

BIBLICAL ECONOMICS TODAY

Vol. IX, No. 1

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Dec./Jan., 1986

POLLUTION CONTROL AND BIBLICAL JUSTICE

by Gary North

If a man shall cause a field or vineyard to be eaten, and shall put in his beast, and shall feed in another man's field; of the best of his own field, and of the best of his own vineyard, shall he make restitution. If fire break out, and catch in thorns, so that the stacks of corn, or the standing corn, or the field, be consumed therewith; he that kindled the fire shall surely make restitution (Ex. 22:5-6).

These verses make plain at least three facts. First, the Bible affirms the moral and legal legitimacy of the private ownership of the means of production. Fields and cattle and crops are owned by private individuals. Second, private property rights are to be defended by the civil government. The State can and must require those people whose activities injure their neighbors or their neighbor's property to make restitution payments to those injured. Third, owners are therefore responsible for their own actions, and also for the actions of their subordinates, including wandering beasts.

This combination of privately owned property, personal liability, and court enforcement of private property rights is the foundation of capitalism. It is surely the foundation of long-term economic growth. This property ownership arrangement is also important for the reduction and allocation of pollution. Initially, these verses may seem self-explanatory. Nevertheless, when we consider them in the light of the many intellectual and institutional problems related to the whole question of pollution, their application in society becomes an enormously complex task. Without these legal guidelines, however, we could not deal effectively with the pollution problem.

Contrary to many of the twentieth-century critiques of both capitalism and pollution, socialist commonwealths have not produced reasonable, cost-effective, workable solutions to the pollution problem. More than this: such solutions cannot be implemented in socialist societies, for it is the private ownership of the means of production which is the basis for a successful program of pollution control. In fact, it is common ownership—bureaucratic ownership—which creates most of the economic incentives to pollute and exploit the environment.

The "Tragedy of the Commons"

A fundamental economic problem in any system of common ownership is the problem of assessing true costs and benefits. Historically, one of the most familiar of these systems of common ownership has been commonly held land. From the Middle Ages through at least the late seventeenth

century, these property units were known as "the commons," and the term still persists in some regions of the United States, referring usually to city parks.

Where the community allows citizens to place their grazing animals on the commons, a whole series of difficulties emerges. The economic benefits accrue directly to the man who places his animal on the "free" land, but the costs are borne by everyone in the community who would like to use the property for any other purpose. In Puritan New England in the seventeenth century, roaming animals uprooted plants and over-grazed pastures. Townspeople cut down trees in the night for firewood or fencing.¹ Similar problems have plagued the commons in every culture. This is the direct result of a system of ownership in which **economic gains go to individual users and costs are borne by non-users.**

Such a system inevitably produces economic waste and personal disputes over the proper use of the common property. Those who benefit directly from their personal use of the commons have few direct economic incentives to conserve the commons' scarce economic resources, for these resources are obtained at nearly zero cost to the private users. The cost of running one additional animal on the commons is minutely felt by any single taxpayer-owner; he receives the benefits immediately. There is every incentive to over-graze the commons, for economic restraints are minimal, while benefits are direct. This creates a system of "positive economic feedback" rather than "negative feedback." It leads to a situation described by some scholars as "the tragedy of the commons."² It involves such phenomena as over-grazing, soil exhaustion, and pollution. J. H. Dales writes: "The economic effect of making common property available for use on a no-rule basis, so that it may be freely used by anyone for any purpose at any time, is crystal clear. Common property will be over-used relative to both private property and to public property that is subject to charges for its use or to rules about its use; and if the unrestricted common property is depletable, over-use will in time lead to its depletion and therefore to the destruction of the property."³

1. Gary North, "The Puritan Experiment in Common Ownership," *The Freeman* (April 1974).

2. Garrett Hardin, "The Tragedy of the Commons," *Science* (13 Dec. 1968); reprinted in Garrett de Bell (ed.), *The Environmental Handbook* (New York: Ballentine, 1970). Hardin calls for greater government intervention rather than an expansion of private property rights. A solid refutation of Hardin is C. R. Batten's "The Tragedy of the Commons," *The Freeman* (Oct. 1970).

