Marxism and Soviet Environmental Law

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This paper examines, with respect to environmental law, the statement by Professor Wolfgang Friedmann that: "[A]fter more than forty years of Soviet law, despite many basic differences between the Soviet and other legal systems, no basically new concepts or legal relationships have developed." Professor Friedmann was not an armchair legal philosopher who spun vague theories from second-hand data. He was known for his extensive first-hand knowledge of other legal systems. Indeed, this author had the good fortune to attend a symposium Professor Friedmann organized in Yugoslavia on that country's joint venture law,\(^1\) and to see first hand both Professor Friedmann's skill in grasping the essence of a Marxist legal system and his willingness to reexamine his opinions in the light of new developments and new evidence. The development of Soviet environmental law in the quarter century since Professor Friedmann first wrote these words highlights not only the basic differences between Soviet and other legal systems recognized in his statement, but also the fact that the Soviet integration of environmental protection into legally-binding, national economic planning is basically a new approach to the protection of the environment.

At the time Professor Friedmann made his statement, Yugoslavia, like all Marxist socialist countries today, presented a mixed picture of environmental quality. U.S. visitors suffered the mixture of soft coal smoke and automobile exhaust in Belgrade, but enjoyed the beauty of a restored, pollution-free Dubrovnik. Today, an observer taking a physical measurement of environmental quality indicators (such as particles in the air and impurities in the water) probably would find that the Marxist socialist countries have a quality of environment superior to that of developing countries and inferior to that of advanced capitalist countries. In this sense, there is nothing basically unique about environmental controls in socialist countries. Such an observation, however, would be a faulty, static measurement of a dynamic system. Only by understanding the basic historical and ideo-

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logical background and the current institutional structure of environmental law of Marxist countries can we answer the questions of environmental dynamics: how did the system get where it is and where is it going?

A great deal has been written within and outside the Soviet Union about the virtues and shortcomings of the Soviet system of environmental controls. This analysis does not attempt to repeat or summarize the many case studies of environmental problems. Nor does it discuss in detail Soviet legislation on the environment and the agencies that are designated to enforce Soviet environmental law. Rather, this essay attempts to analyze how various aspects of Soviet socialist thought have affected and are affecting the development of environmental law. These aspects include: faith in the ability of man to understand the laws of nature and economics and to use this knowledge to better the human condition; central economic planning; concentration of economic power in large governmental organizations; and Party control of information, speech and organized activity.

I. MARXIST THEORY

The founders of Marxist theory were well aware of environmental questions. Friedrich Engels' common-sense approach reflects a keen appreciation of the importance and complexity of environmental issues, and suggests a reasonable path toward their solution. On the other hand, Karl Marx's "scientific" labor theory of value undermines adequate economic analysis of environmental problems and can be blamed for many of the environmental disasters that have occurred under socialism. The idea of a ruling party as a repository of the truth often has prevented environmental debate.

In an often-quoted passage, Engels outlined his views on the environment:

[T]he animal merely uses external nature, and brings

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about changes in it simply by his presence; man by his changes makes it serve his ends, masters it. This is the final essential distinction between man and other animals, and once again it is labour that brings about this distinction.

Let us not, however, flatter ourselves overmuch on account of our human conquest over nature. For each such conquest takes its revenge on us. Each of them, it is true, has in the first place the consequences on which we counted, but in the second and third places it has quite different, unforeseen effects which only too often cancel out the first. The people who, in Mesopotamia, Greece, Asia Minor, and elsewhere, destroyed the forests to obtain cultivatable land, never dreamed that they were laying the basis for the present devastated condition of these countries, by removing along with the forests the collecting centers and reservoirs of moisture. When, on the southern slopes of the mountains, the Italians of the Alps used up the pine forests so carefully cherished on the northern slopes, they had no inkling that by doing so they were cutting at the roots of the dairy industry in their region, they had still less inkling that they were thereby depriving their mountain springs of water for the greater part of the year, with the effect that these would be able to pour still more furious flood torrents on the plains during the rainy seasons. Those who spread the potato in Europe were not aware that they were at the same time spreading the disease of scrofula. Thus at every step we are reminded that we by no means rule over nature like a conqueror over a foreign people, like someone standing outside nature—but that we, with flesh, blood, and brain, belong to nature, and exist in its midst, and that all our mastery of it consists in the advantage that we have over all other beings of being able to know and correctly apply its laws.

