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Six Propositions on the Poor
and Pollution

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Six Propositions on the Poor and Pollution

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ABSTRACT

The effect of improving the environment may be greater inequities in our society. Current environmental programs maintain this inequity, proposed environmental programs may make things worse, and even if we do improve the environment, contentment may decrease. A political coalition of environmental and equity enthusiasts may provide a viable way out of these dilemmas.

Concern for the quality of the environment has been expressed in terms of conservation, natural resources, ecology, and the impending extinction of mankind. Each of these terms has varying meanings and it is not unusual for two "conservationists" to be fighting against each other for different realizations of environmental quality. Yet there *is* a set of shared values among them, probably exemplified by a concern for nature and the limitations of the natural environment.

I think, however, that debate over environmental policy issues ought to take place in a larger arena than that admitted by most environmental quality enthusiasts. The world of politics and public policy is vitally concerned about problems related to equity and poverty. Since resources for change, whether in the natural or "unnatural" environment, are limited, problems related to environmental quality must be compared to problems related to poverty. We cannot rely on the Defense budget to instantly shrink to provide resources for everything. We need ways of suggesting relative priorities for spending on problems of the environment and problems of the poor. *Where is there a greater gain for a dollar spent—in pollution abatement or poverty abatement?* By observing the interaction of environmental quality programs with poor people, we might come to the conclusion that *pollution is good and environmental quality programs are bad*. The unrealized side-costs (externalities) of environmental improvement are substantial.

It is an illusion to believe that environmental quality could be a separable issue from problems related to equity. Problems related to environmental quality, in many cases, are very much the issues for the nonpoor in our society and are acceptable for

that reason.¹ The issue of environmental quality may be viewed as a conservative response to the urban revolution. Policies related to the improvement of the quality of the environment may result in a greater maldistribution of the quality of life for the people of this country.

In this article, I want to look into the interfacing of environmental policy with considerations of equity. In a subsequent article I shall look at how we might make rational allocative choices between these two problems.

I shall take a conventional view of the environment and concentrate on the physical and aesthetic aspects of the world around us. For the present, more inclusive definitions of "environment" (for example, the home or social milieu) will not be used.²

Problems of Equity and Distribution

In asking questions about the *incidence* of poor environmental quality and the *distribution* of its betterment, we can see a connection between environmental problems and equity concerns. In this section I want to define what I mean by equity and then look at several kinds of poor environmental quality and the incidence of their disbenefits.

Let us define an equitable distribution of goods as an equal opportunity for each individual to gain access to and use *his desired* kinds of services and environment. Much of the environment and its quality are provided for by the public sector and I think a strong definition of equitable distribution of the environment is justified. In emphasizing the consumer's desired level and kind of environment, we take into account the changing expectations for environment that seem likely in a rich and growing society.

I shall not deal with the question of who is to pay for public sector environmental improvements. Taxation questions are better left to others;³ whether admissions to National Parks should be free is a red herring—as I suggest below; and deeper questions—such as who should pay for clean air—would require another article.

I want to look at some specific aspects of environmental quality and how their benefits are distributed. The aspects that I am concerned about are not the owned parts of the environment for which property rights exist. These would include timberland, private lakes, and development rights. The beneficiaries of these environments are more easily accounted for and controlled, though often the side effects of their activities are neither.

I am concerned about the parts of our environment which are not owned by anyone and ostensibly are equally available to all. Such collective or public (or common

¹ See C. P. Benson and P. B. Lund, *Neighborhood Distribution of Local Public Services* (Institute for Governmental Studies, Univ. of Calif., Berkeley, 1969). They show that the users of services can be divided into two groups, dependent on the services used. The service groups are *poverty related* services and *developmental* services. Many of the aspects of environmental quality as narrowly conceived fit into the second category.

² See H. Perloff, *The Quality of the Urban Environment* (Resources for the Future, 1969), for a more extensive discussion of the "new" environments.

