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Antidotes for the "American Disease"

Richard B. Stewart*

INTRODUCTION

It may seem surprising and perhaps presumptuous to suggest that Europe is in danger of catching a distinctively American disease: regulatory legalism. The United States and the European Community reflect significantly different degrees of political centralization and have different legal and regulatory cultures. In the United States, formal, adversarial procedures and extensive litigation burden the regulatory process. In Europe, most regulatory decisions are developed through informal processes of consultation, and litigation is rare.

Nonetheless, recent signs suggest that the European Community is vulnerable to a variant of U.S.-style regulatory legalism. Legislation in the Community increasingly relies on centralized command and control directives to specify not only the particular conduct required of regulated industry, but also the measures through which Member States must implement such legislation. Litigation concerning regulations has been, and will doubtless remain, less prevalent in the Community than in the United States. Nonetheless, Europe will experience far more regulatory litigation than it has been accustomed to. Further, reliance on command and control directives to advance environmental, health, and safety goals in the Community is already beginning to display some of the same dysfunctions that it has in the United States. In particular, the bureaucratic command and control system suffers from information-processing overload, excessive rigidity, and high administrative and compliance costs. The opaque, or at least byzantine, bureaucratic decision-making process creates a "democracy deficit." Finally, command and control techniques breed a new class of regulatory lawyers and lobbyists that seek to influence the regulatory process to benefit their clients.1 Concern over these developments may well contribute to the popular unease over the Maas-

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1. It is notable that many U.S. law firms with a Washington, D.C. practice have opened offices in Brussels.
tricht Treaty so evident in the initial Danish rejection of the Treaty and the narrowness of the French vote. 2

Regardless of whether the Maastricht Treaty is eventually ratified and in what form, the Community must decide how best to promote environmental and other social goals without diminishing flexibility and innovation in the means of their achievement. In addition, the regulatory system the Community applies must fit a large, heterogeneous federal-type system built on an integrated market economy. The painful experience of the United States in grappling with this challenge provides lessons that may enable Europe to escape the worst forms of regulatory legalism. This essay briefly surveys the reasons for the adoption of centralized environmental regulation in federal-type systems and summarizes the drawbacks of such an approach. This essay then examines economic incentives as an antidote to regulatory legalism and advocates their application to achieve environmental goals.

A variety of environmental problems arise in a federal-type system and must be addressed through centralized measures. Two of the most pressing kinds of problems are those posed by industrial products and by-products of industrial processes. 3 In the European Community, different environmental, health, and safety product regulations among states create obstacles to free trade within the common market, 4 harming consumer welfare. Member States may also seek to use product regulation to insulate domestic industries from competition. 5 For these reasons, Member States will generally benefit from the harmonization of standards.

A homogeneous federal-type system with few members may conceivably achieve harmonization by direct negotiation among states. However, a heterogenous polity containing many states will likely require central legislation. In fact, product regulatory standards have been extensively harmonized through central legislation in the United States 6

2. See Alison Smith, The Liberal Democrats at Harrogate: Danish Minister Hopes for French 'Yes,' FIN. TIMES, Sept. 15, 1992, at 12. The paper reports the remarks of Mr. Uffe Ellemann-Jensen, the Danish Foreign Minister, that the Community must become more accountable and less bureaucratic by "developing subsidiarity as a counter to centralizing tendencies." Mr. Ellemann-Jensen warned that, "Unless the Community is able to convince the European populations that we mean what we say when we talk about subsidiarity, the European integration will be brought to an abrupt halt." Id.

3. Automobile air pollution is an example of an environmental problem caused by products. Wastewater from a pulp factory would be an example of a process problem. Other problems that may call for central measures are transboundary shipment of wastes and the preservation of especially scenic or ecologically significant natural resources.


6. See ECKARD REHBINDER & RICHARD B. STEWART, ENVIRONMENTAL PROTECTION POLICY 177-78 (6 INTEGRATION THROUGH LAW Mauro Cappelletti et al. eds., 1985).
and the Community.\textsuperscript{7} The authority of an individual state to regulate products more stringently remains a contentious issue in both systems.