And, in fact, with every day that passes we are learning to understand these laws more correctly, and getting to know both the more immediate and more remote consequences of our interference with the traditional course of nature. In particular, after the mighty advances of natural science in the present century, we are more and more getting to know, and hence to control, even the more remote natu-

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5. Marxists, when quoting Engels, often omit this erroneous sentence. Actually, potatoes may be more rather than less dangerous than Engels thought. Ames, Dietary Carcinogens and Anti-carcinogens, 221 SCIENCE 1256, 1257 (1983).
eral consequences at least of our more ordinary productive activities. But the more this happens, the more will men not only feel, but also know, their unity with nature, and thus the more impossible will become the senseless and anti-natural idea of a contradiction between mind and matter, man and nature, soul and body, such as arose in Europe after the decline of classic antiquity and which obtained its highest elaboration in Christianity.

II. THE ENVIRONMENTAL PROBLEM IN THE SOVIET UNION

The environmental pollution cycle is represented in the oversimplified chart in Figure 1.
Insert Figure 1 as close to this point in the text as is possible.

The object of environmental controls is to achieve optimum quantity and pollution levels of waste released in the environment, as measured at point C. In the United States, the quantity and pollution levels of waste are determined through the democratic political process and through court litigation. Pollution problems are depicted vividly on independent television news broadcasts. Environmental legislation is enforced by powerful federal and state environmental protection agencies which set standards for pollution levels at the point of waste output from factories (point A), output from products, such as automobile exhaust (point B), and output from purification facilities, such as municipal sewage plants (point C). Enforcement in the United States consists largely of monitoring purification levels at points A and C, imposing sanctions on violators, and requiring products to meet certain standards for purification levels at point B.

Anyone who looks for the same pollution controls in the Soviet Union is bound to be disappointed. No democratically elected officials set environmental policy because the USSR is an oligarchic gerontocracy, not a democracy. Soviet courts do not make major policy decisions. Reports of pollution in the mass media are heavily censored. Enforcement agencies are weak and lack both the staff to monitor pollution and the political authority to bring violators into line. Environmental horror stories are commonplace. Those who ask if the Soviet Union has U.S.-type pollution controls, however, are asking the wrong question. The Soviet Union is a Marxist socialist state with a radically different economic, political and ideological system. The appropriate question is how the environment is protected within the context of such a system, and how this system affects environmental protection.

In a free enterprise system, factory owners and individuals use resources without paying for them when they discharge pollutants into the air or water or onto the land.6 Persons enjoying clean air and fresh water transfer the costs of their environmental preferences to costs of production when they obtain environmental legislation through the political process, which raises the cost of goods produced in factories that are forced to install pollution controls.7

In the United States, political pressure results in legislation setting a date for enforcement of environmental standards for the purity

of discharges at points A, B, or C in Figure 1. At least in theory, market forces then lead to the production of the necessary purification equipment. In the Soviet Union, on the other hand, public political pressure is a much less important factor and there is no free market. Nevertheless, the socialist factory manager, similar to the capitalist factory owner, has strong financial disincentives to spend on pollution controls. Furthermore, since there is no market in which pollution control equipment can be bought, no legal sanctions applied at points B and C can have significant effect.

Political pressure in the Soviet Union can be exercised only through state- and Party-approved agencies. Thus, the ministries responsible for fisheries or tourism can and do enter strong political protests against pollution by the ministry responsible for the chemical industry. Yet, the Soviet system limits the effectiveness of these protests. Production ministries and the sections of the Party secretariat that supervise them are quasi-independent satrapies. As long as the ministry for the chemical industry produces the chemicals needed by the civilian and military economies (particularly the latter) and stays within its budget, it is allowed to manage its affairs with considerable independence.

Because ordinary citizens have little political power, the Soviet government has excelled in environmental controls that bear directly on consumers and do not require manufacture of special equipment. For example, smoking is forbidden on airplanes; controls on hunting and fishing are strictly enforced; dented, rusty and unwashed private cars are banned from the streets; and graffiti and littering are not tolerated.

The significant contribution of Marxist socialism to environmental law is the idea of central planning of environmental quality. Under the Soviet system such planning is essential if any environmental protection measures are to be taken. Since there is no market to supply pollution control equipment, none will be produced unless there is a specific planners' decision to manufacture it. Although in the short run planners have had to deal with the vested interests of various industrial ministries, in the long run planners have been successful in appealing to the Politburo to favor interests of the country as a whole over the interests of particular industries.

