1. Stealing the commons

*The law doth punish man or woman
that steals the goose from off the common,
but lets the greater felon loose
who steals the common from the goose.*

– Anonymous

Nature underpins human livelihoods both as a source of raw materials and as a sink for the disposal of our wastes. The quality of the natural environment can be profoundly affected, however, by how we distribute power and wealth among ourselves. The Earth is the home and common heritage of all humankind, but some people claim more of its bounty than others. Access to ‘natural capital’ – a phrase lately in vogue among economists – is filtered through our political and economic institutions. Those people who are relatively wealthy and powerful generally reap more of the benefits from uses of the environment, and bear fewer of the costs from its abuse, than do those who are relatively poor and powerless.

Disparities of power and wealth influence not only how nature’s pie is sliced, but also its overall magnitude. When disparities are great, those at top of the political and economic ladder can more easily pollute the air and water and deplete the natural resource base of those at the bottom. When disparities are small, those on the bottom rungs of the shorter ladder are better able to defend themselves. A democratic distribution of power and an equitable distribution of wealth, therefore, can help to protect the environment. Conversely, an oligarchic distribution of power and an inequitable distribution of wealth can exacerbate environmental degradation.

RETHINKING THE ENVIRONMENT AND THE ECONOMY

Long before the rise of market economies, humans relied on natural resources for their livelihoods. Even today, when markets mediate access to many of the goods and services we produce and consume, much that is vital to our quality of life remains outside the sphere of market exchange. The air we breathe is not purchased at the supermarket; neither, in most cases, is the water we drink. The vast majority of the sights, smells, and sounds of daily

life are not bought and sold. At the end of the day, the joys and sorrows of families and friendships often count for more than what was in our shopping baskets.

The economy is larger than the goods and services exchanged in market transactions. A broad vision of the economy takes into account all of the assets, or forms of wealth, that provide the foundation for our livelihoods; it encompasses the many dimensions of well-being that matter to us; and it embraces the full range of activities by which we derive well-being from the assets at our disposal. The economic nexus includes natural assets as well as human-made assets, non-market activities as well as market exchanges, and non-income benefits as well as income (see Figure 1.1).

Figure 1.1 Wealth and well-being

Humans versus Nature?

Environmental debates, especially in the United States, often pit proponents of wilderness preservation against advocates of ‘rational self-interest.’ The preservationists typically base their case on the linkages depicted in the top half of Figure 1.1: they emphasize the crucial importance of natural assets, non-market activities, and non-income dimensions of well-being. The deep-ecology variant of the preservationist school of thought goes further, arguing that the ‘rights of nature’ ought to supersede human well-being as the ethical basis for policy (Nash 1990).

Those who champion rational self-interest typically base their case on the linkages depicted in the lower half of Figure 1.1. They are generally inclined to see the market as the measure of all things. Some of them recognize the need for government interventions to redress market imperfections and market failures; others claim that Adam Smith’s ‘invisible hand’ alone delivers

the greatest good to the greatest number. The libertarian variant of this school goes further, arguing not only that free markets serve to maximize human well-being, but that freedom from non-market restrictions on individual liberty should itself be an overriding social goal.

Notwithstanding their profound differences and often acrimonious disputes, both sides in this environmental debate share certain premises. Both juxtapose nature to humans, the environment to the economy, differing only in which side they think will and should ultimately prevail. The preservationists argue that, in the absence of strict controls, the magnitude of negative human impacts on the environment will overwhelm nature's capacity for resource renewal and waste assimilation. The proponents of market rationality argue that human ingenuity, guided by price signals, will triumph over environmental constraints. In addition, neither side generally devotes much concern to the well-being of the poor. In the preservationist paradigm, the poor are best fenced out of nature lest they trample upon it. In the greed-as-virtue paradigm, the poor are simply left to their free-market fates.

The starting point for this book is an alternative vision in which humans are not apart from nature, but a part of it. For thousands of years, going back at least to the origins of agriculture, human activity has shaped and reshaped the environment. As William Cronon (1995: 25) remarks, 'Nature is not nearly so natural as it seems.' The environmental impacts of human activities are often negative, but they can be positive too: we can degrade environmental quality, but we can also improve it by investing in natural capital.