³ See, for example, J. Pechman, "The Rich, the Poor, and the Taxes They Pay," *The Public Interest* (Fall 1969), p. 21.

property) goods include the air, the water, and the sound spectrum. Some of these *may* be appropriated by a government, but which government (federal or local) is a matter of legislation and is not a given. Frequently, there is no price for these goods. More significantly, we, as a political entity, may decide that it is good for people to have these aspects of the environment (such as clean water) and decide that people *should* have these "merit goods."

We should note that our ability to use some of these "unowned" attributes of the environment may depend on our ability to own "ownable" parts of the environment. For example, a car enables one to get to a national park. In being able to use the environment more, it is also likely that one is capable of creating more bad environment. Those who own bigger cars with larger engines and travel more, are likely to pollute more also. The production side of pollution and bad environment is not discussed further here, but remarks similar to those that shall be made for consumption can also be made on the other side of the ledger.

Proposition 1: The quality of environment available is proportional to socioeconomic status.

Consider the case of *air pollution* in an urban environment. Let us say, for the moment, that the pollution level is constant throughout the city. The incidence will turn out not to be so. The "rich" have air conditioners. Also, they can get away from the city for the weekend or when the pollution gets very bad. One envisions their having a plane ticket ready to be used when the CO (carbon monoxide) level reaches a certain point. The well-to-do have alternative means of reducing their pollution intake substantially.

It is not true, however, that the distribution of pollutants is constant throughout the city. There are fixed sources of pollution. Pollution is probably greater close to factories and power plants. Disamenity created by these sources, partially due to the pollutants they emit, tends to reduce the rent in these areas.⁴ Poor people live here. That the better half frequently lives in a less polluted suburb, yet uses the resources of the city to make its living, makes these inequities even greater. Finally, considering the reduced income of poor people, the costs of pollution, such as extra medical services and dirtier clothing, affect them more deeply than they do the well-to-do. Also, the probability that pollution will cause disease, for a fixed level of pollutant, will be greater for those in poorer health (such as poor people) than for those in good health.

It is true that the well-to-do sometimes *choose* to live in places with large amounts of pollution. They live in the center of the city—though they often have air conditioners and second homes. The well-to-do can afford to express their needs in terms of effective demand; one would expect that there are benefits that outweigh the costs of living

⁴ See R. U. Ayres, "Air Pollution in Cities," *Natural Resources Journal*, 9 (1969), 1. There is still some controversy on this question, though. An extensive discussion of the problems related to measuring the various effects of pollutants is given in R. Ridker, *Economic Costs of Air Pollution, Studies in Measurement* (Praeger, 1967). See also, J. A. Jaksch, "Air Pollution: Its Effects on Residential Property Values in Toledo, Oregon," Oregon Agricultural Experimental Station Technical Paper No. 2845 (Cervallis, Oregon: Oregon State Univ., 1970).

in the polluted environment. But the poor cannot so effectively participate in the amenity market.

Essentially similar arguments can be made for *noise*, *solid wastes*, and *water*.

It is very difficult to stop breathing or to plug up our ears, but we do have options as to kinds of *recreational facilities* we wish to have. The density of cities and their frequent lack of open spaces make access by the poor to open space facilities difficult. It is sometimes argued that mountain lakes and hiking trails may not be desired by poor people—their culture requires a more dense style of life. It is funny that when people stop being poor they suddenly are able to appreciate the beauties of nature. The extra cost of transportation, the lack of availability of time, and the extra costs of recreation at distant facilities such as a lake outside the city, make it reasonable to suggest that those who use a facility are those who can afford to. We have a case here of poor environmental quality not because the environment is not available, but because it is quite inaccessible.⁵

An argument can be made that the poor can afford the wait for the use of facilities. They can take a "slow" bus to the park. But, although their ability to "demand" timesaving methods of access to facilities is weak, their "need" is substantial. Also, the costing of the time of the poor ignores important social costs. If a child is not taken care of while his mother goes to a clinic far away, for example, then the social cost may be quite substantial in the long run.