The need to harmonize environmental regulation of industrial processes seems less obvious. Differences among state standards do not pose direct threats to the integrity of the common market. Trans-boundary spillovers of pollution, however, require common measures. In addition, states may be reluctant to adopt strong process standards lest domestic industries be disadvantaged in competition with industries located in other states that have not adopted comparable standards. As a result, each state may adopt a standard lower than it would if it had assurances that other states would act likewise. A federal-type system can mitigate this danger by legislating a uniform minimum level of process controls. Such controls can also address, albeit indirectly, the problem of pollution spillovers.

The United States Congress has mandated far-reaching federal regulation of processes.\textsuperscript{8} Community process-regulatory legislation is significant but less extensive.\textsuperscript{9} This difference likely reflects the fact that conflicts of interest among Member States are likely to be greater in process than in product regulation. All states share a long-term interest in a common product market. However, some states may prefer economic growth to environmental quality. These states will consistently favor lower process standards than states that stress environmental protection. The Community’s voting rules for environmental legislation, which until recently required unanimity,\textsuperscript{10} have sometimes made it difficult to agree on common measures in the face of such differences.\textsuperscript{11}

I

\textbf{MADISON'S NIGHTMARE}

Central legislation controlling the environmental risks of products and industrial processes can potentially remedy some of the welfare economic “failures” of state-by-state regulation. Moreover, centralized legislation affirmatively promotes the social as well as the economic aspirations of the larger political community by transcending the limitations of local politics. In the U.S., this argument for centralized government dates from the formation of the nation: in the \textit{Federalist Papers},

\begin{itemize}
  \item \textsuperscript{7} Id. at 31.
  \item \textsuperscript{8} Id. at 177-78.
  \item \textsuperscript{9} Id. at 232, 236-39.
  \item \textsuperscript{10} \textit{See generally} Laurens J. Brinkhorst, \textit{The Road to Maastricht}, 20 ECOLOGY L.Q. 7 (1993).
  \item \textsuperscript{11} \textit{See, e.g.,} \textsc{Rehinder & Stewart}, \textit{supra} note 6, at 236-37 (an empirical study of SO\textsubscript{2} policy in Community Member States (and Switzerland) shows varied patterns of regulation and enforcement). 
\end{itemize}
James Madison justified the United States Constitution on precisely this ground.

Madison feared that local politics would be dominated by oligarchic economic and ideological factions. An extended Republic would encompass so many diverse and scattered factions that no single interest group could gain dominance, nor could coalitions be maintained permanently. Unlike their local counterparts, federal officials would be liberated from servitude to parochial and partisan interests, and would adopt measures for the common good. The political integration achieved through the Constitution's new legal structure would thus ensure governance in the common interest.¹²

Transposed into the specific context of environmental regulation, Madison's theory suggests that regulation at the state level could produce inadequate environmental protection because industrial and development interests will dominate the political process. A system of national regulation should be less subject to these pressures because it will encompass a greater array of interests, whose efforts to shape policies will tend to cancel each other out. Thus, centralized legislation will more likely reflect a long-term perspective and ensure effective environmental protection.

The actual performance of the United States regulatory state has fallen far short of Madison's expectations. Congress has delegated the task of imposing detailed controls on business conduct in order to protect health, safety, and the environment to federal administrative agencies, such as the Environmental Protection Agency.¹³ Even when the agencies enjoy highly trained personnel and extensive resources, the agencies are not equal to the task of supervising the hundreds of thousands of facilities subject to federal regulations.¹⁴ Accordingly, Congress has conscripted the states to implement and enforce federal pollution control and other federal environmental regulatory programs.¹⁵ In the process, the federal government has imposed detailed requirements and procedures on the states to ensure that they carry out this job with the stringency intended by Congress.¹⁶

The centralized regulatory state has failed to fulfill its apparent promise. Centralization has produced Madison's Nightmare. The regu-