In many cases, investing in natural capital takes the form of ecological restoration – repairing damages caused by earlier human activities. Examples include reforestation, the protection of endangered species to enable populations to reach levels at which they are no longer endangered, the clean-up of contaminated land and water bodies, and reductions in concentrations of air pollutants such as lead, sulfur dioxide, and suspended particulates. These investments – in effect, making amends for past 'disinvestments' in natural capital – are some of the most important ways in which humans can act to improve environmental quality.

Yet the scope for positive human impacts of environmental quality is not limited to the reversal of past damages. Humans also can, and sometimes do, enhance environmental quality above and beyond what would exist in their absence. Perhaps the greatest historic example is the domestication of crops and animals. Beginning some 10,000 years ago, human interactions with nature created rice in Asia, wheat and barley in the Near East, maize in Meso-America, potatoes in the Andes (Kahn 1985). Our daily bread, and the diverse other foods on which our survival depends, are the fruits of positive environmental changes brought about by human hands.

A more recent example is the modification of the ecosystem in the Upper Rio Grande watershed in southern Colorado and northern New Mexico. Beginning in the sixteenth century, Hispanic settlers in this bioregion constructed gravity-flow irrigation systems, known as *acequias*, that transformed arid lands into rich and diverse agricultural ecosystems. Today the descendants of these farmers maintain these water channels, thereby providing a range of valuable environmental services: soil conservation, water retention and filtration, the preservation of habitats and corridors for wildlife, and the conservation of crop genetic diversity (Peña 2001). Far from being short-sighted despoilers of nature's bounty, humans are here the 'keystone species' on whose presence the complex web of other species crucially depends.

To term the advent of crops or the creation of anthropogenic wetlands an 'improvement' in environmental quality is to make a value judgment. I believe that the basis for such judgments must be a deep commitment to the well-being of present and future generations of humankind. I embrace the goal of protecting the environment, then, not because I consider nature to be more important than people, but because I recognize that the fates of humans and nature are inextricably woven together.

Winners versus Losers

The human-versus-nature dichotomy not only neglects the potential for people to have a positive impact on the environment. It also diverts our attention from the contests *among* people that are central to an understanding of the dynamics of pollution and natural resource depletion. Environmentally degrading economic activities typically create winners, who reap net benefits from these activities, as well as losers, who bear net costs. Without the winners, these activities would not occur; without the losers, there would be little reason to worry about them, at least from the standpoint of human well-being.

To understand the reasons for environmental degradation – why more of it happens in some times and places than in others – we must ask why the winners are able to impose costs on the losers. There are three possible answers to this question:

- First, the losers may not yet exist: they belong to future generations and are not here to defend themselves. In such cases, the only feasible solution is to foster an intergenerational ethic, combining a sense of gratitude toward those who preceded us with a sense of responsibility toward those who will follow.
- Second, the losers may exist but not know it: they lack full information, for example, about the extent of air pollution and its health

impacts, and hence do not mobilize to combat it. Such cases highlight the importance of environmental research and education and of right-to-know laws that guarantee citizens access to information about environmental hazards.

- Finally, the losers may exist and be well aware that they are losers, but they lack enough power to prevent the winners from imposing environmental costs on them. In such cases, the extent of pollution and resource depletion reflects the disparity in power between the winners and the losers: the wider this disparity, the greater the amount of environmental degradation.

Empirical evidence suggests that this third explanation – in which environmental degradation is based on power disparities – is often an important part of the story. In the United States, for example, a growing number of studies indicate that low-income people and racial and ethnic minorities often face disproportionate environmental hazards (see, for example, Bullard 1994 and Pastor 2001). Internationally, countries with a more equal income distribution, greater political rights and civil liberties, and higher rates of adult literacy – indicators of a more equitable distribution of power – tend to have less air pollution, less water pollution, and wider access to clean drinking water and sanitation facilities (see Chapter 5). Within the United States, states with a more equal distribution of power (as measured by an index derived from data on voter participation, tax fairness, Medicaid access, and educational attainment) tend to have stronger environmental policies, less environmental stress, and better public health outcomes (see Chapter 6).

