climate change, which is a documented feature of the climatic record, yet cannot be reproduced by any of the major climate models. (In this respect, climate modeling is on a par with economic modeling, which cannot faithfully reproduce or predict major business cycles.)

2. The Impacts of Climate Change

What are the likely impacts of projected climate changes over the next century and beyond? We need answers to this question if we are to design sensible public policies.

The impacts of climate change are, like much in this field, enormously complex. I begin with a review of the impacts on the market economy of high-income countries like the United States. I have investigated the degree of climate sensitivity of the U.S. market economy. Surprisingly, only a small fraction of the U.S. economy (about 2 percent) is highly vulnerable to climate change, while around 94 percent of the economy operates independently of climate.

The most vulnerable sector of the economy is the farm sector. Agriculture is likely to be significantly affected by climate change because most crops depend sensitively upon climatic variables. Current research indicates, however, that we are not sure about the sign of the impact of global warming on agriculture in temperate regions.

The balance of the economy includes sectors that have a moderate sensitivity of climate change (including recreation and construction) and sectors which are estimated to be negligibly directly affected by climate change (including most of manufacturing, services, and government).

We have very sparse evidence about the impacts on non-market activity and on natural ecosystems. There may be major impacts on unmanaged ecosystems, and I will hazard the forecast that we will see dramatic and often unwelcome changes accelerate over the coming years. How important these impacts are likely to be either economically or societally is essentially unknown. The major concern, in my view, is the potential for abrupt and unforeseen changes in climate, particularly on a regional level. A major concern, for example, is reversal of thermohaline circulation, which could lead to enormous climatic shifts in Europe. This and similar "catastrophes" are genuinely frightening prospects, but we have no reliable way of assessing their likelihood at present.

I recently surveyed estimates of the economic impacts of climate change. My best guess is that the impact on global incomes (market and non-market) of a $2^{1/2}$ degree C warming would be about $1^{1/2}$ percent of income. Current projections foresee this level of warming coming around 2100. The regional impacts range from about zero for Russia and China to 3 to 5 percent of income for vulnerable regions like Western Europe and India. These estimates indicate that most of the high-income countries outside of Western Europe would have a negligible impact of gradual climate change over the next century. The potential costs of the catastrophic impacts are more serious, albeit much less more speculative.

3. The Costs of Slowing Climate Change

In weighing public policies for climate change, we need to know not only the impacts of warming but also the costs of slowing climate change. A wide variety of approaches are available to slow climate change. Most policy discussion has focused on reducing CO₂ emissions by reducing the consumption of fossil fuels through energy conservation, alternative energy sources (some would even contemplate nuclear power), and other measures.

The shape of the cost function for reducing CO₂ emissions is one of the most thoroughly studied areas in the economics of climate change. The work in this area is relatively uncontroversial and I will therefore leave this to later discussion.

4. The Balancing Act in Climate-Change Policy

An important goal of economic research is to examine policies that will find the right balance of costs and benefits of actions to slow climate change. Because of the complexity of the entire system, scientists and economists have developed a new tool - integrated assessment models - that incorporates the major elements in the climate change dilemma.

IA models are useful for making consistent projections of the many factors and relationships in complex systems like the global economy and the global

climate system. They can also help score the relative efficiency of alternative policies. Policymakers often choose to ignore the results of models, but just as often they or the citizens they represent regret the unwillingness or inability to appreciate the proper role & quantitative analysis.

B. Regimes for Managing Global Public Goods: Appraisal of the Kyoto Protocol

So much for science and economics. In the balance of this lecture, I will inquire into how our nations and international institutions are dealing with this important global public good.

1. Quantity limitations

The standard approach to global public goods is to negotiate a treaty among nations that limits the production or quantities of a particular activity. This approach is taken in the Montreal Protocol (limiting ozone depleting substances), the International Whaling Commission (banning commercial whaling), the Convention on International Trade in Endangered Species (limiting trade in endangered species), and the London Convention on Dumping of Marine Wastes (prohibiting dumping of wastes without a permit). The Kyoto Protocol following this approach through quantitative restrictions of greenhouse gases.