¹³ See, e.g., Clean Air Act § 112(d), 42 U.S.C.A. § 7412(d) (West Supp. 1992) (delegating to EPA the authority to promulgate regulations establishing emission standards for sources of hazardous air pollutants).
latory decisions of federal agencies have far reaching economic and social consequences. Organized interest groups inevitably seek to influence these decisions through both formal and informal participation in the agency decision-making process, and by challenging agency decisions in court.\textsuperscript{17} Madison attributed the problem of factional domination to territorially limited government.\textsuperscript{18} However, changes in communication and transportation technology, and the evolution of large corporations, have severed much of the link between territory and interests. Instead of neutralizing special interests, the centralized regulatory state has spawned a new form of factional domination. By an irony of inversion, Madison's centralizing solution to the problem of factions has produced Madison's Nightmare: an interest-group maze of fragmented and subterranean micro-politics within the national government.\textsuperscript{19}

Centralized regulation has not produced coordinated, consistent policies. The rapid growth of federal controls has outstripped the capacity of Congress or the President to make responsibly the thousands of decisions required to dictate conduct throughout a vast, diverse, and dynamic nation. Such decisions are effectively left to federal bureaucracies and courts. The structure of these institutions produces a morass of disparate directives and decisions.

The regulatory state also spurs the formation of new factions. Since the 1960's, it has been popular wisdom that regulatory agencies are typically "captured" by the industries that they are supposed to regulate. But ideological and other economic interests, as well as regulated industries, have sought to influence agency decision-making. Organizations representing labor, government contractors, agricultural interests, environmentalists, and other client groups have arisen to join the "regulation game."\textsuperscript{20}

II
THE POTENTIAL FOR REGULATORY LEGALISM IN THE COMMUNITY

At first blush, it may seem unlikely that the Community could suffer this nightmare. The resources and authority of Directorate General XI, with responsibility for the Environment, seem pitifully small compared to those of EPA.\textsuperscript{21} The Member States still play a dominant role in the

\textsuperscript{17.} Stewart, supra note 12, at 341; Owen & Braeutigam, supra note 5, at 4-9 (summarizing the strategies—such as litigation, lobbying, co-opting experts, and using innovation strategically—that both new and established firms may employ to affect regulatory agency decisions).

\textsuperscript{18.} Stewart, supra note 12, at 342.

\textsuperscript{19.} See id.

\textsuperscript{20.} Id. at 341; see Owen & Braeutigam, supra note 5, at 2-30; Barry M. Mitnick, \textit{The Political Economy of Regulation} 79-167 (1980) (exploring various theories of the regulatory process).

\textsuperscript{21.} Congress appropriated $6.9 billion to the EPA for fiscal year 1993. Lawmakers Ap-
legislative process, despite changes in the voting rules for Community environmental legislation that have eliminated the previous requirement of unanimity in the Council and afford a greater role for the Parliament. Unlike the United States Government, the Community has no direct enforcement authority. Instead, to carry out central legislation the Community must rely entirely on implementation and enforcement by the Member States, prodded by infringement actions in the Court of Justice.22

These factors will not, however, prevent the development of regulatory legalism. Indeed, the very institutional weaknesses in the Community's position may encourage it. Community environmental policy feels a number of strains. The completion of the internal market will spur a significant increase in economic growth within the Community, which will in turn create increased pollution and waste. The recent expansion in Community membership, and the prospect of further expansion, makes it increasingly difficult to ensure uniform implementation of Community legislation by Member States. Implementation gaps created by Member States' failure to carry out community legislation are now recognized as a serious problem.23 Uniformity is undermined because Member States vary widely in the effectiveness of their implementation and enforcement of Community environmental directives.24 These variations reflect differences among Member States in the extent of popular and elite support for environmental protection, in administrative and legal resources and capabilities, and in the stage of economic development. Some states carry out Community legislation efficiently, while in others implementation is little more than a paper exercise.25

Brussels understandably responds to these strains by adopting Community legislation that particularizes the measures that must be adopted.26 The more specific the directives, the more definite the obliga-
tions of the Member States to adopt and implement national measures carrying out those directives. Such precision prevents Member States from exercising discretion to protect local industry, which would undermine effective environmental protection. Thus, greater specificity in Community legislation tends to ensure that all industries throughout the common market are subject to the same requirements, creating a regulatory “level playing field.” In addition, specific obligations provide a clear legal benchmark against which Member State performance may be measured, and which can support an infringement action in the Court of Justice. If the Commission itself exercised direct enforcement authority, such specificity would be far less necessary.27