Poverty and the Environment

Discussions of the links between poverty and the environment often focus on the ‘vicious circle’ in which the poor degrade their environment in a desperate quest to survive, in turn deepening their poverty in the future. Such cases undoubtedly exist. But if much environmental degradation benefits the powerful at others’ expense, then a more important link may rest on the relationship between wealth and power: poverty is bad for the environment because the poor are less able to resist having environmental costs imposed on them by the rich. In both scenarios, poverty sets the stage for environmental tragedies, but in the first case the principal actors are the poor themselves, while in the second the principal actors are the rich.

Both poverty–environment linkages can be found throughout the world. Tropical deforestation, for example, is sometimes driven by poor settlers who are clearing land on which to grow food. Other times it is driven by multinational corporations and national elites who are engaged in timber exports,

mining, and cattle ranching, often to the detriment of poor people and ethnic minorities who live in or near the forest.

Some insight into which scenario is most common can be gleaned by considering the distribution of income worldwide. The United Nations Development Programme (1992: 36) has estimated that the countries whose average incomes rank in the richest 20 percent of the world's population receive 82.7 percent of global income, while the countries whose average incomes rank in the poorest 20 percent receive only 1.4 percent of world income. Average incomes in the top tier of countries are thus about 60 times greater than in the bottom tier. World income disparities are even sharper, of course, if we consider inequalities within countries. The same UN study estimates that in 1988 the richest 20 percent of individuals around the world (regardless of whether they happen to live in a high-income or low-income country) had average annual incomes of \$22,800 per person, while the poorest 20 percent had annual incomes of \$163 – a 140 to 1 ratio.

The amount of environmental degradation associated with a dollar's worth of production and consumption is likely to vary across individuals and countries. Whether degradation per dollar is higher for poor people or for rich people is a question on which little systematic evidence has been collected. If the amount of degradation per dollar were roughly the same for both groups, the richest 20 percent of the world's people would account for *140 times as much* environmental degradation as the poorest 20 percent. Put differently, the total amount of degradation for which the poorest fifth is responsible could equal that for which the richest fifth is responsible only if the degradation per dollar for the poor were 140 times greater – a rather implausible suggestion. This simple comparison suggests that environmental degradation driven by the economic activities of the rich is likely to surpass, by a substantial margin, that driven by the economic activities of the poor.

This is not to say that the rich have no interest in environmental protection. Clearly they do, particularly in protecting the parts of the environment where they live and play. But the demand of the rich for environmental quality is tempered by two considerations. First, since they receive a large share of the benefits from economic activities that degrade the environment, they would bear much of the cost of protecting it: they face a tradeoff between their desire for environmental protection and their desire for higher profits and cheaper consumer goods. Second, since environmental quality is not a pure public good, available in equal measure to all, the rich can seek to displace environmental costs onto lower-income communities at home and abroad.

Reductions in poverty and a narrowing of inequalities of wealth and power, therefore, can help to protect the environment, not only by diminishing the need for the poor to degrade the environment in order to survive, but also by curtailing the ability of the rich to do so at their expense.

POLITICAL ECONOMY

Economics, according to the usual textbook definition, is about the allocation of scarce resources among competing ends. Political economy includes not only economics thus defined, but something more: it is about the allocation of scarce resources not only among competing ends, but also among competing people. The distribution of wealth and income are treated as a peripheral issue in much of economics, but in political economy who has what is absolutely central. Distribution is relevant both normatively, in judging the desirability of economic outcomes, and positively, in understanding how economies work.