3. J. H. Dales, *Pollution, Property, and Prices: An Essay in Policy-Making and Economics* (Toronto: University of Toronto Press, 1968), p. 63.

Private Ownership

The private ownership of property drastically reduces these problems. Private costs are more readily, accurately, and inexpensively assessed than public or social costs, precisely because **private owners directly face the effects of their own economic decisions.** The cost of adding another animal to the land is borne directly by the man who expects to profit from the decision, if the owner of the animal is also the owner of the land.⁴ When the private costs of adding one more animal to the land exceed expected future benefits, owners will stop adding new animals. **Private costs and private benefits tend to balance over the long run.** The better the knowledge that owners have about costs and benefits, the more rapidly the two will be equated. Resources are thereby conserved.

Nevertheless, men are continually tempted to pass on costs to their neighbors, while retaining benefits personally. One man may sneak his animals into another man's field. The other man is harmed economically—robbed. The injured party has an immediate economic incentive to put a stop to his neighbor's practice of transferring production costs to him. His incentive as an injured private owner to stop the practice is far greater than it would be in a system of common ownership, where the injury is spread over the entire population of so-called owners. (Do we really own common property? If a man cannot **disown** a piece of property, it is difficult to see how he can be said to own it.⁵ At best, the costs of "disownership" are high; they involve political mobilization, not simply a private offer to sell.) The desire to reduce costs is strongly felt on both sides of the fence which separates privately owned properties. In fact, **the very existence of the fence testifies to a man's desire to keep outsiders from transferring their costs to him.** Of course, a fence also testifies to people's desire to avoid having their "benefits" wander off, especially if they might cause damage to another person's property, assuming restitution is the law of the land.

Fences Reduce Conflicts

The Bible affirms that those who violate fences or property lines must make full restitution to the economically injured neighbor. The assessment of harm is easier to make than under common ownership. "*His cows ate this row of corn in my cornfield.*" The owner of the damage-producing animals is responsible. Responsibility and ownership are directly linked under a system of private property rights. Under a system of private ownership, **property lines are in effect cost-cutting devices, for they serve as cost-assessing devices.** Without clearly defined property rights for men, and therefore clearly defined responsibilities, the rights of "property"—God's living creatures and a created environment under man's dominion (Gen. 9:1-17)⁶—will be sacrificed.

Carefully defined property rights also help to reduce social conflicts. Dales writes: "Unrestricted common property rights are bound to lead to all sorts of social, political,

and economic friction, especially as population pressure increases, because, in the nature of the case, individuals have no legal rights with respect to the property when its government owner follows a policy of 'anything goes.' Notice, too, that such a policy, though apparently neutral as between conflicting interests, in fact always favours one party against the other. Technologically, swimmers cannot harm the polluters, but the polluters can harm the swimmers; when property rights are undefined, those who wish to use the property in ways that deteriorate it will inevitably triumph every time over those who wish to use it in ways that do not deteriorate it."⁷

In questions of pollution and environmental quality, there can be no neutrality. There are winners and losers, although net winners may suffer some losses (air polluters breathe, too), and net losers may gain some benefits (asthmatics may earn high incomes by working for firms that sell raw materials to local polluting factories). It is the task of biblical exegesis to establish the ethical and legal foundations that enable judges: 1) to identify the winners and the losers; 2) to enable them to adjudicate cases properly; and 3) to determine what is fair compensation to the losers from any unauthorized winners.

Fire and Pollution

Each owner is also responsible for what any animate or inanimate objects under his control do to injure others. A fire kindled on the land of one man must be kept restrained to his property. If the fire spreads to his neighbor's field, he is fully accountable for all the damages. Men therefore have an incentive to take greater care when using potentially dangerous tools or techniques.

