NATURAL RESOURCE LAW

PROPERTY RIGHTS AND TAKINGS

Richard A Epstein

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Richard A Epstein

RICHARD A EPSTEIN is the James Parker Hall Distinguished Service Professor of Law at the University of Chicago, where he has taught since 1972. Previously, he taught law at the University of Southern California from 1968 to 1972.

He has been a member of the American Academy of Arts and Sciences since 1985 and a Senior Fellow of the Center for Clinical Medical Ethics at the University of Chicago Medical School. He served as editor of the *Journal of Legal Studies* from 1981 to 1991, and since 1991 has been an editor of the *Journal of Law and Economics*.

His books include *Torts* (Aspen Law and Business, 1999), *Principles for a Free Society* (Perseus Books, 1998), *Mortal Peril: Our Inalienable Right to Health Care?* (Addison Wesley, 1997), *Simple Rules for a Complex World* (Harvard, 1995), *Bargaining with the State* (Princeton, 1993), *Forbidden Grounds: The Case Against Employment Discrimination Laws* (Harvard, 1992), *Cases and Materials on Torts* (Little, Brown, 5th ed, 1990), *Takings: Private Property and the Power of Eminent Domain* (Harvard, 1985), and *Modern Products Liability Law* (Greenwood Press, 1980).

Professor Epstein has written numerous articles on a wide range of legal and interdisciplinary subjects and taught courses in contracts, criminal law, health law and policy, legal history, property, real estate development and finance, jurisprudence and taxation, torts, and workers' compensation.

An Overview of Natural Resource Law

Being ignorant of New Zealand's local circumstances, I am uncertain what I can offer to another country on topics such as the law and economics of resource management. What I hope to bring is a general theory that applies independently of local concerns. There will be many transitional challenges unique to New Zealand, and there may be certain kinds of resources found here that are not duplicated anywhere else. But as I began my working life – I might add as a Roman lawyer – I was struck at how extraordinary it is, when dealing with subjects of trade and commerce, that the basic principles of contract law travel well across oceans, across generations and across cultures. I think that the same is true about natural resource law.

Public and private resources

In organising the subject of natural resource law, it seems useful to first break the subject into two halves, and then see how the halves interact with each other. The first half concerns the rules that govern the allocation of natural resources when the land or other property is owned by the state. The second half outlines the legal regime for natural resources in private hands. The challenge is to decide the appropriate set of legal institutions in each case, and to note their similarities and differences.

These are very different tasks, and we need to explore the differences. At the most general level, when the government owns resources it acts

not only as a regulator but also, after a fashion, as a private property owner. Therefore, to the extent that the government can claim ownership rights in a particular bundle of resources, it will have far greater power and discretion over those resources than I think it should have, or indeed does have, when it seeks to act only as a regulator.

The usual presumption is that an owner, including a government owner, is more or less entitled to do what it wants with what it owns, so long as it does not invade the rights of others. The presumption with respect to a regulator, even in a world that is shorn of constitutional restraints, is that it must show good cause, or at least give a good reason or explanation as to why decisions by private owners should be superseded by the collective will. There are very different balances of power in the two cases.

Ownership of natural resources becomes more complicated when the owner is the government rather than a private party. The government is not a natural person. The government turns out to be all of us, so when the government owns a piece of land, every individual within the society has some claim upon the collective resources in question. The moment political collectivities need to make decisions, the matter becomes much more complicated than the case of individual ownership or even voluntary joint ownership.

In the normal situation, private individuals who come together to pool their resources are deeply concerned about how these resources will be managed. They are always worried that their corporate officers may run away with collective resources. They worry about mismanagement. They worry that insiders will divert resources to a small group of privileged persons.

Given these risks, individuals who join private collectivities are very careful with whom they choose to do business, and they normally set up complicated articles of governance to forestall various kinds of abuse, neglect and defalcation. In many corporate markets, people try to protect themselves by using marketable interests and securities – exit rights – so if they do not like what is going on in the corporation, they can sell their

interest to someone who may agree with the underlying policy. If enough shareholders decide to sell simultaneously, it is called a takeover bid, and new shareholders can oust the old management and redirect policy.

When dealing with natural resources owned by government, all of the problems of collective ownership exist, but without many of the customary protections and benefits that private-sector collectivities can afford their members. In the first place, the government will contain individuals who fundamentally disagree with each other over the proper use of resources. Yet there will be little guidance as to which group should prevail, or why. Moreover, since all owners are citizens, they will not possess alienable rights over the resources under common control. If you cannot switch (by selling your interest in the resources), it generally means you will have to fight. And 'fight' means devising an administrative process to determine the pattern of resource use that commands the support of the electorate. Public ownership of resources thus invites factions, coalitions and political control. It forces the state to adopt complex administrative procedures. It places you, *a citizen*, in a most inefficient decision mode. Do we need it?

The valuation problem

Given this awkward governing structure, how should we deal with commonly owned natural resources? There are a number of methods for allocation, but each is subject to enormous pitfalls. The basic problem is that society contains many individuals with separate and distinct preferences. Hence, one approach is to allow the central administration to collect information about these preferences, to ask whether or not they can all be satisfied simultaneously, and then to develop an administrative compromise that represents a fair measure of the preferences of the public at large.

This process, however, has enormous disadvantages. The weakness with the participation model in administrative governance can be summed up in a single sentence: 'Always overstate your preferences'. To the extent that you do not have to pay for exaggerated claims, you will think to yourself:

'I know that I want this particular outcome, and the best way to get it is to announce forcefully – more forcefully than I feel – that this outcome and only this outcome will be acceptable'.

If you are a conservationist, you will declare that nature is sacred and that any form of human interference should be condemned as sacrilegious. If you believe in development, you raise clearing the land to the status of a moral imperative. You make these strong rhetorical claims because you do not have to pay any price for speaking your mind. Talk is cheap and it comes in abundant supply. The costs of your proposals will be diffused over all taxpayers, and much will be paid by individuals who oppose your programme. The political system therefore inspires inflated rhetoric with little accountability. This weakness is intrinsic to the valuation process; it does not depend on which side of the political struggle one happens to be. It is basically an inherent feature of the decision-making rule.

There is second way to describe the valuation problem. When people talk about what they value, it is easy for them to pick a number that reflects their valuation of some item or resource. But in economic theory, valuation is a slippery and complicated process, dependent on two critical concepts. The first is that the scarcity of a resource helps determine its value. The less that one has of a given thing, the more valuable any particular unit of it will be. The second is that in ordinary private markets, where property rights are well defined and respected, values are determined by what the marginal consumer or the marginal producer regards as the net value of the last unit of production.

To give a famous example: it may well be that the first litre of water is far more valuable to any individual than the first carat of diamond. The first is a good of necessity and the second is one of luxury. However, given the relative abundance of water compared with diamonds, the market price of the diamond will be far greater than the market price of water, because at the margin the last unit of water is worth far less than the last unit of diamonds. Their prices will therefore tend to move accordingly.

Unfortunately, the strong rhetorical tendencies that I mentioned do not allow people, in the context of publicly owned goods, to distinguish clearly the average and the marginal value of a given commodity. Consider a strong conservationist who wishes to preserve a mangrove swamp. If there are one hundred thousand acres of swamp, the political tendency is to act as though the last thousand acres of available land are worth as much as the first thousand acres. At some point, however, the law of diminishing returns has to affect marginal values as the relative abundance of swamplands increases.

Political bodies, for the most part, find it exceedingly difficult to disaggregate these two kinds of valuations. Hence they have problems deciding at the margin whether, or how, one resource ought to be traded off for another. This leads to serious errors in the use of public resources. Most people, even conservationists, will not take the view that whatever is owned by the public must remain at all costs and at all times in its natural state. Instead, they will accept some trade-off and allow, perhaps, modest harvesting of timber or other forms of development. But with public ownership of resources, it is more difficult to defend those intermediate, mixed land use policies against the positions at either extreme. Moreover, it could invite certain intermediate positions that are more wasteful and inefficient than either extreme. Much will depend on particulars. With limited privatisation of government land, for example, it is not enough to move vaguely toward a market system of allocation. The rules governing property use must be scrutinised to ensure that the system operates in a consistent and coherent way.

The perils of partial privatisation

Let me give you an illustration from a very different area, which I hope to relate back to the problem of resource management in the public sector. During the late 1980s, there was an enormous crisis in the United States in the savings and loan industry. Through mismanagement of its various savings and loan programmes the United States created a debt of some

US$500 billion, which the people owed to themselves. Now, oddly enough, the actual debt in some sense is of relatively small consequence. If all of us owe some portion of the debt as debtors, and all of us own some portion of the debt as creditors, at first sight it looks as though any payment of the debt is a wash – each person pays what they get. And likewise with any default on the debt – each person need not pay themself.

If only a pure transfer between one group of individuals and another were at stake, any legal approach might shuffle the distributional positions of various persons but would not reduce the overall wealth of society. As a lawyer-economist, I might therefore have some justified Olympian detachment as to whether payment were made or not. But the cause of this debt was that the security for various loans made by the banks turned out to be worthless. In effect, banks invested US$500 billion in real estate and business ventures that netted far less, so there was a enormous shortfall on the initial investment. The debt problem is the back end of a set of real economic losses.

Why did it take place? The answer is partial deregulation. Under the old regime, the way in which banks issued their loans was extensively regulated. The United States also introduced a system of guarantees whereby individual depositors were protected against the losses on these loans by the US government. Under deregulation, the guarantees were kept in place, but the government scrutiny over bank lending was greatly reduced.

That mixed regime is a much more dangerous one than full deregulation, because it creates an enormous moral hazard. The banks that engaged in risky activities knew that if they struck paydirt they would do handsomely, but they also knew that if they failed there would be no loss to their depositors because of the government guarantee. This partial deregulation created an incentive to engage in irresponsible conduct. One constant worry in any market is the existence of subsidies for certain kinds of activities left by unthinking forms of government control.

As we return to the question of land, we face the same peril. Many places in the United States have seen the development of 'mixed' uses of

government-owned land, where there is some harvesting of timber on the one hand and some retention of timber in its original growth on the other. But how should one decide which timber is harvested and which is allowed to stand? The US system is, in effect, a system of proration, taking a little timber from a lot of places instead of taking a lot of timber from a few places.