The conventional explanations for environmental degradation proffered by economists usually downplay the importance of political economy. The standard textbooks characterize pollution and natural resource depletion as impersonal ‘negative externalities,’ social costs that slip through the fingers of the market’s invisible hand. Those on the receiving end of these costs just happen to be in the wrong place at the wrong time. To correct for these market failures, the textbooks prescribe a similarly impersonal remedy: government interventions in the form of regulation, taxes, or the creation of tradable emission permits. Yet governments often fail to respond efficiently to environmental externalities; indeed, sometimes they fail to respond at all. To understand why societies act to protect environmental quality in some times and places more than others, we must examine how social decisions are governed by the distribution of wealth and power.

The Tragedies of Open Access

The ‘tragedy of the commons,’ described in a famous article by Garrett Hardin (1968), epitomizes the distribution-blind analysis of environmental degradation. In Hardin’s parable, people have free, unlimited access to common lands where they can graze their animals. Each individual reaps the full benefit of grazing his or her livestock on the open-access lands, while bearing only a small fraction of the attendant cost of thereby reducing the amount of forage remaining for all. Overgrazing is the tragic result. Hardin proposed state regulation to safeguard the commons. Market proponents have used the same analysis to argue for the privatization of common lands.

In recent years a large body of research has demonstrated the crucial difference between common property and open access. In many places throughout the world, communities have developed informal but effective rules to ensure that common-property natural resources, including grazing lands, forests, and fisheries, are used sustainably (see, for example, Ostrom 1990). Hardin’s parable hence is better termed the ‘tragedy of open access,’ referring

to free-for-all situations where rules for the joint use of common property do not exist.

In the scramble for open-access natural resources, some people are more equal than others. In open-water fisheries, for example, the advantage goes to those who can field the most ruthless extractive technologies. Similarly, everyone may have the same right to pollute the air and water, but not everyone has equal means to do so. The law that mandates the same penalty for anyone who steals a loaf of bread, whether the thief is a starving person or a millionaire, provides a hollow form of equality. So too does the fact that a poor family living downwind from a chemical factory has as much right to foul the air as the factory's owners. Open access therefore often leads to not one tragedy, but two: the abuse of environmental resources, and the 'stealing of the commons' by powerful and wealthy interests at the expense of others.

Five Dimensions of Power

Several dimensions of power are important in analyzing the ability of different economic actors to appropriate natural resources, to discharge wastes into environmental sinks, and to prevent others from doing so:

- *Purchasing power* is the dimension of power that underpins the notion of 'consumer sovereignty' in economics textbooks: in a pure market economy, the ability and willingness of individuals to pay for various goods and services determines what gets produced. Similarly, purchasing power is the foundation for the valuation of environmental goods and services – such as biodiversity conservation or cleaner air – in the 'shadow markets' of benefit-cost analysis that are meant to underpin public-sector decision-making in a world of 'optimal planning' free of distorting political influences.
- *Decision power* – the ability to prevail in contests where different people prefer different outcomes – is the most evident 'non-economic' dimension of power. For example, a government's decisions as to what pollutants to regulate, and how strictly to regulate them, is typically based not only on dispassionate calculations of the social costs and benefits of pollution control, but also on the relative strength of the lobbying efforts by proponents and opponents of regulation.
- *Agenda power* is the ability to determine which issues enter into the arena of public decision-making at all. This is a more subtle dimension of power, in that it can shape outcomes before decision power comes into play. For example, in his classic study *The Un-politics of Air Pollution*, Matthew Crenson (1971) recounts how corporate power in

the steel town of Gary, Indiana, kept the issue of air pollution off the municipal government's political agenda for many years.

- *Value power* is the ability to influence what others want, what they themselves will choose if given the opportunity to decide. This is an even subtler dimension of power, for it raises the possibility that people's wants can be shaped by the society in which they live, so as to work against their own interests (Lukes 1974). As John Kenneth Galbraith (1973: 9) once observed, in a presidential address to the American Economic Association, such power can be wielded in an effort to persuade people that pollution is 'palatable or worth the cost.'
- *Event power* is the ability to alter the circumstances in which people make choices, rather than directly determining the choices themselves. 'Externalities' are an example. Randall Bartlett (1989: 43) offers this hypothetical illustration: 'Suppose I dig a deep pit, fill it with poisonous snakes, and throw you in. I then stand on the edge of the pit and offer to sell you a ladder. To buy or not to buy is not the only question. What prior events made you need to buy, and my influence over them, are also relevant.'