To summarize, it appears that the distribution of environmental pollutants and disamenities is inequitable and that people who are financially poor suffer disproportionately from a poverty of environment.

Improving the Environment

It would seem to be worthwhile that we improve the quality of our environment. For problems such as air pollution, the imperative to improve the environment seems quite real and seems to have justification independently of who immediately benefits. Yet it may turn out that long run benefits to the society from improving the environment, as it is narrowly conceived, will make life worse for some members of the society now. Urban change rarely hurts no one, but it seems unfair that we ask those people who are least able to cause changes in their environment to pay for improving the environment of others. It turns out that:

⁵ This is discussed in part in M. Clawson and J. Knetsch, *Economics of Outdoor Recreation* (Baltimore, Md.: Johns Hopkins Press, 1966). They point out some of the fallacies concerning the benefits to the poor from outdoor recreation (pp. 271 and 305)—the poor cannot afford to get to the national parks. They also point out that the amount spent for outdoor recreation is a (approximately) constant 5–6% of income (p. 106). Finally, they discuss the lack of outdoor recreation facilities for the poor in the central cities (*passim*). Ruth P. Mack and Sumner Meyers suggest how we might take these into account in R. Dorfman, *Measuring Benefits of Government Investment* (Brookings Institution, 1965). For a discussion of how income affects utilization of recreation, see D. W. Seckler, "On the Uses and Abuses of Economic Science in Evaluating Public Outdoor Recreation," *Land Economics*, 42 (November, 1966), 485.

Proposition 2: In trying to improve the environment, we are most likely to increase the disparities shown in Proposition 1. Environmental policies which are sensitive to other social problems and which are sensitive to the differences in the preferences for environment can avoid this problem.

Let us consider an example in housing policy.

Assume that we have a housing market which consists of two kinds of housing, good and poor. Let us say there is a latent demand for better housing; people are crowded up in the better housing. Rents are set by the market with no direct intervention by the government.

Let us try to decrease the amount of *air pollution* released into the environment. There are some localized sources due to power plants, for example. Property values are depressed near the sources of pollution and it is quite likely the rents are lower there. The poor live near the worst air. We apply a pollution abatement mechanism to the power plants. Aha, you say, the poor benefit somewhat more than the rich since the pollution source is much closer to where they live. There may be problems with diffusion and winds and so forth, but it is still quite likely that the poor do have better air than they used to, and probably, proportionately, are doing somewhat better than the rest of the city.

However, the property values and rents for housing in the power plant area, which were depressed due to the pollution, have no reason to be depressed anymore. The owners could now charge substantially higher rents and meet the demands of the better quality housing market. Over time, the stock of low-rent poor housing decreases, and the stock of higher-rent housing increases. It is likely that the poor will have to crowd up, while the well-to-do will have more space available to them. And, of course, the better air that the poor had begun to breathe is not necessarily better anymore since they have moved.⁶

Our attempts to improve the general welfare have succeeded by decreasing the amounts of pollutants in the air. Our disappointment lies in the fact that our efforts to improve the lot of a special group have been foiled. The clean air might have been more effective in improving the lot of poor people than that of the rich; this does not influence systematic behavior though.⁷

This new pattern need not have to occur since there could be a housing policy coordinated with the air pollution abatement policy. The point of my argument has been to suggest that environmental quality policy which is not coordinated with housing policy leads to undesirable results from the point of view of equity considerations.⁸

⁶ J. Margolis discusses this point more generally in "The Demand for Urban Public Services," in H. Perloff and L. Wingo, *Issues in Urban Economics* (Baltimore, Md.: Johns Hopkins Press, 1968), p. 546.

⁷ If we choose to *move* the power plants and associated manufacturing to a less populated area, then those who are employed in these industries will be forced into company towns, which are not necessarily desirable.