The Commission understandably prefers to use specific command and control directives to promote environmental goals.28 This reliance on regulatory legalism, however, leads to dysfunctions similar to those experienced in the United States: adoption of rigid, uniform measures that are excessively costly and burdensome in many applications, centralized decisional overload, the growth of organized interest-group factions seeking to persuade the central decision makers to adopt measures favorable to their interests, and local resentment of and resistance to commands emanating from a remote and seemingly inscrutable central political-bureaucratic process. These problems are at present far less acute in the Community than in the United States. In the long term, however, Community environmental legislation will neither ensure strong environmental protection nor promote political integration unless it provides the flexibility needed to accommodate different national and regional situations and concerns. Today, such flexibility is largely secured by differences in the extent of Member States’ implementation and enforcement of Community environmental legislation. Such “implementation gaps” are a poor way to achieve regulatory flexibility. Nonetheless, the Community must resist the temptations to promulgate ever-

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more-detailed central directives to close these implementation gaps. If carried too far, this strategy will exacerbate the Community's democracy deficit and undermine the perceived legitimacy of Community measures in the Member States.

Popular opposition to the Maastricht Treaty in the Member States indicates that these concerns are not fanciful. There is already talk in Europe — talk reminiscent of the early Reagan years in the United States — of deregulation and devolution of responsibility to the Member States. The principle of subsidiarity, which affirms that the Community should legislate only on those subjects which can be handled better at the Community level than at the level of the Member States, is much discussed. Community regulatory policy must address these concerns. The new policy must promote a Community environmental program that is effective, responsive to the diverse conditions within and among the Member States, and sensitive to the importance of innovation and flexibility for firms competing in the internal market. Changes in regulatory instruments, including the expanded use of economic incentives, present the most powerful means of achieving these several objectives. Nonetheless, certain changes in legal remedies would also be helpful.

An effective Community environmental policy depends heavily upon the existence of active and influential environmental groups in the Member States. The Commission recognizes this fact, but currently has only a limited ability to promote their development. A useful step toward encouraging the growth of a Community-oriented environmental constituency would be to recognize, as a matter of Community law, the right of individuals and environmental groups in the Member States to secure remedies from Member State courts against failures by Member State authorities to implement or comply with Community environmental legislation. A second legal reform might grant individuals and environmental groups a direct private right of action against polluters who fail to observe the requirements established in Community legislation. In the United States, such remedies have been created through "citizen suit" provisions in federal environmental statutes. In the Community context, such remedies might be created either by Community legislation or through decisions by the Court of Justice. Indeed, the Court has already begun to recognize private remedies against Member State authorities for failing to implement Community legislation effectively.

Paradoxically, the creation of these new legal remedies could help cure regulatory legalism. The problem of regulatory legalism originates in Brussels. The remedies urged here encourage the development of Community-oriented environmental groups in the Member States. These groups would apply the new remedies to enforce Community laws and attract public support. These remedies would in many situations close local implementation gaps far more effectively than could the Commission, and would reduce the need for detailed Community legislation to ensure environmental protection. Recognition of new Community remedies within the Member States could also provide a healthy counterweight to centralized regulation from Brussels.

III

MARKET-BASED INCENTIVES

A more fundamental change in Community environmental law concerns the selection of regulatory instruments. Increased use of market-based incentives for environmental regulation in lieu of traditional command and control strategies could go far to reconcile the competing demands for effectiveness and flexibility in Community environmental policy.

There exist four basic types of market-based incentives for environmental protection. First, a regulator may impose taxes or fees based on pollution or some other index of environmental degradation such as wetlands loss. The more a source pollutes, the more it must pay to the government. Second, a regulator may implement a system of tradeable pollution permits. Under such a system, the government issues or auctions off a limited number of permits, each entitling the holder to emit a given quantum of pollution. No source may emit more units of pollution than it holds permits. Thus, the total amount of pollution is limited by the number of permits. The permits, however, can be freely exchanged, bought, and sold. Accordingly, the market, rather than government regulation, determines the allocation of pollution rights, and hence of pollution control.