This regulatory regime has fatal consequences for resource management. Every time timber is harvested from a certain location, it is necessary to build roads. As a result, the US Forest Service is the single most important and expensive road builder in the United States. When somebody decides to thin a remote stand, they smash through large portions of forest and destroy enormous amounts of valuable timber, in order to be able to harvest timber that could be harvested somewhere else. If harvesting were concentrated in a few areas there would be fewer roads to build, and much less damage to the environment. Since all of this is internal to the government, nobody assesses the cost of the road when decisions are made to harvest the timber. The moral is that under collective ownership without private property rights, nobody has the proper incentives to figure out whether or not the total cost of a given project will exceed or be exceeded by its benefits.

In addition, when private companies acquire timber leases from the government, they behave differently, as they have rights to harvest only some of the crop but do not own the rest of it. If private companies own the entire forest, when they cut down some timber they will be careful to preserve the value of the standing timber that remains, because if that value should be reduced it will hit their pocketbook, not somebody else's. But if a private company has the right to harvest timber, but the government owns the timber that remains standing, the company has every incentive to be sloppy and careless in its harvesting activities. The company gets the benefits of cheap harvesting, while somebody else pays the latent externality of the damage to the residual stock. With these systems of mixed management of forestry resources, the outcomes can be wasteful. It is possible to ride roughshod over various kinds of interests

that would be described, in anybody's book, as (i) important, and (ii) non-economic.

In the United States, an instructive case, *Lyng v Northwest Indian Cemetery Protective Association* (485 US 439 (1988)), involved some forest land owned by the government. A substantial portion of this land was in fact a sacred area for prayer by some Indian tribes. The Forest Service decided to bulldoze a road right through the Indian prayer grounds. The question was whether or not the Indian tribes could find some way under American constitutional and statutory law to stop the bulldozer. So they brought an action, which was eventually decided by the US Supreme Court. Justice Sandra Day O'Connor, in her opinion, argued that everybody knew that the forests were owned by the US government, and she used the standard metaphor of private ownership, ignoring all elements of public trust, to argue that the government, as owner of the land, could do what it wanted with, of course, *its* property. In this she responded to the political interests of the owners, the harvesters and the Forest Service. The Indian interests were wiped out, and there was no judicial redress.

It is interesting to see the way in which the campaign on behalf of the Indians has taken place inside the academic community. People who believe that *Lyng* was wrongly decided, and I am one of them, argue two points. First, they attack the various forms of incompetence of the US Forest Service in making resource allocation decisions. Second, they will hearken back to an idea of private property in order to protect the Indian claims, even on public lands. More concretely, legal scholars will note that the Indians had perpetual use over various portions of this forest from time immemorial. They will say that the uses were definite, that they were predictable, that they were known by other individuals and that they satisfied all of the requirements needed to create a prescriptive easement at common law. Therefore, once the easement is recognised as a species of property, the government can only wipe it out (if at all) by compensating its owners. Given the very sensitive nature of the use, it may well be that the Indians are entitled to block the road altogether. That argument is correct, I think, as a matter of principle, but it is

absolutely wrong as a matter of positive law, for the road unquestionably counts as a 'public use' under the Constitution's takings clause.

The source of the malaise stems from the structure of government rules with respect to public ownership and the question of adverse possession. It is settled law that claims of adverse possession, or claims of prescriptive easements, never run against the government. This gives the government the power to do anything through the political process, no matter what previous patterns of use exist. This process does not, of course, understand the relationship between average and marginal values; nor does it have to make responsible trade-offs, because the bureaucrats who make the decisions never have to pay the price of error.

A better approach

Within the public sector, then, what, if anything, can be done to transfer resources out of public hands and into private hands? In many cases this is a difficult decision – the so-called privatisation decision. It is an issue that I believe New Zealand has faced, and doubtless will be faced all over the world. Initially, it is more difficult to decide whether to privatise some kind of natural resource held by the government than it is to decide whether to privatise the Bank of New Zealand or Air New Zealand.

With respect to business corporations owned by the government, I can think of no responsible argument that the government will manage assets better than a private company. If property rights can be established in the form of shares, you should organise some form of auction or competitive sale as soon as possible. But an ordinary corporate asset is very different from an ecological resource rich in complex interactions with other land or water. If one plot of land is sold, the value of some nearby plot may be reduced. So the simple argument for privatising everything owned by the government may not be the correct solution. We first need to determine whether or not privatisation will lead to the best outcomes. That challenge, unfortunately, leads back to the same kind of general collective cost-benefit analysis that is associated with other allocative decisions.

Now suppose you decide, as I think you often should, that large tracts of forest may be better off in the hands of environmental organisations, which could then sell timber or mineral rights to private firms. Still, political factors make it difficult to handle the transition. When resources are controlled by the public sector and their use is decided by administrative procedures, many individuals and various interest groups have an enormous stake in the current system of allocation. The moment the state transfers these resources to some other group, be it a timber company or an environmental organisation, so that decisions thereafter can be made through normal market processes, the political influence of these groups will necessarily wane. They will therefore exert the last ounce of energy to keep these decisions in the political arena.

Is there a better way? I think the answer is 'yes'. Let me give you an illustration from the United States that shows how to arrive at mixed uses that take into account the relative cost at the margin of competing activities. The Audubon Society owns extensive wetland properties, and many are concentrated in Louisiana. Quite consistently and successfully, the Audubon Society has sold leases for oil and gas drilling on its own property. They do this with full knowledge of the irreducible risk that pollution could damage sensitive locations. So why would the Audubon Society promote mixed uses? The answer is that they use revenues from the oil and gas leases to improve the habitat that they already own, and to acquire additional habitat.

Do they get the same deal as other oil and gas lessors? The answer is 'no'. They receive a lower royalty for the oil and gas drilled under their property than an ordinary private owner. By recognising the greater risk from spillage on its land, the Audubon Society requires its lessees to take additional precautions: (i) to reduce the probability of an occurrence, and (ii) to reduce the severity of any spillage that does occur. Hence, greater care is taken in the siting and spacing of wells and the drilling rate. It knows that these precautions cost money, so it forgoes some portion of its potential royalties and imposes tighter restrictions on drilling companies. Private enterprises, including environmental organisations, have incentives

to make relevant trade-offs at the margin. Government organisations typically do not. In this case, you could give or sell the same land to an oil company and achieve a similar outcome. If a group of environmentalists wanted this particular resource more than the oil company, they could buy it from the oil company and then lease it back on the same terms and conditions used by the Audubon Society. A sale by the government does not prevent recontracting between private parties with very different views; one should therefore be sympathetic to the privatisation alternative in the natural resource area.

Moreover, when moving from the world of government and administrative law to the world of contract and trade, the relationships between environmentalists and developers are transformed. In the government context, each side is determined to expose what is terrible about the other, in an effort to shut them down entirely. In the market context, both sides struggle to reach trade-offs over the resources they own. Conflict and antagonism are replaced by relative cooperation over natural resources. While I do not recommend that all publicly owned resources be sold off tomorrow, I do think caution is the order of the day before creating implicit subsidies that allow private enterprises to use public lands at a fraction of the real costs of their activities. Likewise, we should be more receptive to selling certain lands to private parties, secure in the knowledge that a strong demand for environmental preservation will be recognised in the marketplace just as it is recognised in politics.

Regulation of private property

The second half of the problem concerns the regulation of private property. Here, of course, many forms of regulation cover a wide range of private activities. Some forms of regulation are appropriate; others may be suspect unless they are accompanied by compensation. I will begin with the simplest cases, and then move towards more complex modern situations.

The first point is that even the most devout supporter of laissez-faire and freedom of contract does not deny that the law of tort has some role

to play in the organisation of human affairs. One of the earliest elements in the common law of tort, and indeed everywhere else, was the law of nuisance. That legal doctrine provides a remedy when activities undertaken on land discharge pollutants either into public waters or on to the private lands of other individuals. Either an injunction which says 'stop the discharges', or money damages for the harm caused, or both, will be awarded to the victim against the wrongdoer.

People fear that misguided private conduct will be bad for natural resources. They recognise that you cannot adopt a system that simply leaves it to the 'market' to regulate the total level of pollution. A law will not work if the gains from certain activities are wholly internalised by the person who undertakes them when the costs in terms of pollution and destruction are borne by other individuals. The purpose of nuisance law under these circumstances is to ensure that if these externalities occur, the cost is borne by those engaging in the activity, so that they will treat the loss inflicted upon somebody else as though it were their own.

Once these outside costs are internalised, people have a powerful incentive to rethink their behaviour. The price schedules that they face will be radically changed by the looming threat of tort liability. Even in the private sector legal intervention is routinely used to handle disputes between neighbours. This outcome does not stem from the modern worries over environmental issues, but from the traditional worries about private property rights and externalities between neighbours.

In this particular framework, however, not all pollution is alike. There is an enormous difference between pollution that affects somebody else's property or public lands and waters, and pollution that takes place exclusively on the polluter's property. The latter situation does not call for any form of government regulation, because the full cost of the pollution is borne by the person engaged in the activity. To the extent that one person gains all the benefits and bears all the costs of the activity, the usual principle of profit maximisation applies in a benevolent fashion. The individual will be forced to recognise that part of the cost of obtaining a 'good' such as a building may be the pollution of something

else on their property. These individuals, like the Audubon Society, have an incentive to trade off goods at the margin in order to come up with that mix of development and pollution that will best serve them and, by implication, society at large. One mistake of the environmentalist movement is its failure to distinguish pollution that has negative external effects and pollution whose negative effects stay at home. Too often, the case for regulating externalities becomes an argument for regulating internalised harms. Many statutes on the books in the United States provide that if an owner alters their own land, their action will be treated as raising environmental concerns. Hence, even someone who bears the entire cost of the pollution can be stopped from making such alterations.

Let me give you an illustration. In the United States people engage in 'strip mining' at certain sites. A coal deposit, for example, may be located relatively close to the earth's surface. The cheapest and most efficient way to exploit it is to take off the topsoil, trees and all, and take out the entire deposit. Afterwards, the miner does their best to fill the big hole that remains, and to cover it up with grass and trees. Just as I argued with harvesting timber, it is best not to mess around with half measures. A private owner will recognise that any effort to preserve a single tree on top of that strip-mined field is going to be (i) unsuccessful, and (ii) enormously costly. The best strategy is to take the coal out cheaply, and, once finished, worry about how to rehabilitate the land.

Two concerns arise with strip mining in the light of my general position. First, without doubt, strip mining can have very serious externalities. The moment a miner changes the layout of the soil, the flow of water, contaminated perhaps by pollution, may become more dangerous than before. I have no doubt that it is perfectly appropriate for any person who is hurt by strip mining to insist by private action on compensation for their losses, or to gain an injunction if the harm continues to be substantial. The ordinary common law of nuisance should apply to strip mining just as it applies to any other kind of activity.