⁸ It is possible to design environmental improvement programs which will benefit the poor. Starr and Carlson have suggested that a massive sewer building effort would be a good public works program for employing the poor. See, Roger Starr and James Carlson, "Pollution and Poverty: A Strategy of Cross Commitment," *The Public Interest*, Winter 1968, p. 104.

Though the above argument may be interesting, it would be good to know that it applies to real situations. The housing market is quite complex. The low vacancy rate for good housing that seems to be necessary for the above argument to apply may not exist. In some cities with bad environmental quality, there is a high vacancy rate—people are abandoning the city. On the other hand it can be argued that an improvement in environmental quality would encourage an influx back into the city and consequently the poor would not benefit from the improvement. More data and some study are needed to ascertain the true situation.

One completed study points up some other problems of air pollution abatement procedures based on automobile effluents.⁹ This study points out how the poor and disadvantaged “may value pollution reduction, but they are likely to value more reduction of the disadvantages and poverty that set them apart.” Also the costs of pollution reduction mechanisms bear more heavily on people with limited incomes than on the nonpoor.

We might have a situation for *noise abatement* similar to that for air pollution. The removal of the Third Avenue El in New York City, for example, occasioned the building of luxury housing (admittedly during the boom for luxury housing).

However, there is an interesting twist to noise abatement. It turns out that a large number of poor people regulate their day and obtain their sense of time from the noises that exist around them. Would Italians prefer to live without the benefit of their church bells? There is some evidence for cultural norms for sound levels.¹⁰ And whether some sounds are noise is also culturally determined. Some sounds, which seem like noise to an outsider, may be a benefit, and as Todd La Porte has suggested, “A quiet street is cultural imperialism.” The lonely and the elderly find in noise a substitute for people around them. They gain comfort from their thin walls. Silence may well be a norm of the rich. It is true that psychologically harmful noise is not considered desirable, although frequently chosen. This issue may seem facetious and trivial. But we do not know the cost of the readjustment required by people when the environment that gives them the cues for regulating their lives is altered dramatically.

For both of the cases given so far, I am not arguing against improving the environment. It is true that poor people are especially harmed by the bad environment. It is also true that some costs, such as long delayed illness, may be sufficient reason for improving the environment for *them* (poor people). But it should not be assumed that this is always the case—our concern for the quality of the environment must be tempered by the needs of those for whom we are providing the environment.

Another example is related to *open space*. For most cities, accessibility to open space is poor. When transportation systems are evaluated, insufficient weight is given to systems providing for access to recreation areas. If we count the number of transported passengers, then we find that most transportation serves people going to and from

⁹ Ed Blum, *Approaches to Dealing With Motor Vehicle Air Pollution: Report of the Subpanel on Transportation System Requirements of the Panel on Electrically Powered Vehicles* (RAND Corp., Santa Monica, California, December, 1967).

¹⁰ Noise may be a benefit in an industrial society. See “Beloved Noise,” *New Society*, November 6, 1969, p. 730.

work, rather than those travelling to recreational areas. Yet, the poor in the central cities need transportation to open space as much as the rich in the suburbs need transportation to work.¹¹ Yet, tax deductions for open-space gifts, means that the poor pay for open-space for the rich.¹²

A similar question arises when we decide on the location of *recreational facilities*. In doing large-scale water management, the development of recreational lakes up in the mountains seems reasonable and serves, in part, as a justification for such projects. But who has access to such environmental improvements? Not the poor. Should environmental improvements be in cleaning up the East River or the Hudson River, so that the recreational facilities will be available to the dwellers of the central city (New York), rather than in the development of recreational facilities in the Adirondacks?

The Problem of Supply

Proposition 3: When we try to resolve the inequities shown in Propositions 1 and 2, there will be even greater discontentment about the environment, even when things are "better."