2. The Framework Convention on Climate Change and the Kyoto Protocol

Although concerns about climate change have been voiced from the scientific community for at least three decades, the first major international agreement was the Framework Convention on Climate Change (FCCC), which issued from the Rio Summit of 1992. The FCCC was producing next to nothing in actual policy measures, so governments turned to the Kyoto Protocol of 1997, which includes binding commitments.

The key provision of the Kyoto Protocol is Article 3, under which Annex I countries will reduce their emissions of greenhouse gases on average by 5 percent relative to 1990 levels by the budget period 2008-2012, with each country having its own emissions limit.

Economics has suggested that allowing economic agents to trade can substantially reduce the cost of meeting an aggregate quantitative reduction target. At the urging of the U.S., the Kyoto Protocol included international emissions trading. The trading provision is contained in Article 6, which allows countries to meet its emissions-reduction target by acquiring emissions rights from other countries, although with some limits. An additional provision, the clean development mechanism, introduces the possibility of offsets from developing countries.

3. Economic Analysis of the Kyoto Protocol and Alternatives

Economists have begun to examine the economic and environmental impacts of the Kyoto Protocol. I will give a sketch of some of the results that we

have developed at Yale using an integrated assessment model known as the RICE-98 model. Based on our work with the Yale model, along with a review of other work, my assessment is that the Kyoto Protocol as currently designed has very serious shortcomings.

First, just to put this in context the Kyoto Protocol is an expensive undertaking. The abatement cost of the Kyoto Protocol is in the order of \$1 trillion (that is the net present value of future costs in today's dollars). This is truly a massive environmental program, approximately 100 times more expensive than the Montreal Protocol.

Second, the Kyoto Protocol has no rationale in economic or environmental policy. The approach of freezing emissions at a given level for a group of countries has no relationship to a particular goal for concentrations, temperature, costs, or damages. Nor does it bear any relation to an economically oriented strategy that would balance the costs and benefits of greenhouse-gas reductions.

Third, the Kyoto Protocol is also highly wasteful. The reason is that the emissions reductions under the Kyoto Protocol are "frontloaded" relative to economically efficient policies. My estimate is that Kyoto Protocol costs at least ten times more than a cost-effective plan.

Fourth, one of the major contributions of economic analysis in this area is to point to carbon taxes as an efficient tool for implementing global climate-change policy. We estimate that the carbon taxes associated with the Kyoto Protocol shoot up sharply in the early years compared to the other policies; prices are likely to exceed \$100 per ton of carbon in the controlled regions. Efficient policies have much lower and gradually rising carbon prices. The implications of such high prices for fiscal, macroeconomic, and trade policy are daunting.

Fifth, The major surprise to most people is how little contribution the Kyoto Protocol makes to reducing global temperatures over the next century. Even though the Kyoto Protocol is estimated to cost \$1 trillion in present value, it reduces the global temperature increase in 2100 by only about 0.1° C over that period.

Finally, the Kyoto Protocol has significant distributional consequences. Annex I countries pay the costs of Protocol. The lion's share of these costs are borne by the United States - the U.S. pays almost two-thirds of the global cost. By contrast, developing countries like China, India, Brazil, Korea, Indonesia, South Africa are all in compliance with the Kyoto Protocol today by doing essentially nothing, and they have no incentive to join the costly emissions-reduction program.

C. An Alternative Approach: Harmonized Policies

Current research indicates that the approach to global public goods taken in the Kyoto Protocol is economically inefficient environmentally unjustified, and politically unsalable. While these findings are consistent with just about all the economic modeling in this area, some would ask: Isn't the Kyoto Protocol the only game in town? If we reject the Kyoto Protocol, are we not left with the even more

inefficient non-cooperative solution of unchecked warming with all the dangers that that entails? Shouldn't we see the Kyoto Protocol as the first step on the road - one which sets the basic framework after which we can improve and fine tune the details?