Deposit and return systems comprise a third category of economic incentives. Under this type of system, government requires those who generate waste, or who produce or purchase a product whose improper

34. Id.
disposal would create waste problems, to pay a fee or deposit. The deposit is returned in whole or in part when the waste or product is properly treated, disposed of, or recycled.  

Finally, a regulator can make use of information strategies. Government can take steps to help provide consumers with accurate and useful information about the environmental effects of different products and services and the means by which they are produced, enabling those consumers who wish to buy "green" commodities to do so. The green consumers in turn provide a market incentive for industry to produce less environmentally destructive products.

All of these mechanisms advance environmental protection by creating economic incentives for industry to reduce pollution, wastes, and other forms of environmental degradation. They also provide industry with the flexibility to adopt or invent the least costly and burdensome means of doing so.

The discussion below focuses on fees and tradeable permits, because they are currently the most widely used incentives. Further, fees and taxes show the greatest potential for displacing the traditional command and control approach. Nonetheless, deposit and refund systems exhibit considerable promise in dealing with waste problems, including those of illegal transport and disposal of hazardous waste. In addition, both the Community and the United States are actively considering the appropriate role of government with respect to "ecolabelling" and other information-based strategies.

Taxes, fees, and tradeable permit systems present the most promising alternatives to command and control regulation in reducing pollution and waste generation. In both the United States and the Community, the command and control system has consistently demanded that industries apply pollution controls reflecting the best available control technology for various categories of industrial processes and products. This

36. Hahn & Stavins, supra note 33, at 10.
38. See Hahn & Stavins, supra note 33, at 7.
39. When the deposit fee is suitably high, illegal transport and disposal become unprofitable because they result in a forfeit of the deposit. For discussion of the application of economic incentives to solid waste, see Peter S. Menell, Beyond the Throw-Away Society: An Incentive to Regulating Municipal Solid Waste, 17 ECOLOGY L.Q. 655 (1990).
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approach has successfully achieved initial reductions in pollution, but displays serious limitations and inefficiencies over the long-run.43

Command and control requirements based on best available technology embody a relatively clumsy and costly regulatory approach. Central command and control regulators must determine how each of hundreds of thousands of industrial sources should minimize air and water pollution and the hazards associated with the toxic wastes these sources create.44 The volume of information needed to carry out this task inevitably overloads the regulatory center. In order to reduce such overload, central regulators typically adopt uniform regulations for each industry,45 ignoring the fact that some plants can reduce pollution much more cheaply than others and disregarding other differences among states. Administrative limitations thus prevent command and control regulators from promulgating fully efficient and appropriate regulations.

In addition, command and control regulation does not sufficiently encourage industry to develop new technologies and ways of doing business that will reduce pollution. Today the need for a regulatory system that encourages innovation is especially great because regulation has already moved industries far up the cost curve of pollution reduction.46 Substantial future reductions in emissions will only be accomplished through the development of products and production processes that pollute less.

Unfortunately, as a practical matter, the best available technology approach tends to specify end-of-pipe controls to reduce emissions of pollution after it has been generated. Compliance requires the adoption of specified technological controls, locking in today's technologies and retarding creative, new pollution-reducing measures. This limits the solutions that industry can adopt in dealing with environmental problems and often forecloses pollution preventing alternatives such as conservation or the development of entirely new processes.47

A further failure of the technology-based command and control approach is that it spawns regulatory legalism.48 In specifying the level of

43. See, e.g., Ackerman & Stewart, supra note 41, at 173-75 (discussing inefficiencies in U.S. best available technology (BAT) regulation).

44. Id. at 174 ("BAT involves centralized, uniform determination of complex scientific, engineering, and economic issues involving the feasibility of controls on hundreds of thousands of pollution sources.").


47. See Dudek et al., supra note 37, at 26 (discussing how regulations have forced automobile engineers to concentrate only on end-of-pipe emissions, which is not as effective as trying to solve overall pollution problems).