Limited resources available for environmental quality improvement make redistribution efforts more difficult. The population is growing, yet resources may not be expanding at a commensurate rate. It is quite likely that much of the improvement of the environment benefits middle- and upper-class people.

Paradoxically, facilities available for people who have been able to raise their incomes may decrease in quality since so many others are doing the same thing. Thus, people with rising incomes may become less contented with the environment as they discover that rising income does not necessarily buy them more amenity.

Greater wealth is likely to create a greater demand for environmental quality. There may be some problem with the possibility of supply meeting this demand without raising the cost of environment. If the supply is not sufficiently elastic, then the better-off will soon discover that their riches do not buy them better environment. The elasticity of supply depends on two factors. The first is the willingness of the public to spend extra funds for the creation of more environments of high quality. Second, there is a dependence on the capacity (productivity) of the environment—a given environment with a given technology can only support a certain number of users (for a quality of experience) no matter how much is expended on its improvement. The interplay of supply, demand, and capacity determines how well we can provide for an equitable distribution of the environment.

Improvement of the environment may create some worse problems than we originally had, create greater inequities than we originally started with, and disbenefit more poor people. The ironies do not end here.

¹¹ For another statement of this see the paper by S. Chapin in Perlott, *Issues in Urban Economics*, pp. 331, 332.

¹² M. Clawson in Perlott, *Quality of the Urban Environment*, p. 168.

Federal Environmental Policy

Proposition 4: Federal environmental policy is such that the rich get richer and the poor, poorer. A poor family receives \$60 per year of environmental benefits, a middle-income family, \$90, and a rich family \$240. Things are substantially worse if we look at per person benefits.

We shall try to measure how the money spent for environmental quality is distributed among the various income groups. Our standard for equity will be that each family should receive an equal amount of the benefit of the monies spent for environmental quality.

First, we shall need to know how many families are in each income class. We find that 45% have incomes less than \$7,000 per year, 45% have incomes between \$7,000 and \$15,000 per year, and 10% have incomes greater than \$15,000 per year. (1968 *U.S. Statistical Abstracts*, p. 324). Since this is a distribution for all families, we would expect the distribution to be somewhat more skewed to the low end for blacks. Thus, if we do find in our analysis that poor people are inequitably provided with environment then it is likely that some suffer even more inequitably. Also, if the mean size of the family tends to be larger for some lower income groups, the monies spent per person will be even more inequitably distributed.

Next we need to know how much money is being spent in the fields of environmental quality improvement. The analysis reported on here has been done for federal expenditures since the data are easily available. (A crosswalk of the estimated budget for 1968 can be found in L. L. Lederman, *An Analysis of the Allocation of Federal Budget Resources as an Indicator of National Goals and Priorities*, Battelle Memorial Institute, Columbus, Ohio, 1969.) Using Lederman's categories we can readily produce a list (perhaps not complete) of federal programs in the environmental field.

In order to determine who receives the benefits of environmental programs, we need a way of dividing up the pie. The criterion here will be imprecise; the data available do not warrant more sophisticated procedures. We shall look at how much a program is *used* by a certain group as a proxy for how much a group *benefits* from that program. Not all expenditures result in positive benefit, but that is what we shall assume here. Also, our decision as to utilization are guesses for lack of much better information for many of the programs.

For each program we decide (a guess) whether the poor, middle, and rich have equal utilization (per family) of a program (case "0/0/0") or whether there is some one group which benefits more than another. In the following analysis, for the latter case, we assume that of the three groups: one benefits, one loses, and one receives the equitable share proportional to the number of families in the category. For example, if the poor receive more benefit and the rich receive less, we would classify the program as being "+/0/-."

We then decide on the benefits to a group (i.e., the amount of money from a certain expenditure that accrues to a group). If the classification is 0/0/0 then we distribute the money 45%/45%/10%.