The problem of pollution should be subsumed under the general principle of responsibility for fire. A fire is a physical cause of physical damage. From the case-law example in Exodus 22:5, it is clear that the fire which one man starts is his responsibility. **He cannot legally transfer risks to his neighbor without his neighbor's consent.**

The Bible is not talking here about some shared project in which both men expect to profit, such as burning fields to get rid of weeds or unwanted grass. In such a mutually shared project, the case-law example of the man who rents his work animal to a neighbor, but who stays with the animal the whole time, is applicable. The neighbor is not required to pay anything beyond the hiring fee to the owner (Ex. 22:14-15). If the animal is hurt or killed, the neighbor owes nothing.

There is no doubt that the fire-starter is responsible for all subsequent fires that he starts. Sparks from a fire can spread anywhere. A fire beginning on one man's farm can spread over thousands or even hundreds of thousands of acres. Fire is therefore essentially unpredictable. Its effects on specific people living nearby cannot be known with precision. It is this factor of **uncertainty and unpredictability** of the specific, individual consequences which governs the rule of restitution for damage-producing fires, as well as laws relating to the regulation of fire hazards.

What about pollution? Specifically, what about the uncertainty aspect of pollution? A Christian economist should argue that a man must not pollute his neighbor's property without making restitution to him for any **new** damaging effects. If some form of pollution is discovered to be more harmful medically or ecologically than understood before, the polluter should be required to reimburse those who are **subsequently** affected adversely by the pollutant, after the information concerning the danger is made public by the State, or becomes known within the polluting industry.

4. In the case of land which is rented or leased, the renter may attempt to pass some of these costs to the owner. He may allow his animals to overgraze, or he may allow the soil to be depleted or damaged in other ways. Profit-seeking owners need to consider these costs when they draw up the terms of the lease. The original lease contract may impose penalties on renters who damage the property, or it may include incentives so that he will care for it.

5. "The corollary of the right of ownership is the right of disownership. So if I cannot sell a thing, it is evident that I do not really own it." F. A. Harper, *Liberty: A Path to Its Recovery* (Irvington-on-Hudson, New York: Foundation for Economic Education, 1949), p. 106.

6. See "The Ecological Covenant," in Gary North, *The Dominion Covenant: Genesis* (Tyler, Texas: Institute for Christian Economics, 1982), ch. 14.

7. Dales, *Pollution*, p. 67.

Land Discounts: Restitution in Advance

But what if the complaining neighbor had purchased his land knowing all about present **nuisance effects** (as distinguished from subsequently discovered effects) of the pollution process which was going on next door? Does he now have the legal right to sue his neighbor, who is doing exactly what he was doing before the property was sold? After all, the buyer bought the property at a **discount**, because of the depressing effect on land prices caused by the pollution. There is no doubt that there is an inverse relationship between pollution and land rents (and therefore the market price of land): the greater the pollution, the lower the rents.⁸ The market reveals this inverse relationship.

Economic analysis informs us about the costs and benefits of biblical morality, and biblical law tells us who should bear these costs and receive these benefits. As potential buyers, we look at the discount in the purchase price of the land next door to a polluting production process, and we can conclude that this discount serves as an **advance payment of restitution to the buyer for specified, known kinds of future "spillovers."** The nuisance effects of these spillovers from the property next door are implicitly agreed to by the buyer when he receives his discount from the seller. Any subsequent attempt by the buyer to demand financial compensation from the polluter under such circumstances is simply a demand for a statist, compulsory redistribution of private property. So is any legislation that would force the polluter to reduce pollution, unless new information regarding the dangers of the pollution is discovered. It would be a demand for restitution in addition to the discount already received by the buyer when he bought the property.

Murray Rothbard has used the concept of the "homesteading principle" to defend the legal right of a polluter to continue to pollute. By developing a previously unused piece of land, he has created an **easement right** to whatever polluting processes he adopts, so long as these processes do no physical harm to those people who owned nearby property when he bought or discovered his land. He "owns the right" to emit noise or other forms of pollution, assuming his original neighbors were unaffected. In the case of pollution, he calls this a **pollution easement**.⁹

The Christian economist could also argue that a protesting "pro-environmentalist" who demands that the civil government put a stop to his neighbor's pollution is seeking to achieve a less polluted life-style at his neighbor's expense, despite the fact that he bought the property at a discount because of the pollution. Would he be willing to pass on to the polluter any increase in the value of his property that results from the reduction of pollution, to help defray the costs of reducing the pollution? If not, why not? Economically speaking, he is demanding that a third party, the polluter, return the discount to the buyer which was forfeited by the seller. The polluter loses, and so does the seller who was forced to accept less money for his property.