48. Command and control techniques are closely associated with "formal, lawyer-dominated procedures for decisions by regulatory agencies and . . . court litigation to review the
controls which industries must achieve, central planners in effect determine how much each plant and facility should contribute to clean air and water. This exercise requires the regulators to examine the details of industrial processes and the availability and cost of control technology and specify required control technologies or levels for each plant, production unit, or pollution source. This system of central planning through legal directives creates economic rigidities, delays, transaction costs, and other dysfunctions.49

Fees and tradeable permit systems can cure these several failings of regulatory central planning. Both fees and permits use price signals as incentives to industries to reduce environmental degradation. Fees or taxes impose a direct price on pollution. Under a tradeable permit system, permits carry a positive market price because their supply is limited;50 the effect is the same. Unlike a central planning technique that tells each firm what it should do, fees and tradeable permit systems tell industry: "Here is the social cost of pollution; it is up to you to find out the cheapest way of minimizing that cost." Typically, some sources can reduce pollution far more cheaply than others. Under the price system, they will do a lot of cleaning up, and will either pay less in taxes or hold fewer permits.51 Sources for whom it is more expensive to clean up will reduce pollution less and pay more taxes or buy more permits. As a result, an economic incentive system will significantly reduce the total social cost of achieving any given level of pollution control. The cost savings vary, but they can run anywhere from twenty to thirty percent to as much as fifty percent or more.52 Society will willingly spend only a limited sum for environmental protection. The enhanced cost-effectiveness of market-based incentives means that one can get far more environmental protection for the same amount of money by using economic incentives rather than the command and control approach.

Systems of fees and tradeable permits also provide greater incentives for innovation than do regulations requiring best available technology. Under an economic incentive system, firms face strong incentives to develop more effective ways of reducing pollution. A firm that does so will reduce its payment of pollution fees to the government, or will make money by selling some of its existing permits, thereby gaining a competitive advantage over rivals. Accordingly, reducing pollution can be profit-

49. See Stewart, supra note 12, at 343 (discussing central planning and its associated problems).
51. Id. at 85, 110-11.
52. See Hahn & Hester, supra note 35, at 361; Ackerman & Stewart, supra note 41, at 176-77 n.12.
able for a company. The scope for innovation is broad; sources can select any available means of reducing pollution or waste generation. The reductions can be achieved through new production processes, conservation, or changes in raw material inputs, as well as the more traditional end-of-pipe controls.

Finally, use of economic incentives dramatically reduces the need for central planning by the government. The regulator simply monitors the output of pollution and determines either the price of pollution or the total quantity allowed. In addition, emissions must be monitored in order to ensure that sources do not cheat on their taxes or emit more pollution than allowed by the permits that they hold. Monitoring and enforcement, however, are essential to any governmental system to control pollution. The regulator need not micromanage production decisions by a vast number of firms. The regulator makes far fewer and more politically-transparent decisions, greatly reducing regulatory legalism and the conditions that create Madison's Nightmare.

The use of economic incentives for environmental protection in lieu of command and control legislation is attracting growing interest in the United States and the Community. Some Community Member States have applied effluent charges and levied pollution taxes, although in most cases the prime objective has been to raise revenues rather than to create incentives for pollution reduction. 53 A panel of experts convened by the Commission has recommended the use of economic incentives in Community environmental legislation, 54 as has the European Parliament Committee on Environment, Public Health, and Consumer Protection. 55 The Council and Commission are negotiating over a tax on carbon in fossil fuels to reduce emissions of CO₂. 56 The United States has successfully used tradeable pollution reduction credits to phase out lead in gasoline and provide flexibility in air pollution control regulation. 57 The

53. Effluent fees are imposed on water pollution in Germany and France to cover the costs of waste treatment and other water quality projects, as well as government administrative expenses. The basic purpose of the fees is to raise revenue rather than influence discharge levels. J.B. Opschoor & Hans B. Vos, Economic Instruments for Environmental Protection 37, 39 (1989) (stating that the purpose of the French system is to raise revenues, while noting that the German system has some incentive purposes); see also Craig E. Reese, Deregulation and Environmental Quality 152 (1983) (stating that while the tax raises revenues, the rates have been too low to dissuade discharges).