The unequal case is somewhat more complicated. The way in which we decide to

TABLE 1

The Distribution of Federal Expenditures on Environmental Quality
(in millions of dollars)

Topic ^a	Poor/Middle/Rich	Total (in millions)	Poor	Middle	Rich
Area regional dev. EDA	000	\$153	\$69	\$69	\$15
Appalachia	+ - 0	159	107	36	16
Conservation of land-farm	- 0 +	211	48	96	67
Soil conservation	000	115	52	52	12
Public housing	+ - 0	295	198	67	30
Model cities	+ - 0	25	16	6	3
Urban renewal	- 0 +	499	110	225	164
Open space	- 0 +	60	14	27	19
Water and sewers	000	90	40	40	9
OEO (Office of Economic Opportunity)	+ - 0	926	624	210	92
Army Corps of Engineers	- 0 +	1,341	300	600	441
Reclamation	- 0 +	291	65	130	96
Water pollution	000	190	85	85	19
Saline water	000	31	14	14	3
Bureau of Land Management	- 0 +	83	19	37	27
TVA (Tennessee Valley Authority)	0 + -	109	50	54	5
Soil conservation watershed	- 0 +	106	23	46	37
Forest Service	- 0 +	495	113	225	157
BLM—Forest	- 0 +	22	5	9	8
Bureau of Outdoor Rec.	- 0 +	105	23	46	36
National Parks Service	- 0 +	140	31	62	47
Fish	- 0 +	153	35	70	48
ESSA (Environmental Science Services Administration)	000	168	76	76	17
All except OEO, Model cities and Public housing: "Conventional Case"		4,511 ^c	1,278 28%	2,000 44%	1,245 28%
	% of total redistributed funds ^b		-750	-30	+780
w/o OEO		4,841	1,485 31%	2,077 43%	1,275 26%
			-700	-100	+790
All		5,767	2,115 37%	2,282 40%	1,370 23%
			-490	-320	+790

^a Taken from Lederman, *An Analysis of the Allocation of Federal Budget Resources*, Section 6, 8, 13, 14.

^b Redistributed funds = $\sum \text{group} - \text{total} \times \text{fraction of families in a group}$.

^c Totals may not reconcile due to rounding.

do the allocation must be arbitrary in that we do not have exact figures as to number of users.¹³ Knowing the relative number of users does not really solve the problem since we do not know if some users benefit more from a "use" than others.

What I do is to give the "-" group one-half of what it should receive, and the "0" group its proportional share, and to the "+" group the rest (which is more than its share). The benefit to the "+" group depends on who is losing.

We then sum up, for each group, the total expenditures for which they receive benefit and compute the fraction of the money they get. We can also compute the amount of money that a group is "cheated of" by comparing the total for a group with its equitable share. The table on the next page gives the results.

Several points emerge from this analysis.

1. *Conventional environmental quality programs (on the federal level) tend to be regressive in their distributive effects.* Even if we include so-called poverty programs and programs that are aimed at the central cities, things do not change dramatically.

If we look at the distribution by family (Table 2), we find that for the conventional case the inequities are substantial.

TABLE 2
Per Family Distribution of Expenditures (in dollars)

	Poor	Middle	Rich
Amount of EQ money received per family	\$60	\$90	\$240
Difference from equitable ^a	-\$30	0	+\$150

^a An equitable distribution is defined as one in which environmental quality expenditures are distributed equally to each family. The "difference" is the amount received minus the equitable amount. The analysis given by W. I. Gillespie, "Public Expenditures and Income Distribution," in R. Musgrave (ed.), *Essays in Fiscal Federalism*, Brookings, 1965, is similar to the one done here.

2. Since the assignment of distributive effects for the programs has been done by myself, there may be some errors due to some single random error in an assignment or a systematic error in the assignments. For the first case, we can get a handle on the magnitude of the problem. The Corps of Engineers programs are, by far, the largest expenditures. I have altered the assignment somewhat for this program and have, in Table 4, tabulated the change in the redistributive measures. The net effect is to change the amount that the "Middle" benefits, but we do not have to change our conclusions about the regressive nature of environmental programs.