These are good questions. And the answer may be that the Kyoto Protocol is the best that we can realistically hope for. However, in this final section, I will consider an alternative approach that might be more economical and practical. This alternative, which is harmonized policies, radically restructures the principles used in designing treaties on global public goods. The alternative is to coordinate policies through the use of prices or taxes rather than limiting emissions.

Under the price approach, an international agreement would set an agreed-upon economic penalty to impose upon carbon and other GHG emissions; countries would then agree to harmonize their fiscal policies to this coordinated price. For example, countries might select a price of \$10 per ton of carbon as a reasonable target for a penalty in the first decade. Countries would then adjust their internal fiscal and energy systems by raising the costs of emissions of carbon fuels at least to this level.

I will mention five reasons for preferring prices rather than quantities as the tool for coordination. The main advantage of the price target as opposed to the current approach of the Kyoto Protocol is that the price could be explicitly linked to scientific and economic studies. That is, the level of the carbon price could be chosen with an eye to the costs and benefits of imposing the taxes. This approach would be in contrast to that taken in the Kyoto Protocol, where there is complete disconnect between ultimate objectives and the targets of the Protocol.

Second, there is a strong presumption that stock public goods would be better managed with price-type approaches because of the major uncertainties. The reason is that, for stock externalities, the marginal costs of emissions reductions are highly sensitive to the level of emissions, while the marginal benefits of emissions reductions are independent of the emissions. Under these conditions, price-type regulation will be more efficient tools than quantitative standards when there is considerable uncertainty.

A third reason for the superiority of carbon taxes is the strong fiscal-policy preference for using revenue-raising measures rather than quantitative or regulatory measures. When prices are raised by regulations, this increases the inefficiency losses from the overall tax system - this is the "double burden" of regulation. By contrast if the carbon constraints are brought about by taxes that are then rebated through reductions in other taxes, the additional efficiency loss from higher prices is offset. Recent studies indicate that the fiscal costs might well dominate the calculation in high-income countries.

A fourth reason for preferring price-type systems is that quantity-type regulations are likely to show extremely volatile prices. The likelihood of violent price fluctuations arises because of the complete inelasticity of supply (of permits) in the quantity case along with the presumption of quite inelastic demand for

permits in the short run. The likelihood of significant volatility makes a quantity-type approach unattractive.

A final advantage of price-type approaches, particularly for global warming, is that they fit more easily into the domestic administration of most countries. To the extent that countries use carbon taxes as a means of implementing their domestic policies, this requires no vast domestic or international bureaucracy for measuring and monitoring nor any new agency to track down carbon emissions or land-use changes. Rather, carbon taxes can simply be added to the tax base along with other goods, such as energy taxes. Indeed, European countries like Sweden have already implemented carbon taxes with little administrative costs or fanfare.

D. Summary

In this discussion, I have reviewed the fascinating problem involved in managing global public goods, focusing particularly on global warming. All public goods pose severe challenges, but global public goods are even more daunting. The structure of international law and political power raises enormous obstacles to obtaining the unanimous or near-unanimous consent of sovereign nations to take collective international action. Failures are many, while successes; are few in this area.

I come with no magical solution. Neither world government nor powerful multinational institutions seems either likely or desirable. Europe is one of the few regions of the world where countries are voluntarily ceding sovereignty, while the United States revels in its legal isolationism.

I would leave you with one novel suggestion, which is to rely more upon price-type approaches to global public goods instead of the command-and-control approaches used up to now. Such approaches can more easily be integrated into current domestic institutions, are more transparent, are more compatible with existing institutions, and are likely to be much more efficient. Low cost is probably the surest route to, success for any ambitious collective undertaking.

More generally, extension of market-type approaches to the international arena would be part of an ongoing revolution in governance that began with Adam Smith in 1776. Over the last quarter-century, governments have begun to substitute market-type regulation for command-and-control regulation. In the important case of global warming, I am fearful that unless we find more efficient and politically acceptable approaches to this most important global public good, we may end up trapped in the non-cooperative solution of overheated rhetoric and minimal effective policies until it is too late or too costly to reverse the tide.