Since decisions by central planners in the long run control the development of Soviet environmental protection, the keys to Soviet environmental law may be found in the criteria upon which Soviet

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planners make their decisions. These criteria typically take the form of legally binding prices for natural resources and guidelines for calculating project costs and benefits. Since Joseph Stalin's death, the Western-oriented marginal cost theory has replaced traditional Marxist labor theory of value, in a revolution of Soviet economic theory about the environment. This revolution in theory is leading to significant changes in legal guidelines for planning. This revolution is also changing the identity of who makes the law, as the influence of the lawyer gives way to that of the economist.

III. THE LABOR THEORY OF VALUE, MATERIALISM AND ENVIRONMENTAL PROTECTION

In Das Kapital, Karl Marx outlined the "labor theory of value" to demonstrate how workers were exploited by capitalists who expropriated "surplus value" generated by the workers. The labor theory of value undoubtedly was successful in rallying members of the working class to the socialist cause; indeed, it still has its attractions to young associates in large law firms. This theory, however, has proved to be a disastrous basis for environmental planning.

As strictly interpreted by Soviet economists of the Stalin period as well as some conservative Soviet economists today, the labor theory of value was not only a tool for demonstrating the evils of capitalism, but also a method for planning a new, better socialist society. The economists argued that all products produced in a socialist society should be valued by the labor involved in their production. Thus, the steel produced in a steel mill would be valued as the sum of the values of the coal and iron ore used as inputs plus the labor cost of the steel-workers. The coal and iron ore would be valued at the cost of their extraction. Yet, no value or cost would be attached to the destruction of farmland or scenery by open pit mining, to the exhaustion of the country's best energy and mineral reserves, or to the pollution of air, water and land by the steel mill, since none of these resulted in the production of goods incorporating human labor. This Communist Manifesto for the destruction of the environment surpassed the worst extremes of laissez-faire capitalist ideology. Contrary to Professor Freidmann's statement, this application of the labor theory of value to environmental protections indeed constituted a basically new legal concept.

The problems created by this theory were compounded by the "materialist" nature of Marxist philosophy. This materialist nature was reflected in a system of national accounts that calculated material production, but not the production of services or other benefits. Thus, operation of a chemical factory that dumped poisonous waste into a lake was tantamount to production of material goods, whereas cleanup of the same lake was not. This material production theory guided the incentives of state enterprises and ministries, all of which were evaluated by the quantity of goods produced. Even the cost-oriented reforms that gradually were adopted concentrated on minimizing the use of labor and capital inputs. Such reforms hardly helped the environment, since virtually all anti-pollution measures require substantial labor and capital inputs. Thus, the "materialist" aspect of Marxist theory has provided another uniquely Marxist contribution to environmental law.

IV. THE REVOLUTION IN SOVIET MARXIST ECONOMICS AND ENVIRONMENTAL PLANNING

A third contribution of Soviet Marxism to the environmental question has proved to be the most important. While continuing their claim to ideological purity, the now-dominant school of Soviet economists has abandoned the Marxist theories of value and material evaluation of production. By this theoretical about-face, the Marxist theory of environmental law has shown a flexibility not found in the economic theory of capitalist countries, where market and marginal cost theory seems safe from all rivals. In the period since Stalin's death, a revolution has emerged in Soviet economics in general and Soviet environmental economics in particular. Under Stalin, with the notable exception of a few courageous scholars, economics was a pseudo-science, similar to Lysenko's pseudo-biology. Since Stalin, Soviet economics has been swept by Western-style mathematical economics, and the old generation of pseudo-economists is rapidly fading away. The new mathematical economists, while engaging in a sophisticated cost-benefit analysis of environmental programs, pay only lip-service to Marxist principles. The economists' careful documentation of the costs of environmental pollution has been extremely influential in recent Soviet policy-making, and probably will result in a gradual improvement in the Soviet environmental situation. Unlike government officials in many Western countries, who largely base environmental standards on political grounds, Soviet planners increasingly are referring to these mathematical economists for aid in making environmental policy decisions.
The paradoxical result of this reliance on modern, mathematical economics is that some aspects of Soviet environmental policy are closer to the recommendations of leading U.S. economists than is U.S. environmental policy-making. Environmental economists generally criticize two aspects of U.S. environmental policy. First, environmental criteria often are determined without a proper weighing of the costs and benefits of pollution. Second, the criteria are applied uniformly with no consideration given to the differential costs of cleanup measures. One remedy is more careful cost-benefit analysis before setting environmental standards. Another remedy is the use of economic incentives, such as pollution charges, rather than administrative controls, to secure compliance with environmental standards. The theory of a pollution charge is that by setting a given fee for polluting and/or offering a fixed incentive for cleanup, economic efficiency can be achieved and the expense of administrative controls can be avoided. Those polluters who can easily reduce polluting activities will do so; those polluters for whom such reduction would be expensive need not; and others may be encouraged by incentives to enter into cleanup activities.