Inequalities in all five dimensions of power play a role in the political economy of environmental degradation and environmental protection.

OVERVIEW OF THE FOLLOWING CHAPTERS

The essays presented in this book explore these themes, addressing both theoretical issues and empirical evidence, and drawing on experiences in various parts of the world.

Chapter 2, 'Let them eat risk,' contrasts two approaches to policies for reducing vulnerability to natural and man-made disasters. The wealth-based approach is founded on purchasing power: decisions as to how much protection to provide and to whom are based on the conventional willingness-to-pay criterion. An alternative, rights-based approach is founded on the proposition that every individual has an equal right to a clean and safe environment. Tensions between the two approaches exist in public policy around the world. History, I suggest, is on the side of the rights-based approach.

Chapter 3, 'Investing in natural and human capital,' explores the potential for expanding the stock of natural capital, particularly in the developing countries of Latin America, Asia, and Africa. Such investments are not an alternative to investing in 'human capital' through improvements in the nutritional well-being, health, and education of the poor. Rather, investments in human capital can provide a foundation for investments in natural capital.

Chapter 4, 'Inequality as a cause of environmental degradation,' develops the theoretical basis for the proposition that inequalities of power and wealth shape the overall magnitude of environmental degradation, as well as the distribution of its social costs. This implies that a more equal distribution of wealth and a more democratic distribution of power can advance the goal of environmental protection.

Chapter 5, 'Rethinking the environmental Kuznets curve,' tests this proposition by examining the determinants of international variations in air pollution, water pollution, and access to clean water and sanitation facilities. In recent years, some economists have suggested that pollution and other forms of environmental degradation display an inverted U-shaped relation to per capita income: as economic development proceeds and average incomes rise, pollution at first increases but ultimately reaches a turning point after which environmental quality improves. An examination of international variations in income distribution, literacy, and political rights and civil liberties suggests that these may be more important than average income *per se* in determining environmental outcomes.

Chapter 6, 'Power distribution, the environment, and public health,' examines interstate variations within the United States, and reaches a similar conclusion: those states with a more equal distribution of power tend to have stronger environmental policies and tend to perform better in terms of both environmental quality and public health.

Chapter 7, 'The globalization of market failure?', considers the environmental impacts of international trade, and challenges the common assumption that the main environmental threat posed by global economic integration is that dirty and unsustainable production practices in the developing countries of the 'South' will undermine relatively clean and sustainable production in the industrialized countries of the 'North'. On the contrary, the opposite can and often does occur: dirty production in the North displaces clean production in the South. Two case studies illustrate: the intensified competition between maize producers in Mexico and the United States in the wake of the 1994 North American Free Trade Agreement (NAFTA), and the competition between jute, a natural fibre produced mainly by peasants in Bangladesh, and polypropylene, a synthetic substitute produced by the international petrochemical industry.

Chapter 8, 'A squandered inheritance,' examines the dynamics of deforestation by means of a case study of the Philippines in the era of dictator Ferdinand Marcos. Like other Southeast Asian countries, the Philippines experienced rapid deforestation in the 1960s and 1970s, driven primarily by exports of tropical hardwoods to the world market. Those who benefited most from the logging industry were well-connected politicians and military officers; and those who suffered most from its consequences were poor people

who lived in or near the forests. In the Philippines, as in other countries in the region, the imbalance of power between these winners and losers propelled environmental destruction on a massive scale.

Finally, Chapter 9, 'Democratizing environmental ownership,' draws some policy implications from this analysis of the political economy of the environment. Democratization – that is, movement toward a more equal distribution of power – can provide a powerful impetus to environmental protection. At the same time, environmental protection – insofar as it embodies the principle that every person has the right to a clean and healthful environment – can provide a powerful impetus to democratization.

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