In many cases it may be appropriate to go a step further. There may be good reason to believe that the damage to others will be irreparable,

but, at the same time, it may be difficult to ascertain the future injured party. Rather than having many uncoordinated private actors bringing law suits to stop the mining, it is perfectly sensible to allow the government, as *parens patriae*, to seek an injunction. In the environmental area, the problems of coordination for relief when the victims are diffuse and widespread are very acute. One useful role of government is to coordinate the otherwise ineffective efforts of private pollution victims.

On the other hand, there are many cases in which the strip mining will *not* create these sorts of external costs, yet even in these instances there is extensive regulation. In the United States anybody who engages in strip mining on certain private property is under a statutory duty, once the strip mining is finished, to restore the land to its original contours. The old ridges, hills and slopes must be replicated in rehabilitating the land. Why? In many cases, restoring land to its original contours is enormously expensive. It does not improve the total value of the land, and it generates no benefits to strangers. Indeed, sometimes restoring land to its original contours requires more earth-moving activity than simply filling in the hole, covering it with topsoil, and selling it off to a forestry company that could plant trees on the land. The original contour statute, therefore, increases the pollution of neighbours, by moving more earth than is necessary.

Takings and compensation

How should we respond to the challenges of regulation in a regime that respects but does not deify private property? In New Zealand, the legal regime essentially leaves all legal power in the hands of the sovereign, so that private property is protected by social consensus and not constitutional decree. The legislature will basically be able to decide whether a statute is a good one or a bad one and to act accordingly, with or without compensation for those whose property rights are diminished. The legal regime in the United States is rather different. The US Constitution contains a number of provisions that protect private property. The key provision, which is the focal point in the decided cases, is the

'takings' or the 'just compensation' clause, depending on which end of the barrel you are looking down. Either way, the clause is very short, but not for that reason simple. It says "nor shall private property be taken for public use, without just compensation". Those few words have generated an extraordinary volume of judicial opinion, and an even greater profusion of academic commentary. Despite (perhaps because of) this endless discourse, we routinely manage to get the analysis wrong at key junctures.

The problem centres on the attitude taken regarding the relative competence of private and public parties to make decisions that can be said in some sense to advance the common good. This attitudinal predisposition is critical, and in many ways it is far more important than any detailed textual explication of what constitutes 'private property', what constitutes a 'taking', what constitutes 'just compensation', what constitutes a 'public use', and – something not mentioned in the clause, but crucial to its understanding – what is meant by the 'police power' of the state.

Let me explain why I think the attitude taken towards government action and decision-making dominates all these particular considerations. To make the point in its most dramatic form, let us make the following two assumptions about government. First, we shall assume that the government has perfect information about all the benefits and costs associated with any form of action that will be undertaken by a private party or by the government itself. That is, we accept the argument made popular by the socialists in the 1930s that government, and only government, can acquire, through systematic means, all the relevant information regarding how prices and quantities vary, not only on average but at the margin as well.

The second assumption is that in the routine conduct of governmental affairs, we can eliminate all the problems of faction and political intrigue. Our government actors are not only knowledgeable but virtuous as well. Given these assumptions, a rule that states, 'Never worry about what a government does, and never provide any specific cash compensation for property rights taken', offers the correct answer, even if constitutional text explicitly protects private property.

Why reach this grotesque conclusion that acknowledges explicit constitutional protection of private property rights while stating that this protection should never be invoked? If one assumes that the value of every resource, material and human, is known by the government, some virtuous public servant could decide whether the benefits associated with some government activity would outweigh the costs. Because government can implement the efficient mode of regulation – which is the second assumption – this perfect information will always be obtained and used in a perfectly responsible way. Particular landowners may turn out to be net losers because compensation is not paid to them, but the government will say to them, 'Never mind. There are lots of other people who will be regulated in other ways, and we won't raise your taxes to compensate them. In dealing with wetlands regulations the state will be as benevolent and accurate as it will be with the strip mining statute. Your gains from those proposals will offset your losses here'. Hence, the government will ensure that its regulations maximise the total well-being of society.

In this situation, all the psychic, aesthetic, physical and social externalities are perfectly reported and accurately responded to. Since every government decision will be value-maximising without case-by-case compensation, society will improve inexorably in terms of total resource levels – happiness, utility, wealth, satisfaction, whatever you may wish to call it – to a point it could not match by relying on the sputterings of humdrum and imperfect markets.

What about distributional concerns? We need not worry about them either. The landowner who loses in the strip mining case will gain from the other perfect decision made by the state. The compensation received is not cash, but rather the benefits of government regulation in all the other sectors of the economy. In this kind of world, where everything is done right every time by virtuous central planning, there is no need to worry about just compensation, especially when the administrative costs of compensation will reduce overall utility below what it would have been by simply relying on government regulation of all resource use.

These two assumptions about government mean that even though private property has been taken, in each case it has been taken from and given to so many people in so many different ways. Hence, we can be assured (given perfect government knowledge and administration) that each government decision creates more gains than losses. When there are a large number of such decisions, the gains to each individual will eventually swamp the losses and there is no need to worry about distributional matters.

This story guarantees happy endings every time. It is, however, too good to be true. We need to think critically about the two assumptions it relies on. When it comes to public choice questions, this ideal administrative model faces two problems that no government has been able to overcome fully. The first is the problem of information. Elaborate planning boards must be established, and they need to find a way to discover and register preferences. In the absence of prices, people do not reveal what they are prepared to give up in exchange for what they want. Instead, they voice their preferences strategically and in grandiose fashion, because they are never asked to bear the costs necessary to obtain the benefits. Planners, who are themselves imperfect individuals, have to peel through the rhetoric to find out how much people really value the things that they passionately seek.

The second problem is that nobody can be truly disinterested. In the world as we know it, some people think that development deserves priority, others think that conservation should come first, and, alas, others think that the sheer game of politics dominates the outcomes it produces. Given ethnic and religious loyalties, gender differences and so forth, it cannot be assumed that one can simply set aside all of these parochial interests and place trust in government power. On the question of knowledge, Friedrich von Hayek's major attack on central planning was that the necessary information will never be attainable. James Buchanan and the public choice theorists pointed out that governments are often ruled by private rather than public interests. When individuals enter

politics, the baggage of self-interest comes with them; it simply expresses itself in different ways.

Given these problems, one must ask what will happen to the decision-making process in land use or indeed any other area. No longer can we be confident that every kind of externality will be taken into account, and that everybody's preferences will be accurately measured. Quite the opposite. Frequently, a winning faction will happily advance its own interests, even if everybody else falls by the wayside. The misallocations from externalities do not magically disappear because all people and groups happen to participate in the political process; they simply take a different form. Those people who lose first in the political process may find their resources so depleted that they cannot recoup in subsequent rounds. It is idle for them to repurchase the resources they need in market transactions on one day if they can be stripped of those resources, or the rights to use them, on the next. Moreover, we may not observe the procession of off-setting advantages over time, and are more likely to see a game in which the winners in the first period hold the whip hand in subsequent periods – at least until some new coalition wrests control from them.

Within this framework, how can the constraint of just compensation mitigate the excesses of the political process? On the public side, it is very difficult to make a collective decision whether to take or regulate the use of private land. Yet we need to worry about both outright takings and regulations, since imposing limits on the use or disposition of property is in reality nothing more (or less) than a partial taking of the traditional common law bundle of rights associated with any particular resource. At the very least, just compensation is worthwhile in preventing a restriction that will cost the landowner $1,000 in value while providing the public with a $20 benefit.

We cannot ensure that public agencies meet this test simply by aggregating preferences through voice and through ballots. Therefore, we must find some other means to make these public agencies operate with a modicum of rectitude. The just compensation requirement makes them

put their money where their mouth is. As a general principle, if the preservation of certain lands is designed not to prevent pollution to neighbours (which they could enjoin as a matter of right) but to enhance the environment for the benefit of all people, then this objective should be achieved by taxing the population at large to compensate the particular landowner for their losses. Those transfer payments convert regulation into a classic forced exchange that leaves nobody worse off and at least one person better off. The landowner is left at least as well off by the full compensation received, and the taxpayers receive for their money a benefit greater than their tax contributions. Of course, this process contains an imperfection given the deadweight administrative costs involved. But putting this in perspective, we cannot overlook the enormous imperfections with all other imaginable systems of resource allocation. Once this system of just compensation is in place, the use of prices to constrain preferences will change the behaviour of those who wish to regulate property and those whose property is to be regulated. The former will internalise the costs of their appetites, and will choose their targets more carefully. On the other side, those who are regulated will resist less fiercely because the promise of compensation (at least when accurately calculated) helps them to avoid the regulatory abyss.

To see how this works, return to the strip mining example. Public officials may well be able to identify some land that should be restored to its original contours. Indeed, they may identify some land that should not be mined at all. In the latter case, the land should be purchased for its full market value before the mining can begin, and placed in a heritage foundation or land bank. In the former case, state agencies will not automatically require the owner to restore the land if the agency must pay the value forgone by the owner of that resource in its best private use. The moment the law attaches just compensation to government restrictions over resource use, the usual kinds of gainful market behaviours will evolve. If people must collectively pay for certain kinds of resources, they will demand less of those resources than they would have if they did not have to pay for them. People will also be more selective about

which resources should be placed under government control and which ones should not. They will now, through the tax system, have at least one incentive to make the marginal calculations of relative value and relative cost that are totally missing under the other kind of regulatory system. By contrast, under a system that basically says, 'Those who want to keep the land in its original contours need only procure 51 percent of the votes of a relevant parliamentary body in order to do so', the power to make decisions will be largely, and in some cases, totally, divorced from their cost. This regime leads to a classic imbalance between gain and loss, which legions of eager political participants will seek to exploit.

When the takings issue comes up with respect to mining or wetlands in the United States, the dominant constitutional rule is that the state or federal governments can do whatever they like without having to pay compensation. Inevitably this rule leads to the aggrandising of the public sector. Any land that ever gets wet can be solemnly called a wetland, so the boundaries of wetlands move higher and higher up hillsides, and the restrictions placed on private harvesting of timber, private mining of coal and the like cut far deeper than they would if there were a price mechanism operating through the just compensation clause.

Interventions which may not give rise to compensation

There is one more point that gives a slightly more balanced account of what the general system entails. I have taken the strong line that any standard use of a resource or any development is a property right that is (or at least should be) protected by the US Constitution against confiscation. To the extent that such rights are taken away from a resource owner, just compensation is due. The next question is whether there is any form of government regulation that would not require explicit compensation, and the answer to that question is 'yes'. Let me discuss a classic situation that shows the weakness of the common law rules and how state intervention without any form of compensation may be perfectly appropriate.