Cost-benefit analysis has been adopted enthusiastically by Soviet planners. Pollution charges have been adopted, but such charges cannot be a fundamental solution to environmental problems because there is no market to make them work. Even so, a successful example has been the long-standing Soviet bottle deposit program which provides for very substantial deposits (about one quarter hour's pay at the minimum wage) on soft drink and alcoholic beverage bottles. The result is that Soviet streets are totally free of beverage containers.

With the exception of a rapidly diminishing number of attacks from the dwindling and retreating economic old guard, Soviet economists have adopted a position on environmental economics that lies in the mainstream of modern marginal cost-benefit economics. They

argue that all natural resources should be valued at marginal cost, and that the goal of economic planning should be to maximize social benefit, not material production. "Limit expenditures" is often used as a euphemism for the suspect term, "marginal cost."

Many Soviet economists now ignore the labor theory of value. Some redefine it so as to be consistent with marginal cost theories. The difference between marginal cost and labor input is defined as socialist differential rent (good), as contrasted with capitalist surplus value (bad).

Within this new orthodoxy, there is still extensive research and vigorous debate on topics similar to those discussed by Western economists, such as the valuation of tourist amenities, or the accuracy of computer models of environmental issues.

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Is this revolution in economic thought on the environment leading to a revolution in Soviet practice? Many Soviet environmental problems continue to exist. There are signs, however, that the economists' theories will prevail in guiding the long-term development of Soviet environmental law. If these theories prevail, Marxism in its broadest sense will be achieved: the idea of faith in human ability to understand the complex interaction of history, politics and economics, and the use of this understanding to make a better world. Progress will come most quickly in those areas where present environmental policies that favor the interests of particular ministries and departments of the Soviet government are perceived by the Politburo as contrary to the interests of the Soviet Union as a whole. If gains in production from omission of environmental protection measures do not exceed the losses to farming and fisheries, and losses in labor days due to sick leave, and if these losses can be demonstrated, as environmental economists now argue to planners and policy-makers, then changes in policy may be expected.

The first major change has been the setting of specific guidelines for calculating when environmental expenditures should be made. The environmental protection measures taken in the Soviet Union depend not upon the language of laws setting acceptable pollution levels nor upon the enthusiasm with which they are enforced, but upon the decision of state planning officials to order the construction, installation and operation of pollution control equipment and upon the incentives planners create to implement their orders. Thus, to find the applicable law of environmental protection in the Soviet Union is to look first at the internal guidelines of the State Planning Committee and second at the incentives and sanctions provided to ensure that environmental protection plans are fulfilled. Not all the internal guidelines of the State Planning Committee are available to the foreign researcher, but a guideline published in 1980, entitled "Temporary Methodology for Determining the Economic Effectiveness of Measures for the Protection of the Environment," provides important clues to determining how environmental measures are planned. This guideline provides for a cost-benefit analysis of projected environmental expenditures, with particular emphasis on the measureable

external benefits, but without inclusion of certain "quality of life" factors.

The guideline begins with a general benefit-to-cost ratio equation for use in making planning decisions on environmental measures. The ratio is as follows:

\[ \frac{\sum_{i=1}^{n} \sum_{j=1}^{m} E_{ij}}{A + N \cdot K} \]

In this equation, \( E(i)(j) \) is the benefit from the \( i^{th} \) type of effect on the \( j^{th} \) object, \( A \) is the annual cost of operating and maintaining the particular measure, \( K \) is the capital investment required, and \( N \) is a coefficient of effectiveness. Translated into words, this ratio can be stated as the sum of all the beneficial effects divided by the sum of both the annual costs and some percentage of the capital costs.