57. Hahn & Hester, supra note 35, at 381. EPA terminated the lead trading program at
Environmental Protection Agency is implementing an ambitious new trading program, mandated by the 1990 Clean Air Act Amendments, to halve SO₂ emissions in the United States. Southern California is developing a broad trading scheme among sources of volatile organic compounds and hydrocarbons — the precursors to ozone-type smog.⁵⁸

For reasons that are not entirely clear, there has been a much greater reliance on fees and taxes in Europe,⁵⁹ while the United States has made far greater use of tradeable permits.⁶⁰ American resistance to taxes, of course, goes back to the Stamp Act and the Boston Tea Party.⁶¹ European nations have been far more successful than the United States in imposing high energy taxes, which reduce consumption and hence pollution. Industry is likely to favor a tradeable permit system over an equivalent tax, because the practice, at least in the United States, has been to give away permits to existing firms for free rather than auctioning them off. Indeed, industry has the opportunity to make a profit by selling excess permit rights. The American penchant for tradeable permits may thus reflect relatively greater industry influence on government policy in the United States than in the Community.

What is the experience with the limited use of market based incentives that has occurred to date? In the United States, the use of tradeable permit systems has often been hampered by overhanging regulatory and other constraints. Nonetheless, the record confirms the economic advantages of market based schemes over command and control systems: greater flexibility, substantially lower compliance costs, and positive incentives for the development of environmentally superior technologies.⁶² In addition, market incentives encourage source reduction, shifts in economic activity among sectors, and structural changes. These elements should form integral parts of any pollution prevention strategy, but are not directly addressed by command and control, best available technology strategies. The Commission Task Force on the Environment and the Internal Market found that such structural changes would be needed to achieve environmental quality goals in the face of the pressures un-

the end of 1987, when the lead phasedown was complete. The lead program was very successful in meeting its environmental targets, although the benefits of the trading scheme are difficult to measure directly. Hahn & Stavins, supra note 33, at 17

⁵⁸. For a review of these and other applications of market-based incentives in the United States, see Dudek et al., supra note 37, at 1; John P. Dwyer, The Use of Market Incentives in Controlling Air Pollution: California’s Marketable Permits Program, 20 ECOLOGY L.Q. 103 (1993)

⁵⁹. See generally OPSCHOOR & VOS, supra note 53 (discussing differences between U.S. and European pollution control).

⁶⁰. Hahn & Stavins, supra note 33, at 8-9.


⁶². See Hahn & Hester, supra note 35, at 374, 376; Ackerman & Stewart, supra note 41, at 179; Dudek et al., supra note 37.
leashed by the internal market, and that traditional regulatory controls would not be able to achieve them.\textsuperscript{63}

In the Community, trading schemes are most attractive in the case of widespread pollutants such as $\text{SO}_2$, $\text{NO}_x$, $\text{CO}_2$, and $\text{HC}$.\textsuperscript{64} A tradeable permit program for these substances would have at least four primary benefits for the Community.

First, the use of trading in Community environmental legislation would make appropriate use of the scale economies and wider comparative advantage afforded by the internal market. A Community-wide trading program would lower the costs to each Member State of achieving a given level of environmental quality, compared to the costs of achieving that level state-by-state. The cost-efficiency of incentive regulation, unachievable by Community command and control legislation, should in turn encourage the adoption of more progressive measures at the Community level.

Second, a trading system could be designed to accommodate Member State autonomy by allowing each state a free hand in the initial domestic allocation of its permit allowances. The Member State would determine how burdens of environmental compliance would be shared among its various industries and regions, rather than having the allocation fixed by Community directives.

Third, a trading system would ease the Community's "legitimacy deficit." Command and control regulation aggravates that deficit by requiring that Brussels bureaucrats issue and seek to enforce through the Member States a uniform central plan for environmental protection. Trading eases the deficit by making the basic policy choice—the overall amount of pollution allowed—more transparent, and by eliminating the need for detailed central commands.

Fourth, trading furnishes an effective and politically palatable way of transferring capital and pollution-reducing technologies from the more industrialized to the less industrialized regions of the Community. The latter can be given relatively more allowances in recognition of their need for industrial development. Firms in the industrialized regions facing relatively high costs for reducing pollution could invest in pollution reductions in the industrializing regions, where costs would likely be lower.\textsuperscript{65} These investments would include the use of sophisticated, environmentally superior technologies. Such investments, driven by competitive market forces, would encourage technological innovation and would prove more effective and less costly than expenditures by public authori-

\textsuperscript{63} See EC: Economic and Fiscal Instruments Within Environmental Policy, supra note 28.