It is well known that oil and gas exist throughout the world in well-defined layers beneath the surface, surrounded by lots of water. The common law rule with respect to these resources was the rule of capture. The effect of this rule, on the analogy of wild animals, was that whoever got to the oil first through their own land could keep whatever they could extract from the ground. So understood, the basic principle of capture discharged one vital function. The moment you put a rig on your land and extracted oil and gas there was no need to worry about where any quantities were located six months earlier – if you extracted that oil and gas, it was yours. We therefore had a rule that solved the identification problem. We now knew, once the oil was taken out of the ground, who owned it and therefore who could refine it, who could sell it and who could put it into trade.

On the other hand, the rule of capture created very perverse incentives about how oil and gas was taken out of the ground. If you think, for example, of a 3×3 grid overlay and ask yourself where any individual landowner in this competitive setting would drill, the answer is clear. They would drill very close to the boundary line and sink many holes. By placing wells near the boundary line, you could get all the oil and gas located under the interior portions of your property and some of your neighbours' into the bargain. Of course, your neighbours will realise that what is good for the goose is good for the gander, and they will follow the same strategy. So you will observe – as we observed in the United States – picket fences of wells going right down the boundary line as the various players tried to out-strategise one another. The same people who engaged in competition that proved so beneficial in the marketplace engaged in a destructive form of competition with respect to natural resources.

Why this unhappy equilibrium? The explanatory factors lie on both the cost and the benefit side. First, it is much more expensive to sink 10 wells or a thousand wells than to sink only one. In addition, the more wells you sink, the less oil and gas you get out of the ground because each well not only extracts oil or gas but also churns up what remains.

The moment you mix oil and gas with water, the extractable yield from the pool is far smaller than it was before.

When the common law rules were applied, oil and gas companies frequently pleaded for government regulation. If the number of wells that were sunk into a particular pool could be limited by some device, the costs of extraction might be reduced and the benefits increased. So a regulation requiring wells to be spaced or even removed could both reduce costs and increase output – a winning combination.

When the government imposed that regulation, it necessarily infringed upon the common law rights embedded in the rule of capture. Should it have paid cash compensation? The answer is 'no', at least on some plausible assumptions. Once it is decided to organise a pool in this fashion, the total amount of the yield will rise. It follows that under a rule of sharing, individual landowners can get more out of the collective system than under the regime of capture. In that case, the rights lost under the old common law regime are compensated by the more valuable participation in the common pool under the collective ownership regime.

Note how the incentives align in this case. Here the people who suffered the losses are the same individuals who received the benefits. Generally speaking, the benefits and the costs could be organised so that they are strictly *pro rata* to one another, at which point there would be no need to account for any mismatches. People would not be deciding to spend someone else's resources to procure their own benefit. Everybody suffers alike and everybody benefits alike. To the extent that non-discrimination constraints are associated with the collectivisation of various kinds of resources, one can dispense with any kind of explicit compensation.

This outcome is the precise opposite of what is seen in the regulation of wetlands and strip mining. In those settings, the benefits all belong to one class of individuals and the burdens tend to be borne by another. In this environment, government intervention should require cash compensation. But if it turns out that there is proration with respect to benefits and costs, explicit compensation is not called for.

In the end, therefore, the key insight into the eminent domain clause is not a parsing of the text. It is an analysis of the way in which governments act when they are endowed with certain powers that they can exercise without facing a price tag. If you accept, as the US Supreme Court does, the proposition that people who are greedy when they are engaged in private activities become knowledgeable and benevolent when they enter public service, you will allow the regulators to do exactly what they want, and you will see the wreckage that necessarily occurs when vast amounts of environmental regulation of very little value are imposed upon the private sector. On the other hand, you could take a rather different view and assume that people are self-interested – that they display both good and bad behaviour, with a similar mix in both public and private life. You will then give the state the power to trump private interests by taking resources, but you will never give its officials the power to act without any restraint. You will impose a price system on government, and that is the intellectual justification for the protection accorded to private property under a takings clause.

The ability to use mechanisms of compensation helps untangle the knots over the regulation of private property. That strategy is not, however, so easily deployed in the deciding on the proper use of public property. Here it is difficult to set up bid systems to decide what uses will be made of what property. In the light of those problems, my short-term advice is, 'If you have lands that are valuable that are now in private hands, the last thing you want to do is to nationalise them by fiat'. You should prefer regulation to take place responsibly with compensation rather than irresponsibly through a political process that, by its very nature, cannot be bounded by anything that even begins to approximate a price system.

Questions

Would you agree that if environmentalists had the money that oil companies now have and oil companies had the money that environmentalists now have, we would see different outcomes because there would be different relative purchasing power for the resource?

There would be less of a difference than you might expect. The question you have to ask in this situation is not only what money people have, but what access they have to additional funds through the capital market. Suppose you have the kind of capital market in which, if you buy a piece of land in order to drill for oil and gas, you could use future drilling rights as security. A lender will look at the resource and say, 'I think the future flow out of these particular wells is sufficiently reliable and world market prices are sufficiently stable that I can value your venture and I am prepared to lend to you on it'. If you have capital markets like that, it will make no difference who is rich and who is poor. If the resources were in the hands of environmentalists, the oil company could simply go into the lending market if the market put a greater value on them. The environmentalists would probably be only too happy to sell, as they would then be able to take some of that money to buy other resources.

So I think that if you started off with well-endowed environmentalists, resources would quickly start to migrate to developers if you allowed free trade. The question you would then have to ask is whether or not the trades would lead to exactly the same division between environmental resources on the one hand and commercial resources on the other as

would eventuate if the starting points were the other way round. This would come down to questions not about how the resources were used, but about the relative endowments of the developers and environmentalists.

This is basically another application of that central theorem of law and economics known as the Coase theorem. What it says in effect is that if you have low or zero transaction costs, no matter who gets the original endowment, whether it be the oil companies or the environmentalists, the ultimate use of resources will be the same as long as they are tradeable. What will differ is the distribution of the cash rewards associated with the venture.

If it turns out either that the goods are not tradeable, or that future oil and gas drilling rights cannot be used as perfect security, there will be 'imperfections' in the capital market. Resources might be reallocated by means of limited partnerships and syndicates, but there will be imperfections when you try to organise joint ventures as well. Those transaction costs will impede your ability to recontract for the resource, and therefore you can expect the volume of exchange to be lower than it would be if the resources were originally in the hands of the oil company.

The second point concerns the way in which the people who own natural resources think about these matters in ideological terms. In the United States there is an increasing tendency on the part of many people to take land that they regard as at risk for future development and give it to a nature conservancy trust, on the condition that no development of any kind will be allowed. They do this by exclusively private means. They effectively make property rights non-tradeable in the future. Given the environmentalist movement, it is possible that the political system could also develop a system of non-tradeable resources. If that happens, resource developers will not be able to buy their way back. Once these frictions and devices are taken into account, then where we end up could easily depend on where we assign the original endowments.

What does this tell us about how to make the original allocation? Generally speaking, the usual insights about substitution remind us of diminishing returns at the margin; the first unit of anything is worth a lot more than the last. Therefore I would be very uneasy about giving everything to the oil companies or everything to the environmentalists. By sharing resources around – say by placing equal amounts in the hands of the two groups, if those are the only two relevant groups – you might enhance the gains from trade, and end up with a resource allocation of higher social value.

Do you believe that there is an equal distribution of the lands now?

In the United States, it is clear which way the balance of power lies. It is much more biased in favour of the environmentalists under the current rules than I would want it to be. The reason is the one I stated earlier: at this point they can impose regulations upon private uses without ever having to bear the full cost of that regulation. The result is that you get too much regulation; often projects that are exceedingly valuable are shut down, and often the environmental uses are extremely dubious. From the outside it is difficult to pinpoint where the losses are occurring, but unfortunately the system gives nobody an incentive to find out that kind of information.

Let me mention one case. The northwest part of the United States contains habitat for the spotted owl, which is evidently of some important naturalistic value. There are several million acres of prime timberlands in which the owls live. The question was whether or not these private timberlands should be kept standing in perpetuity in order to preserve the owls.

Originally it was a straight political decision, because there is no just compensation component in the present law. The original decision was to say 'no timber will be cut', which meant that there would be an immediate loss of, say, 10,000 jobs in the timber industry. The price of timber for construction, including houses for the poor, would go through

the roof. The president finally backed off a little when he decided that the economic consequences would overwhelm everything else.

In many cases there are ways to preserve a species without having to keep the entire habitat untouched. You may disagree with that; you may argue that 10 million acres are needed. But the question is, 'are you prepared to spend $10 billion to preserve the spotted owl? And do you think you could get that through the political process?'. I don't believe that you could. Indeed, what may happen to the environmentalists is that they will over-reach, become totally discredited and then not be able to get much of anything at all. I do not pretend to know what the answers are, but with the current way in which these decisions are made with respect to private lands, all parties have an open invitation to be irresponsible because they stand to get all the benefits of their choices, and somebody else pays a huge portion of the costs.

The only way to defeat this argument is to insist that environmental goods are sacred. If you really believe that, I am afraid that there is no place for human beings on this earth, at least in the numbers in which they now exist. We will have to thin our own population. With an expanding population base we need either more intensive cultivation of existing lands or cultivation of uncultivated lands – something will have to give. I think you have to be very candid about the fact that everything has a scarcity value to it, and that there are no exceptions, including new and endangered species.

Let me put it another way. Let us suppose that we have a situation where we can designate a thousand species in New Zealand or the United States that we would call 'endangered'. Essentially a policy that would try to ensure a 100 percent survival rate of all endangered species over the next 20 years would be ruinous; the one species that would become endangered would be the human species. The price would just be too high. What you must do in this situation, as in any other, is figure out how much of one thing should be preserved at the expense of other things. All I am trying to do is to introduce a set of decision rules that will allow people to think about those trade-offs. I think it would be a

mistake to preserve every endangered species, just as I think it would be a mistake to chop down every tree in order to build houses. It is a question of how you find the middle ground, which is difficult in this area.

The environmental problem is much more difficult than capital markets, much more difficult than labour markets and much more difficult than privatisation. This is to me the single, hardest question of social control. The fact that there is a lot of disagreement over it is not necessarily a sign of bad faith. It often reflects the underlying uncertainties, the interconnectedness between important resources, and the difficulty of getting a system of viable property rights to handle all the relevant complications.

Your preferred solution seems to be based on an assumption that human society actually knows what it is doing and that we have evolved systems that are appropriate to our long-term survival. It also seems to be based on a reductionist view of the universe. I am just wondering if you haven't invented a perfect system based on an imperfect understanding.