While a fair and accurate calculation of the annual costs of operating an environmental protection device, such as a water treatment facility, is generally possible, the calculation of the benefits is obviously more difficult. The coefficient \( N \) for effectiveness is an arbitrary figure, serving as a combined discount rate and depreciation factor, though to some extent depreciation is included in the annual maintenance part of the annual cost. The setting of "coefficients of effectiveness" is highly debated among Soviet economists. As Marxists, the economists have had difficulty in assigning value to capital; as practical planners, some assignment of value to capital has been essential. One tactic has been to use a term other than an "interest" or "discount" rate, such as a "coefficient of effectiveness." To the extent that this coefficient is a pure discount rate, economic theory would require its consistent usage throughout the economy. Soviet economics, however, only gradually has overcome the practice of favoring heavy industry with a lower coefficient of effectiveness. The guideline sets the uniform rate at 12\%, pending further issuance of special regulations for individual branches of the economy.

The guideline also provides for inclusion of specific types of economic effects in the benefit calculation, which divide into two categories: general effects and operational effects. The former are benefits external to the accounting unit that incurs the environmental expense; the latter are benefits within the accounting unit itself.

The first category of effects or benefits includes decreased production losses from sick leave, lower social insurance payments and lower health care costs. The formulas are weighted somewhat in favor of the environment. For instance, the formulas allow for the...
consideration of production loss and sick pay without the consideration of wage savings for absent employees, and the consideration of social insurance disability pay savings and health care savings, without the considerations of savings in pension and health care costs for those who die early because of pollution. No account is taken of the value to citizens of being able to breathe clean air and enjoy clean water, except to the extent that this value is reflected in health costs. The calculations are somewhat similar to those a farmer might make in deciding how much to spend on purifying the air in the barn and the drinking water to keep the farm's livestock healthy.

The failure to measure these indirect personal benefits may be related to the fact that they are not "material," but this failure does not reflect any inevitable feature of Marxism. Soviet economists already have called for calculation of the costs of such benefits. Rather, the failure to calculate indirect personal benefits reflects both the difficulty of measurement and their lower overall priority for the Soviet leadership.

A second category of effects or benefits are those that directly touch the production process either in the polluting enterprise or in some other unit. These effects include savings from less wear on equipment, increases in agricultural output, increases in the value of output, improved quality of output, and reduction of cleaning. Soviet planners face the serious problem of the continuing failure of the price system to provide accurate data for cost calculations. For instance, calculation of improved quality uses the following formula:

\[ B = V \cdot [(P_1 - C_1) - (P_2 - C_2)] \]

In this equation, \( V \) is the volume of production and \( B \) is the benefit. \( P_1 \) and \( P_2 \) are the new and old prices respectively (not including taxes). \( C_1 \) and \( C_2 \) are the new and old costs respectively.

The value of this cost-benefit calculation depends entirely on the validity of the prices. Yet under Soviet economic conditions, there is no indication that price reflects social value.

The second step in the cost-benefit calculation is the determination of the costs. The guideline considers two situations, those involving only short-term costs and those requiring long-term capital investments. The instance involving short-term costs is of course simpler and uses the cost formula:

\[ C + N \cdot K \]

In this equation, \( C \) is the annual cost, \( K \) is the capital expenditure, and \( N \) again is the arbitrary coefficient of capital effectiveness, temporarily set by the guidelines at 15%.
For longer term capital investments, the cost guideline used is:

$$K_o + \sum \frac{K_t + C_t}{(1 + E)^t}$$

In this equation, $K_o$ is the initial capital investment and $K_t$ is the extra investment in $t^{th}$ year. $C_t$ is the operating cost during the $t^{th}$ year. $E$ is the discount rate, set to 8% for regular investments, 10% for new technology, and 3% for reforestation. While the formula looks scientific, the outcome depends upon the value subjectively chosen for $E$, the discount rate.

Information is not available on how certain data—such as the amount of sick leave needed due to environmental problems are obtained, or even whether environmental calculations are in fact made. Nor is there much information on the extent to which determined results lead to concrete plans that are made and enforced. Admittedly, this attempt at cost-benefit analysis could be improved. Soviet economists are well aware of this, and are engaged in a vigorous debate over how environmental costs and benefits should be calculated.