\textsuperscript{64} Commission Expected to Consider Issue of Using Taxes to Promote Pollution Control, 13 Int'l Env't Rep. (BNA) 383 (Sept. 26, 1990).

\textsuperscript{65} See Dudek et al., supra note 37, at 46-47.
ties for the same purpose.66 This feature of a tradeable permit system provides another illustration of how trading harnesses the economic advantages of the internal market for environmental protection goals in order to create an "ecological market economy."

While pollution fees and taxes share all of the economic advantages of trading, they share only some of the political advantages. For example, taxes and fees do not permit Member State flexibility in the allocation of pollution allowances. Moreover, they do not harness market forces to transfer capital and technology to support environmentally-friendly development in industrializing regions.67

Further, marketable permit systems avoid the tension between the revenue and incentive aspects of a pollution tax or fee. In order to have a significant incentive effect, a tax must in most cases be relatively high, generating large revenues. Pollution taxes could be incorporated into the fiscal base, presumably on a revenue-neutral basis; the notion of shifting part of the tax burden from labor and capital to pollution is attractive. Finance ministers, however, want a dependable fiscal base. The very purpose of a pollution tax is to erode the fiscal base by reducing pollution. Moreover, for reasons already noted, polluting industries are likely to oppose a pollution tax more strenuously than a trading system.68

These considerations suggest that greater attention should be given to the use of trading approaches in Community legislation.

On the other hand, a tax or fee system is simpler to set up and administer. Also, a tradeable permit system requires that a well-functioning permit market develop. Accordingly, tax systems and tradeable permit systems may both have a role in dealing with pollution and other forms of environmental degradation. Nor should sole reliance be placed on market-based incentives to achieve environmental protection goals. Traditional regulatory approaches have an important role to play, for example, in controlling locally harmful toxic emissions. The environmental regulatory program of the future should follow a mixed strategy, employing different types of instruments, each in the context in which they are most appropriate.

66. The United States, under the Bush Administration, proposed a scheme of international trading in greenhouse gas reduction credits in order to channel capital and appropriate environment-friendly technology from the developed countries to the less developed countries to limit the greenhouse gas emissions associated with their economic development. See Richard B. Stewart and Jonathan B. Wiener, *The Comprehensive Approach to Global Climate Policy: Issues of Design and Practicality*, 9 ARIZ. J. INT'L & COMP. L. 83 (1992).

67. Part of the proceeds of a pollution fee or tax could be earmarked for investment in environmental protection in the industrializing regions, but investment decisions would be made by central authorities.

68. See Hahn & Stavins, supra note 33, at 8, 26 ("In particular, an emission fee or tax is much more costly to the polluting sector than is an equivalent tradeable permit mechanism, because the tax itself is a transfer from that segment of private industry to the government." (citations omitted)).
CONCLUSION

Market-based incentives can serve as an effective antidote to the disease of regulatory legalism in large, heterogenous federal-type systems such as the Community and the United States. They can help solve the problem of securing effective environmental protection in the context of a common market while accommodating the need for decentralized flexibility and innovation.

The situation in the United States and the Community is, however, different in important respects. The United States is committed to a strong national policy of environmental protection. It faces the question of how to make that policy simultaneously more effective, less costly and burdensome, and less likely to get bogged down in protracted litigation. The Community stands in a more equivocal position, particularly in light of popular opposition in the Member States to the Maastricht Treaty and the prospect of further enlargement of the Community’s membership. Moreover, many Member States lack strong Community-oriented environmental constituencies.

There will continue to be a Community environmental policy. However, the Community cannot successfully confront the remaining problems by relying on new applications of familiar command and control techniques and calls for a stronger commitment to the environment. Fresh thinking and fresh approaches are imperative. The puzzle for the Community is how to accommodate the subsidiarity principle while effectively promoting environmental protection on a common basis. Economic incentives and the creation of new legal remedies to stimulate the growth of Community-oriented environmental groups in the Member States can make important contributions toward solving this puzzle.