¹³ See Benson and Lund, *op. cit.* in footnote 1, for a case where this information has been obtained.

The possibility of systematic biases is real. The purpose of this analysis is to suggest a technique for the analysis of policy and possible outcomes of such an analysis. More data on how programs are utilized by the various subsections of the population could make this work more precise. As a proxy for more data, we might use a Delphi study among a group of experts in the field.

TABLE 3
The Sensitivity of the Estimates of Benefits

Assign "Corps of Engineers"	\$4,511	"-/+ /0"	\$1,278	\$2,300	\$945
			28 % -750	51 % +270	21 % +500
	4,511	"0/0/0"	1,580	2,000	945
			35 % -450	44 % -30	21 % +500

TABLE 4
Wealth Redistribution Due to Environmental Quality Expenditures

	Percent paid of taxes, 1966	Percent received as beneficiaries of environment, 1968	Percent of population
Poor	8	28	45
Middle	52	44	45
Rich	40	28	10

3. Substantial amounts are spent by state and local governments on environmental programs. Analyses of these expenditures need to be done. Finally, it would be interesting to see how private expenditures for environment are distributed. An interesting question is how are the extra expenses for pollution abatement devices being distributed to consumers?

4. Finally we look at the *redistribution of wealth*.¹⁴ The previous analysis of the distribution of the benefits of environmental quality can be used to compare the

¹⁴ An analysis of this sort is found in W. Lee Hansen and B. A. Weisbrod, "Distribution and Direct Benefits of Public Higher Education: The Case of California," *Journal of Human Resources*, 4 (Spring, 1969), 176. B. Weisbrod, "Income Redistribution Effects and Benefit-Cost Analysis," suggests a similar analysis in S. B. Chase (ed.), *Problems in Public Expenditure Analysis* (Brookings, 1968).

amount of benefits to a group with the costs to that group (in terms of taxes paid). Looking at income tax payments (leaving out excise taxes—which are regressive) for the moment, we find (*U.S. Statistical Abstracts, 1968*, table 556) the distribution shown in Table 4.

Yes, it seems that the rich get less than they pay for. It is not the purpose of the federal government to act as a holding company for the distribution of resources in the same proportion as they came in. More to the point, both equity considerations (politically) and effects of scale (practically) mean that the rich should get less than they pay.

The Politics of Ecology and Poverty

Proposition 5: Considering the primary beneficiaries of poverty and environmental programs, the most effective politics for effectuating change (for both) lies in a coalition of these two forces.

People who are afflicted with the poorest environmental quality are least likely to be in the vanguard of those who are complaining. Their needs for greater income and better living facilities probably take precedence over needs for better recreation and cleaner air. The well-to-do, however, are the leaders of the pressure groups desiring improved environmental quality.¹⁵ For them, environmental quality represents an area where governmental action can make life substantially better. Also, environmental quality, as it is conceived today, is not likely to disturb the distribution of privilege within the society. Environmental quality policy is one of status quo for the people and change for the trees.

The poor and rich have different symbolic expressions of their concern for the environment. If the poor must be concerned about immediate needs, then their environment, the ecology to which they belong, is likely to be housing and work. If the rich can afford a longer time span perspective, a deferred gratification of their needs, then the ecology that they would be concerned about is the ecology of the conventional kind. Very few environmental problems are obviously urgent to all. What is happening nowadays is that the rich are looking for allies among the middle classes and the poor in their fight for better environmental quality, just as the poor have searched for allies among the well-to-do in their search for better quality of life.

Albert Lepawsky has specifically suggested this in a wilderness conference, "Why should we assume that, in the struggle for appropriations and legislation, they will vote for our favorite conceptions of parks and primitive areas and seashores, instead of for their own essential preferences and priorities? . . . We should, therefore, search diligently for such common ground. . . . We must look for our natural allies among more of the common citizenry."¹⁶ In the preceding quote *we* refers to the conservationists and *they* refers to the poor.