Well, I thought that I was trying to do exactly the opposite. The argument in favour of privatisation to the extent that it is feasible is that there is imperfect collective knowledge and imperfect motivation, and that the best that one could hope to achieve in a world in which both of these imperfections are present is to create institutions in which people have incentives to behave virtuously. You cannot assume that the imperfections in character exist only on one side of this debate: that all developers turn out in some sense to be corrupt individuals who want to spoil the environment, and all environmentalists turn out to be virtuous individuals who want to protect things against despoilation. When you are talking about imperfection, you have to assume that there is as much of it amongst your best friends as there is amongst your worst enemies.

In fact, the Coase theorem that I tried to describe could be stated another way. If we knew that all people in public life had the right motivations and the right information, there would be no reason

whatsoever to prefer a market system over direct government ownership and regulation of everything. The reason why privatisation is so attractive is precisely because of the imperfections of human nature to which I referred.

So I do not think that I am trying to invent a perfect system, and I do not think that I am trying to be reductionist except in one sense. The area in which I am more reductionist than perhaps some people is on the question of what we do with respect to the class of things known as 'legitimate' preferences, as opposed to simple preferences. I used to think I knew what legitimate preferences were for other people, and now I am not even sure I know what they are in my own case. Therefore I do not think that the function of government is to try to reform the way in which people think about each other and about the world. Rather, the function of government is to demarcate the spaces in which each person can have their own preferences, legitimate or not, and act upon them. A system of private property to some extent rests upon the proposition that two people who have moral disagreements can talk to each other until they are blue in the face, and never secure agreement as to what counts as the appropriate definition of the common good.

In many cases, people work on the opposite assumption, and assume in good Rawlsian fashion that we can engage in disinterested debate; that people will be able to persuade others that they really do not value things in the way that they thought, and lead them to change their mind. If you believe that, then you will be more attracted to collective mechanisms. If you do not believe it, you will incline the other way. Over time I have heard so many debates, and so much passion on both sides of the issue, with people leaving as uncomprehending of the other side afterwards as they were before, that I am hard pressed to say that one side is so wrong that I am simply going to ignore them, and the other is so correct that I am simply going to respect them.

And so I take a very sceptical view. I think the arguments in favour of private property and of individual zones of autonomy are based upon how little we know about the content of appropriate individual

preferences, and about the appropriate definition of a good life. As if that is the case, we ought to limit the scope of coercion. The price that we have to pay for that decision is that every individual in the exercise of the property rights so defined will always do things that will necessarily offend and outrage somebody else. So in the United States, in the context of freedom of speech, there is always the question as to what you do about offensive statements – burning the flag, for example. And the right response if you believe in privatisation is that you cannot allow those sorts of externalities to stop the way in which liberty is exercised. Because if you do, in each and every case of liberty there is also the case of offence, and in effect liberty will just be the first, failed stage in a progression toward complete collectivisation.

I think that the gains from freedom of association and trade are so important that I am willing to tolerate the externalities that come when other people are offended about the fact that some people flaunt their income or, in the alternative, deny themselves the simple pleasures of life. There are many who say, 'Look, the problem with you is you are too abstemious, and you should indulge yourself a little bit more, because we do not like a world in which everybody wears grey from dawn till night'. If one sort of externality about conspicuous consumption turns out to bother some, the externality associated with under-consumption is every bit as offensive to others. Someone may not like walking down the street and seeing hippies, but that is no reason for granting a power to coerce them to wear a three-piece suit and work like the rest of us. That level of toleration has to be carried over into the environmental area as well.

And so I do not think that I am particularly reductionist except in the manner that I have indicated. I am certainly not being optimistic by thinking that a system of private property with human imperfections could work as well as a system of collective ownership with no human imperfections, perfect benevolence and perfect knowledge. But since we do not have perfect benevolence and perfect knowledge, it seems to me that private decision-making and the associated incentive structures normally offer the best that we can hope for.

There are two ways in which your answer is reductionist. One is that the total benefit is simply the aggregation of individual preferences. The more important one is that the environment is a set of disaggregated little parcels which are independent of each other – a wetland here, a species there, a forest there – and that the people who want to protect those things from development are doing that for some kind of personal benefit, and that nobody else gets any benefit from that protection. Now, when you get on to the larger environmental questions, you are actually talking about systems of interdependencies on which the lives of the developers ultimately depend just as much as the lives of everybody else. Individuals may not in fact have the understanding that the aggregate result of exercising their individual preferences will be to break down certain ecological processes which benefit everybody. Examples might be climate change, ozone depletion, or a serious increase in acid rain. How does your system cope with cases where everybody is the loser if the decisions of people exercising their individual preferences in aggregate end up destroying the whole?

If you are right about the way in which you state the interconnections and interactions, you have made life extraordinarily easy for your position. What happens is that under any alternative regime everybody is wiped out. Anything you get under a system with extensive regulation and limited private property rights will necessarily be better than the extinction that you posit under the opposite system.

My position, however, is that there are two parts to the argument, and a couple of distinctions that must be made before you make that dire prognosis. First, I agree that there are enormous degrees of interdependence in the way environmental systems operate – which is why I said that privatisation in these areas is far more difficult than it is with, say, Air New Zealand. But it does not seem to me that you can raise the postulate of interdependence up to the level of necessary truth, so that every time you cut down a tree and decide to make a table out of it you could conclude that the result is likely to be a depletion of the necessary carbon dioxide or oxygen supply in the air, leading to a fatal imbalance. For example, when you talk about whether the forest should be publicly

or privately owned, one of the striking things is that you systematically get better resource management from an environmental point of view if the resource is privatised than if it is left subject to government control. So it seems to me that you have to face the means/ends question the same as everybody else. The fact that you can demonstrate interdependencies does not mean that government regulation, given the various imperfections in that process, will be the best way to achieve any desired goal.

In those cases where you can make the catastrophe claim credible, it seems to me that you are dealing with the standard form of externality associated with pollution, nuisances and so forth. What should we do about this? Well, if you are dealing with the ozone layer and you know it is fluorocarbons that are causing the problems, it seems appropriate to place a ban on it. Should it be a total ban? That is very tricky. If you could show that 1 percent of the fluorocarbons used are absolutely necessary for a delicate medical procedure, it seems to me that you would not want a 100 percent ban but rather a 99 percent ban. And if you could not show this to be the case, then we would have an argument for moving to the corner solution and banning fluorocarbons completely. There is nothing about my theory that says you cannot impose regulation to forestall huge external costs. What you have done in effect is to describe on a slightly larger scale the same process that exists with the pool of oil and gas. If everybody is in the common pool, everybody suffers a restriction on capture, and everybody achieves a gain associated with continued survival. It seems to me that this response meets the standard kinds of just compensation criteria.

But there are always many cases in which the real questions go to technique. Let me give you another illustration, involving the American political response to acid rain. Two forms of coal are produced in the United States. There is the eastern coal with a high sulphur content, sufficient to generate the acid rain that floats up through the New England states and on to a different jurisdiction, Canada – which does not vote in our elections. Then there is the western coal, which can be mined

relatively easily because it is close to the surface, and has very low levels of impurity. Clearly a sound incentive structure should induce the mining of the western as opposed to the eastern coal because (i) it is cheaper to extract, and (ii) it has fewer externalities.

However, there are very strong unions and some established companies in the eastern areas that recognise that a sensible system of environmental regulation could wipe them out. So what happens? The environmentalists enter into an unholy alliance with the eastern companies and the eastern unions. Everybody agrees that it is necessary to reduce the level of pollution from the eastern coal by 90 percent. So that restriction is imposed. Then it turns out that when those pollution restrictions are imposed on the eastern coal, it can no longer compete with the western coal and therefore the eastern mines will shut down. In order to keep the eastern mines afloat, the western mines must also reduce their pollution by 90 percent. Now, 90 percent is 90 percent, but in terms of net savings for given costs the amounts are quite different for the eastern coal and the western coal. So when the environmentalists enter into this deal with the unionists, the net effect is that excessive amounts of eastern coal are still produced.

As a matter of technique, you always ought to impose a regulation where the external costs are the greatest. What is so wrong about the position of environmentalists who talk about everything being necessarily connected with everything else is that they simply refuse intellectually to distinguish between these two cases. They think it better to have a 90 percent restriction in both cases than to have a huge restriction in one and none in the other. They also think that any trade that takes place with respect to pollution is immoral to boot.

Let me give you the property rights analysis of the same problem. It is certainly true that too much pollution is bad but, on the other hand, zero pollution means death by starvation, which is not so good either. If you do not allow pollution rights to be traded because you see pollution as immoral, then whoever has the production right keeps it. Whoever could emit the same level of pollution and get a higher level of output

will be precluded from producing the goods in question. So there will be a production loss without an environmental gain. If trade is allowed to the point at which only efficient producers are creating the pollution, there will be greater scope to constrain the total amount of pollution because the opportunity cost of the pollution will be lower – more goods can be produced for less pollution. In aggregate the willingness to bear that cost would be likely to be correspondingly reduced. But with non-tradeable rights the outcome is ambiguous with respect to output, and does not involve any saving with respect to the environment.

So I think that the property rights approach, which takes into account externalities and allows trades and tries to work in a disaggregated way on preferences, will avoid many of the mistakes that arise with a theory that holds that the environment is sacred. So I am an environmentalist. But the key issue for responsible environmentalists is to recognise that they, like everybody else, must operate in trade-off mode. They need to identify those cases where it really is do-or-die, but not to cry wolf with respect to every plan for every inch of ostensible wetland. If environmentalists take the latter course, in the end they will be entirely discredited because they fail to understand the nature of relative values.

Property Rights and Takings

Convergence of different political systems

The subject of property rights and takings is extremely important worldwide. Conceptually and practically, the problems faced in New Zealand are very similar to those in the United States. The operative legal rules on takings in the two countries are also similar. However, New Zealand and the United States approach the issue from very different perspectives, at least in theory. The United States has a very complicated system of limited and divided government, which rests on a written constitution. The US Constitution contains two types of provisions. One details the overall framework of the government: federalism, the separation of powers between the executive and the legislature, an independent judiciary, and other structural features. The second type of provision includes the guarantees to individuals, as against the government, contained in the Constitution and the Bill of Rights.

One of these guarantees protects private property. It is not an absolute guarantee; it does not say that private property will never be taken or regulated by the government. Rather it is conditional. It states: "nor shall private property be taken for public use, without just compensation".