Assuming that a cost-benefit calculation is made and economists find, for instance, that putting a smokestack scrubber on a particular power generating plant is beneficial to Soviet society, what steps will the planners take to incorporate this conclusion in the plan and what assurances are there that the plan will be implemented? Given the interlinked nature of the Soviet planning system, a number of steps are necessary in order to reach the stage where the scrubber is installed. Production plans of scrubber factories must include enough output to provide a scrubber for this particular plant. The system of planned contracts must force conclusion of a contract by the plant to buy the scrubber. Unfortunately, there are problems in the Soviet planning system that create disincentives for the operation of this plan. A production enterprise which adds a scrubber may suffer a temporary production loss while the scrubber is being installed, and the enterprise's return on invested capital will be lower as long as the scrubber is on its books. The scrubber requires energy to operate and this energy expenditure will reduce the efficiency of operations measures used by planners to reward enterprise officials. Thus, even though the cost of the scrubber is planned as part of the budgeted expenditures, the enterprise may resist its delivery and installation, unless the planners make perfect allowance for the direct and indirect costs associated with the scrubber's installation and use.

Soviet law generally has answered these problems by imposing civil, criminal and administrative responsibility for pollution upon en-
enterprises or their managers in order to force them to obtain the necessary equipment and to use it. The politics and incentives of Soviet industry, however, have prevented local authorities from effectively enforcing this legislation. The Soviet leadership has taken two approaches to solving this problem of enforcement. First, some power has been transferred from local authorities to more effective national bodies that possibly could exert more authority. In particular, the State Committee on Hydrometeorology and Environmental Protection is rapidly being built into a national environmental protection agency. Second, increasingly stiff penalties are being built into laws. Numerous Soviet economists, however, have pointed to the need for radical reform in how environmental issues are reflected in legislation which calculates rewards and bonuses for management. Essentially, the economists suggest that the measurement of an enterprise's success should not be determined by gross output, gross sales or gross profits, but rather by the net benefit conferred on society.

Some Soviet economists have pointed out and some Soviet journalists have complained that a number of factors in the present system of formal and informal incentives for Soviet state enterprises tend to discourage installation, use and maintenance of environmental protection equipment. While gross output has been abandoned as a formal legal indicator of enterprise success, most enterprise managers still expect informal evaluation on this criterion. Formal success indicators include sales volume and cost effectiveness, but the way these indicators are calculated at present creates problems when establishing formulas on which to base the law. This is particularly true of the cost-effectiveness indicator. Economic reforms in the 1960's and 1970's introduced a charge for capital. This charge, along with an amortization charge, directly affects the cost-effectiveness indicator. The result is that the addition of expensive pollution control equipment to an enterprise will reduce the cost effectiveness of the enterprise and thus will require an adjustment in enterprise cost-effectiveness targets. Even if this adjustment is made, however, the enterprise still will be tempted to shirk on maintaining and operating the pollution control equipment, since operating the equipment will require expenditures for labor and energy and result in less favorable labor and energy figures in the enterprise's profit and loss statements. Sales volume also may be affected if the enterprise has to reduce output (for instance, by shutting down certain operations that cause air pollution during days when atmospheric conditions are unfavorable).

If the enterprise develops new, non-polluting products, there is no guarantee that the price set for these products will compensate for the added costs involved. Recent reforms measuring enterprise results by "value added" may encourage environmental measures by counting them as part of the added value.

Many Western economists have proposed a charge for pollution as the most rational way of distributing the costs of pollution abatement. Professor K.G. Gofman, the most capable Soviet environmental economist and the head of a "laboratory" at the Central Economic Mathematical Institute, has argued that pollution charges also would lead to more efficient allocation of resources under Soviet conditions. Essentially, such charges would serve as "shadow" prices, allowing the planners to make more rational calculations as to which enterprises should spend how much money on stopping pollution. Professor Gofman realistically points out the need to monitor the enterprises' operations, a need that will become even more acute with pollution charges, since the enterprises will have a strong incentive to conceal pollution to avoid these charges.

Professor Gofman's work depends on the key assumption that the overall Soviet pricing system is a valid indicator of costs. This assumption is of doubtful validity in the current Soviet economy, but may take on greater validity in the future. If one enterprise, for example, could avoid 50,000 rubles in pollution charges by switching to low-sulfur coal that would cost 40,000 rubles more, while another enterprise could only avoid the pollution charges by installing a scrubber that would result in 60,000 rubles of capital and energy charges, the pollution charge system would result in all the pollution abatement taking place at the first enterprise, which apparently could reduce pollution more economically, while the second would pay the pollution charges. The whole system breaks down, however, if the capital and energy charges for the scrubber and the price differential for low-energy coal do not reflect the relative costs of these items. Yet under the present Soviet law on price setting, it is unlikely that such prices will be very accurate representations of cost.