Public Utilities

Perhaps we can better understand the economics involved by examining the economic involved in the installation of water or sewer lines in a region of town which had previously been dependent on wells and septic tanks. The municipal government could make an offer to local residents who are about to see their property values rise as a result of the new municipal service. The city says: "If you want to hook up to the new lines, you must pay a high hook-up fee to the

municipal water company—a fee closer to the full value of the resulting increase in your property's value." In short, the resident who receives the increase in the value of his capital must pay for this appreciated value. This is the way that new sewer projects should be financed, not by assessing all taxpayers in the community. Those who benefit directly and immediately should bear the full costs of the project, or at the minimum, should be required to pay the equivalent of the immediate increase in the value of the property, perhaps in the form of higher assessments per month for a fixed period of time. If sewers were financed this way, there would probably be less political resistance by overburdened taxpayers to urban development.

What is the economic principle involved? Simple: **one person should not be compelled by the State to pay for the increase in value of another person's property.** The taxpayer whose property is unaffected by the increased benefits associated with a new water or sewer line should not suffer economic losses (higher property taxes or water bills) because he has to pay for another resident's economic windfall (waterfall?). The beneficiary should pay for the benefit.

So it is with pollution. The beneficiary of the improved environment—a benefit extracted through compulsion by the civil government—should pay for this improvement. He should compensate the neighbor for the costs borne by the neighbor in reducing the prior level of pollution.

Private Contracts

This raises a very interesting point. Why should the civil government get involved at all? Why shouldn't the benefit-seeker approach the polluter directly and offer him direct compensation? The beneficiary knows approximately what it would be worth to him to escape from the pollutant. The polluter knows approximately what the value of being able to pollute means to him. If the benefit-seeker's price is high enough, he can sign a contract guaranteeing to reduce or eliminate the polluting activity. In effect, the benefit-seeker pays the discount he received from the seller to the polluter.

The polluter may reject the offer. That is his legal privilege. But it costs him to reject it. He forfeits the economic benefit offered by the benefit-seeker. His cost of continuing to pollute has just risen appreciably. He can no longer pollute at zero cost. He has an economic incentive to stop polluting the environment.

Bear in mind that we are speaking here of pollution which was known in advance, and for which the buyer of the adjacent property received a discount. We are not speaking of new pollution, or an older pollution process which, through improved scientific knowledge, is now understood to be more of a physical hazard than had been understood before.

Pollution and the Costs of Knowledge

If pollution is really equivalent to fire's damaging effects, and we see that the Bible makes all fire-starters legally liable for damages, then is this economic analysis of pollution and damages—the concept of the purchase price discount as a form of restitution payment—ethically biblical? Shouldn't all damage-inflicting pollution be banned, whether or not the buyer next door knew in advance about it? After all, he may also have known that the man next door started fires regularly, but he would also know in a biblical commonwealth that the fire-starter is personally liable for all future damages that their fires might cause. Why should the polluter be allowed to go on with his polluting without paying damages, yet the fire-starter be required to pay for all damages, irrespective of the neighbor's discount? Are the two cases ethically the same or different?

8. T. D. Crocker, "Externalities, Property Rights, and Transaction Costs: An Empirical Study," *The Journal of Law and Economics*, XIV (Oct. 1971), p. 452.