There are three explicit elements in this equation, as articulated in the US Constitution, and each raises questions of interpretation. One element is the 'taking' of private property, and how that should be defined. The second is 'public use' and the meaning of that term. The third is just

compensation – how to determine when it is owed, and how much it will be. An elaborate constitutional structure has been developed to deal with these issues. In brief, if the government 'takes' by entering a piece of land and occupying it, then it owes compensation to the owner. To the extent that the government merely restricts the use of land, compensation is typically not required in the US context.

In Commonwealth countries there is a very different relationship between constitutional arrangements and the protection of individual rights. In New Zealand, for example, there is no written constitution or federal structure. Effective sovereignty is in the hands of a cabinet, and the parliament from which it is drawn. In this system, private property enjoys no formal constitutional protection whatsoever against the legislature. Given the completely different legal environments found in the United States and New Zealand – one with strong constitutional protection and the other with none – one might expect to see different attitudes towards property in the respective political systems, and different rules governing private landowners promulgated by the legislatures and courts.

Yet such an assumption would be mistaken. In New Zealand, as in Britain, if the government occupies somebody's land and takes it for public use, it will typically pay compensation. But if the government 'merely' restricts the use of the land, it will generally not pay compensation. There is one exception, however, which is also a feature in the American system. If restricting the use of someone's property deprives them of all economically viable use of that resource, it is regarded as equivalent to direct occupation. Section 85(3) of the New Zealand Resource Management Act 1991 offers the property owner some limited form of judicial relief in this situation. Thus if the owner can satisfy the Court that any provision of a plan or proposed plan "renders any land incapable of reasonable use, and places an unfair and unreasonable burden on any person having an interest in the land", the Court may direct the local authority to "modify, delete or replace the provision". How that translates into compensation for property taken is not apparent on the face of this

provision. But it takes little imagination to see that if the local authority does not wish to follow the command of the Court, it could settle the dispute on terms that provide some compensation in cash or in kind to the property owner. A condition could be relaxed elsewhere in the project, or credits could be given against certain fees or charges. Infinite variety often lurks just below the surface. For our purposes, however, these details do not matter. What is important is to keep in mind a more general proposition that when regulation goes too far, then administrative compensation may be required either as a matter of constitutional command or administrative practice.

There is thus a strong convergence between American and New Zealand law, and indeed English and Australian law. This raises two questions. First, why has it happened? And second, are the legal outcomes the most appropriate?

The answer to the first question is relatively simple. The constitutional guarantee of property rights in America has generally turned out to be a paper tiger. It may have seemed a strong guarantee when originally included in the Constitution, but a series of judicial interpretations has systematically weakened its protection to a level similar to that prevailing in the Commonwealth countries. This convergence in outcomes suggests that the most powerful forces at work are more likely political than constitutional.

There are two different ways to evaluate the current state of takings law in the Western world. On the optimistic view, if systems with radically different constitutional structures converge on virtually identical solutions, this happy coincidence suggests that legislators in all countries know what they are doing. The systems are basically sound, and at worst they may need marginal adjustment, not fundamental rethinking.

But one can also assess these systems using the branch of economic theory known as public choice. In modelling the operation of a legislature, public choice assumes that its individual members are motivated by self-interest, just like ordinary individuals engaged in private transactions, whether market or non-market. On that assumption, the political process

will end up aggregating the preferences of these individuals – a systematic deviation from the social optimum. This glum conclusion can be expressed by saying that political institutions invite the growth of factions, which will take money and property from common good uses and turn them to narrow and provincial ends. Sometimes a majority of 51 percent unfairly expropriates resources from a minority. Other times a well-organised minority can defeat a majority. When one appreciates that political institutions will fall prey to such structural imperfections that detract from overall welfare, one draws a pessimistic conclusion about the protection of property rights under the law of takings. Whether a political system embodies legislative supremacy or contains constitutional safeguards, the same democratic forces exploit the same structural weaknesses.

Defining property

There are two similar approaches to the law of takings. The first simply tracks the language of the American constitutional provision. One asks first whether there has been a taking of property; second whether there has been just compensation; third whether the taking is for public use; and finally, when there is a taking with no compensation, whether there is some public justification.

The other approach to the law of takings follows the lead of the common law. Land regulation did not arise simply through constitutional provisions allowing the regulation of private property, or by nineteenth and twentieth century legislatures addressing the problem for the first time. Disputes between neighbours were frequent occurrences since the earliest times, and common law approaches to regulating land use were often more effective than legislation. The tort law regarding disputes between neighbours, of which nuisance is the most important, is one body of the common law governing land use. In addition, the system of private restrictive covenants, which became prominent in the nineteenth century,

can sometimes resolve conflicts between neighbours when the law of nuisance cannot.

American constitutionalism and the common law approach correspond closely. In analysing takings, rather than attempting to tackle the issue as one enormous whole, one should break it into its constituent parts, put those parts together again, and then assess the viability of the current law against what one has learned.

The first question is how to define a 'taking' of property, and in many cases this is straightforward. All lawyers know the paradigmatic cases of a taking, as criminal law includes the crime of larceny, and tort law has trespass to chattels and trespass to land. A taking always occurs when the full bundle of ownership rights over a particular possession is moved from one person to another. If Mr A takes the property of Ms B without her consent, generally he must either return it or pay compensation. Hardly anyone will argue with this result. Such actions completely disrupt the system of possession, use and disposition associated with private property. If seizing a chattel, or forcibly occupying somebody else's land, is allowed, then we lapse back into a state of nature. Consequently all legal systems – American, British or New Zealand – regard this action as a paradigmatic wrong.

To further clarify what counts as a taking, however, one must analyse the bundle of ownership rights associated with property. The standard definitions in English and American law are very similar, and because New Zealand law follows English law, there is again convergence. Ownership of property includes the right to exclusive possession and the right to use that property. In addition, one generally has the right to dispose (by sale or otherwise) of the property to anybody willing to take it. This combination of rights is far from arbitrary; taken in conjunction, these three rights define how property is most efficiently employed in a market economy.

Imagine a world where the three rights are detached from each other. One person might have the right to occupy a property, and another person

the right to sell it. If the party with the right to sell the land does not have the right to occupy, what title could they give to the buyer? It would be a very strange situation, to say the least. Or imagine that one person has the right to occupy land and another person the right to use that land. Such fragmentation seems so intrinsically absurd that nobody would argue that it enables us to maximise the value of underlying resources.

We thus aggregate these three rights together, and attempt to give an efficient definition to property rights in land. In addition to the surface area, 'land' should include the ground beneath, all the way down towards the centre of the earth. It should also include the area directly above a person's land, moving upwards towards the heavens. While a landowner may not own Jupiter, people have air rights over their land, at least to the extent that it is substantively occupied, or capable of beneficial human use.

Partial forms of taking

A taking does not require that all three incidents of ownership be taken or destroyed. It can occur when just one specific element of ownership is weakened by government action, even if the original owner is left in possession of the others.

All manner of problematic cases arise under this definition. Even a concept such as possession becomes less clear-cut upon reflection. Imagine that somebody has exclusive possession of their land, and the government creates an easement enabling members of the public to walk over that land. Has the government 'taken' property? No member of the public can stay on the land permanently, or build there, or dispose of the land. Nonetheless, in every legal system, English or American, the owner's loss of exclusive possession has generally been regarded as a taking, even though the state's demands are less than an outright confiscation of property.

Water rights provide another example. Suppose somebody owns a private river off a public marina, and the state forces them to make it

available to other boats. Is that a taking? The American answer is simple. If one had the right to exclude other people, and then is forced to share that resource with others, that is a taking, and compensation will be required. The rationale for this policy is to prevent governments from behaving strategically by illicitly sacrificing the property rights of some citizens for the benefit of others, saving the beneficiaries the cost of obtaining those rights on the market.

If a government must pay 100 percent compensation when it occupies some land worth $1,000, we do not want the government to be able to take an easement worth $400 and pay nothing. That is a recipe for inviting political majorities to attack isolated groups and individuals, as the dominant group can vote for partial takings with no compensation rather than total takings with full compensation. So requiring compensation for partial takings says to members of the government: 'If you shift the line of attack in your demands against an individual landowner, we citizens will shift our line of defence'. That may seem very straightforward. But, as is often the case, it is not really so simple.

Imagine a residential tenant who rents premises on a short-term lease that ends at the end of the year. Suppose the government declares under a rent control statute that the tenant is allowed to stay in the premises after the expiration of the lease. The tenant simply pays the same rate as previously agreed, and there is no transfer of possession back to the owner. Is this a taking of property, taking from one person to give to another? If so, one must assess whether the stipulated rent is just compensation for the owner. At this point, however, the American courts change their approach. The action is not regarded as a taking, but as a mere regulation of a property use.

Yet this is an odd form of regulation. The only person who can take advantage of it is the sitting tenant, and that person is in possession of the property. Is there a taking when the government refuses to allow somebody to be removed from land after they have been there lawfully, or is there only a taking when that person has entered by force? The

common law parallels provide a clear answer. As long ago as the *Six Carpenters* case (77 English Reports 695 (1610)), it was established that if a host asked a guest to leave, even after freely admitting them under an earlier contractual arrangement, that guest had to leave, or they became a trespasser.

One begins to appreciate the divergence between the common law approach to private property and the attitude taken by the modern regulatory state. Typically this divergence is not random in its direction. Regulation generally erodes property rights, effectively allowing outsiders to take over land. If regulators force a landlord to accept a tenant already in occupation, the compensation will always be less than what could have been obtained in an open market leasing transaction. No longer is it merely a question of transferring the occupation of the premises. Rather, it is a transfer of wealth. A property owner ceases to be a landlord, and instead becomes the creditor of a tenant entitled to remain in possession indefinitely. The shift from an owner of equity to a creditor is an important one, and the law will tolerate it in the United States, as in New Zealand.

Yet this system of rent control will generally be inefficient. With contracts between single landlords and single tenants in competitive markets, it is unwise to introduce any system of 'forced exchange' that requires people to become creditors against their will with respect to their own property. These property owners do not occupy any position comparable to that of public utilities; there are no problems involving network monopolies. When restrictions of this type were introduced in the United States, they created obvious disruptions to the rental market. If an American judge ever decided to intervene and strike down that legislation, they would perform a great public service. Needless to say, such laws also create distortions in countries such as Britain and New Zealand, which have no explicit constitutional protections against takings. These schemes, however, will not necessarily proliferate, as their inefficiencies can lead to a political backlash. The corrosive rent control regime in Cambridge, Massachusetts was undone by a statewide referendum that diluted the political strength of the Cambridge tenants. The horrible rent

control system in Santa Monica, California has served as an object lesson that has made it politically impossible to adopt similar rules in Los Angeles. While these examples show that the political system will sometimes reach the right result, it is often attained by a slower and more costly process than a faithful judicial enforcement of constitutional guarantees. And of course the oddities of politics are still difficult to overcome, as is evident in New York City where a system of rent control which has been in place for over half a century has been shaken, but not dislodged.