V. FREEDOM OF SPEECH ON ENVIRONMENTAL ISSUES

Perhaps the most notable difference between Soviet Marxist and non-Marxist social systems is not central planning of means of pro-

duction, but Party control of means of communication. This control of communication, combined with various forms of institutionalized censorship, has a major effect on the nature of environmental discussion. The type of book a Soviet citizen writes on the environment, when he can evade the censor's scissors and the heavy hand of the Party, is very different from a book on the environment published through approved channels in the USSR. A vivid example is *The Destruction of Nature: The Aggravation of the Ecological Crisis in the USSR*, written under the pseudonym "Komarov," which discusses facts that are taboo in legal Soviet publications, such as dangers from mishandling of nuclear wastes. Like most dissident works, Komarov's book suffers because its author was denied access to many sources of environmental data, a result of the pervasive secrecy that surrounds all aspects of the operation of the Soviet regime.

Criticism of environmental policy, however, is not illegal. What is regarded by the Party as constructive criticism is encouraged. Professor Gofman, one of the most severe constructive critics of Soviet environmental policy, has been rewarded by an appointment to an important position at the prestigious Central Economics Mathematical Institute of the Academy of Sciences. The Soviet Union is engaged in an economic race with the United States and it cannot afford to continue the inefficient use of resources. It must allow frank discussion of many environmental problems, particularly in areas where environmental measures, while costing money for individual ministries, would lead to more efficient operation of the economy as a whole. What is not permitted is any linking of environmental problems to the nature of the Soviet system.

*The Destruction of Nature* reflects the type of speech that is banned:

But the avant-garde of the people, as some of the representatives of the ruling elite call themselves, perceives the acuity of ecological problems only from the figures in various documents. The green fences around their suburban homes effectively screen them from the effects of both the economic and ecological crises.  

It is not only this political speech that is banned. Technical quantitative data on pollution also are regarded as state secrets. Komarov's book lists numerous secret reports and a secret environmental journal.

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19. *Id.* at 34.
Some readers may be surprised to learn that there are active environmental protection organizations in the Soviet Union. Like all other organizations in the USSR (with the exception of religious organizations), they are officially and practically subject to Party control. These organizations emphasize cooperation rather than conflict with state agencies. They can make a difference, however, because state agencies often are split in their environmental interests. A local government may want clean air for its citizens and to attract tourists, while the national authorities may want to increase production at the local factory to provide for national needs, despite the air pollution caused. Or, a local enterprise may want to increase output and dump more waste into a river, contrary to national needs for clean water. In these cases when Soviet agencies conflict, there may be no clear Party policy, and the environmental organizations can make a real difference. They also may serve as a source of volunteer support for environmental protection agencies which are constantly short of staff for inspection operations.

VI. THE DECLINING ROLE OF THE LAWYER

When the Soviet Union was newly formed, environmental policy was made and environmental laws were drafted by lawyers, including, on occasion, Lenin himself.20 Traditional legal methods were used, such as sanctions for defined offenses and civil liability for defined causes. Environmental legislation of this type has continued and has even accelerated, so that within the last dozen years, the Soviet legal profession has produced an immense quantity of environmental legislation. Yet, the environmental legislation that really counts—the regulations of the State Planning Committee—is drafted by economists based upon policies developed by economists. This legislation largely is ignored by the Soviet legal profession. The standard law school textbook on *Legal Protection of Nature in the USSR*,21 published in 1976, devoted only 3 of 350 pages to the issue of planning, and limited its discussion to such platitudes as: “The State plans in the area of use of nature and protection of nature must correspond to the requirements necessary to ensure their effective implementation.” The same 350-page textbook contains no serious discussion whatsoever of the economics of the use of natural resources or of the protection of the environment.

By ignoring the economics of environmental protection, Soviet

21. V. PETROV, *supra* note 16.
legal scholars abdicate their role in favor of economists and saddle the Soviet Union with unenforceable legislation, setting unrealistically strict levels of environmental quality. Objective proof of the growing role of the economists at the expense of the lawyers is that the economists' journals are full of references to existing law and contain numerous proposals for new legislation, while legal writing is devoid of any reference to even the most elementary economic principles, such as the fact that there are costs as well as benefits associated with environmental controls. The Marxists faithfully expect the "withering away of law." The Soviet experience suggests that while law has not withered away, the ability of the Soviet legal profession to make or even understand environmental policy is shrinking rapidly.