9. Murray N. Rothbard, "Law, Property Rights, and Air Pollution," *Cato Journal*, II (Spring 1982), p. 77.

The Economics of Uncertainty

They are the same in principle, but different in application. To understand the differences in application, we must discuss the issue of **uncertainty**. The specific effects of noise or smoke are known. They are nuisance effects. They are effects that buyers can estimate, at least to the extent that discounts are offered by sellers to buyers for agreeing to live next door to smoke and noise pollution. In contrast to the known effects of a familiar form of pollution, the specific effects of any given fire are uncertain. They can be negligible or catastrophic. A fire may affect people far distant from the point of origin. Thus, the fire-starter is warned: be extremely careful. Biblical law warns all fire-starters: "You are legally responsible for all damages caused by your actions. We all know how dangerous fires are; do not attempt to transfer the side-effects to a neighbor." Under biblical law, society is partially protected from essentially unpredictable catastrophes, for those who light the fires are restrained by the threat of full financial responsibility for damages that his fires inflict.

The difference between "traditional" polluters—smoke, noise, smells—and fire-starters is primarily a **difference in men's knowledge of each action's future effects**. The specific local effects of a familiar form of pollution are approximately known in advance to those who choose to live near pollution. The specific effects of specific fires caused by local fire-starters are not well known to nearby residents. Whether specific sparks from a specific fire will be harmless, or will ignite this or that field, or this or that neighborhood, cannot be known in advance. We must focus our exegetical attention on these specific effects.

Insurable Risk

The existence of fire insurance does not invalidate this analysis of "the economics of specific effects." While it is sometimes possible for a person to buy fire insurance, the reason why fire insurance is available at all is because companies insure many different regions, thereby taking advantage of "the law of large numbers." They can insure specific properties economically only because fires have known effects in the aggregate. If there were no known statistical pattern to fires in general, insurers would not insure specific properties against fire damage.

This is not to say that the following arrangement should be prohibited by law. A person who wishes to begin a business which is known to be dangerous approaches others who could be affected. "I'll make you a deal," he says. "I will pay for all increases in your insurance coverage if you let me begin this business in the neighborhood." If they agree, and if the insurance companies agree to write the policies, then he has met his obligations. He has made himself responsible for damages. Instead of paying for damages after the fact, he has paid in advance, through the existence

of insurance.

What if some resident says "no"? The prospective producer of danger can then offer to buy him out. If the offer is accepted, the prospective danger-producer can then sell the property to someone who is willing to live with the risk, if the discount on the land is sufficiently large. But if the original owner refuses to sell, and also refuses to accept the offer regarding insurance premiums, then the first man should not be allowed to force out the original owner. If he begins the dangerous production process, the owner can legitimately sue for damages. But he faces a risk: the court may require a money payment from him to the victim. The court need not necessarily prohibit the activity altogether.

This decision by the judges requires that judges do the best they can in estimating the costs and benefits to the community, **including the perceived value to citizens everywhere of the preservation by the State of private property rights**. They cannot estimate perfectly, for they cannot know the psychic costs and benefits involved in the minds of the conflicting parties. But they can make general, "unscientific" estimations, given the image of God in all men, and given the created environment in which all men live.

This is an important application of biblical revelation to economics: if there is no universal humanity—no universal human nature—and no Creator who serves as the basis for man's image, and no creation governed by the Creator in terms of His value and His laws, then it is impossible for the judges legitimately to have confidence in their estimation of social costs, social benefits, private costs, and private benefits. Without our knowledge of objective economic value provided by God's plan and His image in man, objective economic value becomes epistemologically impossible.¹⁰ Judges would then be blind in a sea of subjective economic value, in which it is philosophically impossible for men to make interpersonal comparisons of subjective utility.

Conclusion

Attempts by humanistic economists to come up with an approach to the problem of pollution have not been intellectually successful. Because humanists deny that God is Creator and that men are made in his image, they are incapable of solving the problem of objective knowledge vs. subjective knowledge. They have not been able to solve the problem raised by Lionel Robbins, the impossibility of making interpersonal comparisons of subjective utility. Thus, we must turn to the Bible for a solution to the nagging problem of the economic effects of pollution. We must use Bible principles of justice to begin to devise political and economic sanctions against polluters—sanctions that do not inherently destroy the case for freedom. The basic solution to pollution is **restitution**, either after the act or in advance (discounts).

10. Gary North, *Genesis*, ch. 4: "Economic Value: Objective and Subjective."