Nuisance law and property rights

There are even more urgent questions associated with land use regulation. They concern the earlier distinction between cases where the government (or some citizen under government authorisation) takes the property of a landowner and cases where the government simply restricts a person's use of their land. It would be heroic to the point of foolishness to argue that the government must provide compensation every time it restricts the use of occupied land. Suppose I build an Epstein pollution factory, whose only activity will be to pollute public waters and nearby neighbours. My motto is: 'This factory will kill anybody who lives within a mile of my boundary line'. That is my sole output. A government official comes along and asks me to shut the factory down, because I am creating a nuisance. 'You can shut me down if you wish', I say. 'But you must compensate me for my loss of pleasure in killing my neighbours.'

The man from the government thinks: 'This is very strange. But he is only one nutter. Let's pay him to shut down quietly'. 'Epstein', he says, 'here's $1,000. Go away'. It may seem strange that I was paid to stop polluting, but the outcome, at least at this point, is efficient. The problem is that I have a smart cousin, who sees that my stance over the Epstein pollution factory earned me $1,000. He tells the government: 'I am creating the same useful output on my own land, and I am putting in a subsidiary. I want $2,000 dollars to shut down'. The lesson should be clear. The main reason why it is absurd to compensate people who threaten harm to others does not relate to one transaction in isolation. It relates

to the adverse incentives generated for similar transactions down the track. Consequently, every civilisation has introduced a doctrine not included among the takings, just compensation or public use elements of the US Constitution's takings clause. In American law it is called the police power.

These words are nowhere to be found in the American Constitution. Yet there are long constitutional treatises with titles like 'The Scope and Limits of the Police Power'. Thomas Cooley a distinguished Michigan judge, and Ernst Freund, from the University of Chicago, spent thousands of pages discussing a set of problems that has no textual base in the Constitution. To understand why their enterprise makes perfectly good sense, one needs only to return to the common law parallels. The example of the Epstein pollution factory is not new in human affairs. Many people have polluted, not because they wanted to kill others, but as the by-product of some gainful activity. If all of the pollution produced by one person is also breathed by that person, there are built-in incentives for that polluter not to over-pollute, as they internalise all of these costs. Given self-interest, however, polluters may not be as concerned if others must breathe their pollution. Moreover, polluters might be willing to breathe a portion of their pollution, provided the benefits they gain exceed the fraction of the pollution costs they must bear.

The common law of nuisance was developed to counteract these incentives. The usual remedies were twofold. Past harms could be compensated with money damages, and future harms could be avoided with an injunction. Sure enough, nuisance law was incorporated into American constitutional law. If a common law nuisance is found, the government may enjoin that offensive use of property without paying compensation. It is exactly the same rule under English law. The defence of property rights in no way entails the toleration of unlimited pollution. Quite the opposite: under a coherent system of private property, our neighbour's right to enjoy their property unpolluted trumps our own dubious right to pollute. In other words, pollution must be consistent with the property rights of others.

It follows that there should be much common ground between environmentalists and the property rights movement. Only if property

rights are caricatured out of recognition will the two sides appear to be at odds.

Non-reciprocal covenants and the potential for political abuse

In relationships between neighbours, two types of interest can exist – the easement and the restrictive covenant. The restrictive covenant was developed through cases like *Tulk v Moxhay* (41 English Reports 1143 (1848)) and other nineteenth century precedents. The covenant is essentially an agreement between two neighbours that is respected over time even if the ownership of both parcels of land changes hands. One neighbour agrees to restrict development on their land in exchange for cash, or (more usually) a similar restriction on the other neighbour's development. If two neighbours do not wish to live cheek-by-jowl, they can agree to a restrictive covenant which says their houses will be only 10 metres high, with seven metre setbacks, and so on. With reciprocal covenants of this type, often no cash component is necessary. Each will be happy with the deal, because the gain in light and air more than offsets the restrictions on their own building. And each knows that since the covenant 'runs' with the land, the useful arrangement will remain even after the original contracting parties sell or bequeath their land, creating useful long-term governance relations.

These covenants create reciprocal easements in which the compensation comes not in cash, but in kind. Political legislatures impose covenants of both varieties. Sometimes the element of reciprocity is present, but at other times it is not. There might be 10 plots of land in a single development, nine of which are already developed while the tenth lies empty. The state might pass a new zoning law, preventing development on the final subdivision. At this point there is no reciprocity. Nine people are attempting to use the political process to impose a covenant on one, and there is no reciprocal agreement by the nine to limit the use of their own land. Rather than 10 plots of land, each with a single family home with a small setback, there are nine developed plots, located near a private park (or at least an open space) created through state coercion. This is

very different from cases where zoning laws create an average reciprocity of advantage, where all individuals value in similar proportion the gains received from a system of covenants and the losses suffered.

The political dynamics will be radically different in the two cases. If collective decisions on issues such as restricting the size of houses and agreeing to common setbacks need to be made when the plots are all empty, people will be forced to assess, *ex ante*, whether the restrictions imposed will be worth the benefits received in exchange. Whatever decisions are made, people are likely to think hard about the trade-off between benefits and costs, and make the right calculations. But if a person has nothing to lose and everything to gain from collective action, they need not think very hard about the costs imposed on others. If nine members of this community stand to win and one stands to lose, they will vote nine-to-one to impose the restrictive covenant, which takes resources from the one.

It is easy to understand why this is unacceptable. Suppose nine voted to confiscate the tenth person's land and use it as a public park. This would be regarded by everyone as clear political abuse. What then is the difference between a restrictive covenant imposed by majority will and direct occupation of land? Suppose I can cultivate my land but government regulation prevents me from building on it, and in consequence its value drops from $100,000 to $2,000. Should the $98,000 be considered large enough to constitute a taking?

Both American and English law have arrived at the same general rule regarding whether government-imposed restrictive covenants are compensable. If the restrictive covenant does not go 'too far', compensation is not required. If it does go 'too far', compensation is required. But the obvious question remains unanswered: how far is too far? If such a rule was not already the law, and a student gave it as an answer in an examination, I would fail that student for having an insufficient grasp of the subject for adopting a rule this imprecise and malleable: questions of degree sometimes merge into questions of kind, but there should be at

least some clear reason as to why the distinction is made. But it pays to be Oliver Wendell Holmes, Jr. Such is the weight of his personal authority that when he announced this test in *Pennsylvania Coal Co v Mahon* (260 US 393 (1922)), his wisdom was applauded for the insight it shed on the takings problem.

The problem with the rule is that it does not distinguish between covenants that involve reciprocity and covenants that do not, and thus fails to account for the political dynamics that drive the passage of legislation in the first place. In cases where land development does not take place at a uniform pace, one begins to see a strange interaction between land use regulation and outcomes in competitive markets. Many real live cases show how these two elements work in combination. Suppose there is a thriving supermarket, and a vacant plot of land just across the road. If a second supermarket is built on this site, it will substantially alter the behaviour of the customers of the first supermarket. Prices will fall as local geographic monopolies are eroded. Suppose the owner of the first supermarket lives in the community. They have contacts in the right places and some cash to spare. They approach a member of the local council and say: 'If you zone that plot across the road single family housing, it will still have some value to its owner, and I will not be faced with wasteful competition. Here's a few dollars for you, and a campaign contribution too'. The rival supermarket does not get developed.

Under the American takings law, if the value of the land plummets 'only' 80 percent because nothing except single family homes can be built on the site, no compensation is required and the owner of the vacant parcel must lick their wounds. Perhaps in New Zealand the law is more stringent and this scenario might provoke judicial action under the resource management law. But the conceptual point is clear. Restrictive covenants begin as reciprocal devices for mutual convenience, and end up as mechanisms for restraint of trade. In the example given, if the incumbent supermarket owner succeeds in keeping out the competitor, it becomes not just an issue of land use but of monopoly versus competition.

This problem does not simply relate to land use but to many other types of regulation. For instance, under a free trade regime, New Zealand or the United States would be justified in keeping contaminated food from entering its territory. If a parcel containing Epstein poison was coming across the border, a free trader should not feel bound to open it up, eat the contents and die. In general, one wants to apply to foreign production the same type of health inspection rules one applies to domestic production. It is the use of that non-discrimination provision that stops health measures from working as illicit restraints of trade. The principle is the same in the case of land use.

Often people put forward legitimate arguments for land use restrictions for illegitimate motives. Somebody might object to a nearby development on the grounds that it will pollute a stream. But if the objection is genuine, it might have been equally valid when the objector was undertaking their own development. Or some incumbent might propose a restriction on the grounds that further development will excessively burden the infrastructure of the community. If it was not a concern for the previous development, why should it be a problem for the current one? In this area of the law, one must be constantly alert to two different possibilities. There can be a genuine externality associated with an activity that might require an appropriate legal restraint. But the rule being promoted by interested parties might really constitute an unnecessary restriction on trade that should be rejected as leading to an inferior allocation of resources.

In dealing with this issue, there is no guarantee that a supreme court operating under constitutional principles will strike a better balance than a legislative body or common law court. It is an extremely difficult problem, as many forms of regulation will have both safety justifications and anti-competitive effects. The American police power doctrine sets itself the huge task of determining which justification has greater weight, and the same problems confront non-constitutional legal systems. The rationale for not wanting the nuisance law to apply to the set of restrictions normally imposed by covenants (open space, set back, aesthetic

rules and the like) is not based on the peculiarities of American constitutionalism. Rather, it is based on arguments that systematically link the economics of competition and monopoly with regulation in a legal system. Somebody working within the New Zealand legal framework should be as concerned about these issues as somebody working within the American framework.

Sadly, the American system is very poor at deciding what counts as a suppression of a nuisance and what counts as a suppression of free trade. Time and again the distinction is drawn in a way that restricts competition. The leading case is *Village of Euclid v Ambler Realty Co* (272 US 365 (1926)). The case involved a single plot of land measuring 68 acres, located between two railroads. One party wanted to develop a comprehensive automobile manufacturing plant on the site. Nearby landowners objected. The local council passed a rule that effectively restricted the use of the land to single-family homes, causing it to lose around 75 percent of its pre-zone value.