¹⁵ The title of a recent paper is revelatory of this well-known aspect of this question. See J. Harry, R. Gale, J. Hendee, "Conservation: An Upper Class Social Movement," *Jour. of Leisure Research*, 1 (Summer 1969), 246.

¹⁶ Albert Lepawsky, "Wilderness—The Citizen's Evaluation," in Wm. Schwartz (ed.), *Voices for the Wilderness* (New York: Ballantine, 1969).

Another political scientist, Aaron Wildavsky, suggests that much of the concern for the *new economics*, which has been used as a justification for much of the governmental intervention into the environment, has been to say, "How shall society be organized so that the preferences of the morally or aesthetically sensitive minority will triumph? . . . The term *new economics of natural resources* is used to designate an emerging trend . . . [which] permits economists to avoid direct confrontation with political problems by bringing in aesthetic factors to make economic analysis come out 'right.'"¹⁷

It is just not true that "Restoring nature to its natural state is a cause beyond party and beyond factions."¹⁸

The welfare economist provides us with a straightforward policy solution. Funds spent under the rubric of environmental quality, as conventionally conceived, are more efficient in satisfying the needs of the well-to-do, while poverty money is more efficient at meeting the needs of the poor. Equity considerations might be introduced by saying that we should spend money on environmental quality programs in proportion to the number of rich people and on poverty programs in proportion to the number of poor.

But things are not so simple. The poor can have some of their needs most efficiently met by environmental quality program (e.g., recreational facilities) and not poverty programs. And the rich benefit, often indirectly, from poverty programs. Although we might try to disaggregate programs into rich programs and poor programs and call them that, I believe this would not be wise politically in light of the manner in which American government functions.

The equity-environment quality problem could be resolved by means other than coalition politics. We could try to create new resources and allocate these resources in a more equitable manner than we do with present resources, rather than try to reallocate the old ones. Limitations on funds and on nature's resources suggest difficulties with this approach. We could create new resources of a psychological kind. "Soul" might be one of these.

Our political system may provide a solution to some of the paradoxes discussed so far. Can we succeed considering our culture?

Culture and Environmental Goals

Proposition 6: It is only by retaining man's centrality in our culture that solutions to environmental issues can be equitable.

It is often asserted today that we must be more ecosystemic in our outlook and treat man as an equal member of the biological community. An argument by Lynn White, which points out that the Judeo-Christian tradition separates man from the rest of the environment and inhibits the ecosystem concept from playing a primary role in our social and political process, is used as the indictment of man in the current

¹⁷ Aaron Wildavsky, "The New Economics: A Political Analysis," *Daedalus* (Fall 1967), p. 115.

¹⁸ Richard M. Nixon, "State of the Union Address," *New York Times*, January 23, 1970.

ecologic "crisis."¹⁹ If we were better off, I think we could afford to try to be more ecosystemic. For the moment, our goals need to be stated in terms of the needs of men. If you die of starvation now, you do not care if the air will give you lung cancer in 25 years. It will be worthwhile to emphasize the yet unmet needs for food and shelter over the need for many other aspects of environment.

In the past, we could say that the motivating value of the ecological system on earth was survival. And for most of man's time on earth, he was not so special that he could affect this value. Now we realize, if we are rich, that our survival depends on regulating the rest of the system as well as ourselves. However, there is no single ecology that must exist. Our highly artificial environment necessitates both new statements of values and new modes of intervention into the environment. What contemporary American politics has added to this value system is a commitment to equity. There can be an ecology of survival and equity; I think there must be.

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¹⁹ "The Historical Roots of Our Ecologic Crisis," *Science*, **155** (1967), 1203-1207. For a critique of White's position, see P. C. Ritterbush, "Environment and Historical Paradox," *General Systems*, XIII (Ann Arbor, Michigan, 1968).