Remarkably, the Supreme Court upheld the council's action, even when the local judge who knew better invalidated the regulation because it offered no compensation for the lost value. In the Supreme Court, Sutherland, J, allowed the restriction by casting doubt on what is meant by a nuisance. A pig in a pig pen is not a nuisance even though a pig in a parlour is. And, in some neighbourhoods, those nasty apartment houses verge on nuisances to their well-heeled neighbours in single-family homes. Once these seeds of conceptual doubt have been planted, the lure of legislative deference becomes irresistible: who are we to second guess whether this is a genuine nuisance by a developer or an illegitimate use of the police power by a council? What makes the *Euclid* case so potent is that none of the conceptual doubts about nuisance mattered at all. In this case involving so-called externalities, there were no externalities. Any problems concerning the development of the plant occurred on land held by a single owner. No negative spillover effects were identified for anybody else in the neighbourhood.

This was the first time that a zoning law had been challenged in the American Supreme Court. The outcome proved such an enormous constitutional boost to zoning laws that it took 35 or 40 years before any similar case came up again before our highest court. *Euclid v Ambler Realty Co* effectively marginalised the American constitutional protections with respect to zoning. Henceforth either state constitutions or legislative policies would determine the extent of land-use regulation.

Conclusion: stronger property rights needed

Far preferable to these follies would be a strong set of constitutional documents based on the common law framework. If the common law regarded a certain activity as unlawful when undertaken by a private party, that activity can be enjoined by the state without paying appropriate compensation. That solution handles all the problems concerning nuisances.

Restrictive covenants can also be handled within this framework. Where there is average reciprocity of advantage among those affected by the network of covenants, one does not need to worry about cash compensation. The flows of benefits going back and forth between the owners will typically suffice as compensation. Therefore, the key issue with respect to land-use regulation in a constitutional framework involves the case in which a land-use restriction is imposed for the benefit of one person and the exclusive burden of another. That occurs in much of modern zoning regulation, environmental habitat regulation and the like.

Such biased restrictions should never be allowed without payment of appropriate compensation. If the authorities wish to create a nature reserve, that clearly counts as a public use. If the market is unable to provide a nature reserve due to collective action or holdout problems, the government can still make that attempt under the takings analysis presented here. It can take, however, only if it pays. If some vital plot of land is needed for a habitat preservation, a military installation, a street junction, or any other purpose, the government can choose to take it and pay. It is up to the political process to determine whether the public

purpose justifies the monetary cost to the citizens, as the government now internalises the costs of its actions. That is what good government is about. No one should declare that some outcome is so important that they do not need to tax themselves in order to achieve it. Rather, they should rather be constantly forced to make a judgment as to whether the taxes they pay are worth the benefits obtained.

We are now in a position to answer the question posed at the beginning: do we have an optimistic story about all democracies coming to the same correct conclusions, or a pessimistic story in which they reach the wrong conclusions because all are subject to similar voting pressures under majority rule? Unless one is happy to abandon the compensation formula, one concludes there is a systematic defect in the democratic process. In many cases, this leads to resource use distortions that our theory tells us should be avoided. The pessimistic assessment is evidently closer to the truth than the optimistic one.

Questions

If a restriction is imposed upon private property after somebody has purchased the property, that is a taking. But what if a person buys private property that is already subject to a title purchase restriction? It might be an historic building that cannot be demolished. Would you agree that the purchaser has not lost under the restriction, because they bought the property with full knowledge?

There are two periods that need to be considered in analysing this type of regulation – the time before the regulation is imposed and the time of transfer. The transfer is like any other property transaction involving a lien of which the purchaser has notice. The buyer knows that the value is lower as a result of the restriction. They are presumably paying less, and cannot claim to have been harmed. So your analysis of the second period is correct. But in the first period the analysis is incomplete.

Suppose I own a fine house and have managed to avoid various heritage restrictions, or landmark restrictions as they are called in the United States. Then the authorities impose a restriction, and the value of my house falls from $100,000 to $40,000. At this point the owner has not been given notice in any way comparable to that given to a purchaser. I suffer the restriction in use normally imposed only through covenants. Should I be able to challenge that restriction? If so, then the analysis is very easy. In the first period, I receive $60,000 to compensate for the fall in property value. Then when I sell the property, I receive the $40,000 that the property is now worth. In other words, I receive my $100,000

in two instalments, and the ultimate purchaser pays only $40,000 for the property with the restriction.

The key point is that the government now pays $60,000 for imposing the restriction. That is a good social outcome, at least when one considers the political process generating the decision to impose the heritage restriction in the first place. If politicians can create new restrictions without real restraint, they can effectively buy something for nothing. The great danger is that they will impose restrictions that are insufficiently justified by public benefits. That indeed is the rule in the United States: there is no compensation. This leads to many strange cases. People who are unhappy about some planned commercial development nearby will argue passionately in the name of heritage preservation that a certain ramshackle house should not be pulled down, when their real motivation is dislike of new competition.

Thus the analysis is the same as that given earlier. So long as we include both stages, we can appreciate why we get the right social outcome – neither too much restriction nor too little. If we only look at the second stage, we have no understanding of the earlier stage when restrictions were imposed.

There was a case involving the huge Canary Wharf property development in the East End of London. From memory, six months of earthworks, loss of television transmission, and a number of other inconveniences were not considered to be a nuisance. How would you feel if you were a London property owner affected? I might well feel aggrieved and want compensation.

The earliest relevant American case concerned the Chicago Transportation Company, and dates from the 1870s. The question was whether compensation was owing to a landowner when their right of access to properties was disrupted through repairs to the public road. The court held that no compensation was payable. The result in that case was probably correct, but only in one set of circumstances. If all public streets are repaired at some point in a roughly sequential manner, so that every

single landowner is inconvenienced in broadly equal proportion, the 'average reciprocity of advantage' test provides no reason to compensate in any individual case. One simply adds a temporal dimension to the argument about reciprocity already discussed. If the street is being repaired in such a way that everybody is, say, affected 1 percent of the time, then nobody need be compensated by the others. One merely attempts to run an efficient system of public works.

When a private developer disrupts either a public right of way or a public transmission network or a neighbourhood, a nuisance might eventuate. Perhaps the Canary Wharf development was not considered to be a nuisance because the court went back to a textbook definition, in which a nuisance is something offensive to the senses. If so, I would be willing to stretch that definition a little. If a development involving earthworks brings noise and disruption for an extended period, causes difficulty to the settling of foundations, and interferes with telecommunications transmission, that should be a presumptive nuisance.

Moreover, this is not a case of routine street repairs, where nuisances are privileged. Canary Wharf is one of a special kind – a very large construction. Nobody in that neighbourhood will be returning the favour in five years' time. Clearly this is not a case of roughly reciprocal benefits and costs, and so compensation should be provided for the harms caused. How would that be done? There are many different neighbours affected. A system of private lawsuits from each person would be very costly in both financial and emotional terms. That is why we need government. In effect the government can gather up all the individual causes of action into a broadly coherent programme.

The appropriate response in this case is first to limit the type of construction permits available to a project like Canary Wharf, so that they cannot use heavy dynamite in one operation. To blast away some of the rock, they will simply need to go a little more slowly than ideally desired. They should also be made to pay compensation. This could be distributed to individual landowners upon proof, for instance, of damage to soil and foundations, and could also be used to repair the public roads.

This is not an argument that private property owners are always deserving. Externalities can run in many directions. In this case the externalities seem to be flowing from a huge developer in a relatively quiet neighbourhood on to both public facilities and neighbouring private property. This case does not fall within the usual common law rationale for tolerating nuisances – the *Bamford v Turnley* (122 English Reports (Ex 1862)) 'live and let live' case. This is not live and let live. It is 'I harm you and then live happily ever after'.

Is not the more interesting question the taking itself? How does one assess the efficiency of a Heritage Commission deciding to assign a heritage value to a building? Do they go through some calculation or commodification of heritage values? Given public choice difficulties, that is the real question.

It is indeed a good question. The takings clause solves one problem only: the protection of private individuals from undue impositions. It does not solve the problem of what to do with those resources now regarded as property in public hands. Nor is this problem restricted to heritage cases. To give the simplest illustration, suppose a national park can be kept for conservation purposes or be dedicated to skiing and snow-boarding and the construction of a lodge. What procedure should decide how that resource will be used? Since the citizens collectively are the owners, there is no takings protection for any individual citizen when the land shifts from one use to another.

Instead one assembles the relevant 'board' and attempts a cost-benefit analysis. If it is found that for every rabbit saved, 10,000 skiers are deprived of a downhill run, the conclusion will be that conservation is not the right option. If some irreplaceable trees will be destroyed so that just one person can toboggan, that too leads to an obvious decision. The more difficult cases tend to be hammered out politically, with both sides hiring their consultants. Each party will claim that their own values are sacred, so that cost-benefit analysis should only apply to their opponents. That clumsy process is the only feasible one.

For my own part, I place some weight on formulas. I see the constitutional takings clause as a means of regulating how one imposes special taxes. If a taking involves localised benefits for nearby neighbours, those people should be made to fund the relevant compensation. But if we are creating a landmark for the city at large, it should be funded from a general rate. If one calculates precisely where the shared benefit lies in a given case, it is amazing how often people will back off their demands.

Almost by definition public takings involve a community interest, but under public choice theory bureaucrats are acting out of self-interest. That seems to be a real problem.

The takings clause certainly does not solve everything. It prevents a majority from combining to arbitrarily take resources from one person. But it does not specify the circumstances under which a government should wish to take. If imposing a limited heritage restriction is regarded as a taking, the takings clause in itself gives no guidance about when this should be done. The public choice problems cannot all be solved. But those choices will be even more badly made if the government can take the land without paying any compensation. Thus we solve one problem with compensation, but must revert to more complicated administrative law structures to deal with other public choice problems.

A famous American case illustrates why the takings clause makes a difference. In *Lucas v South Carolina Coastal Council* (505 US 1003 (1992)), somebody owned two beach front lots, each worth $500,000 if a home could be built on it. The council decided that it would prevent the owner from building. The Supreme Court said that the prevention of building amounted to a complete taking. It ordered the state to take a formal deed from the owner of both plots. It now owned the two plots of land, for which it had paid $1 million.

If the state really believed its rhetoric that the land was worth a million dollars to the general public if left undeveloped one would expect the government to say: 'That million dollars represented money well spent.

Since we now own that land, it is important to keep those two plots empty'. But the state must go back and raise the money from a budget. From whom will it be taken? The next door neighbours will not want to pay $500,000 each for keeping the land vacant. They already have houses, and do not much care if there is another person next door. The state cannot find the money. Here is what happened in fact. Somebody proposes to buy one of the lots for $350,000 and not build on it. Not enough: the full $500,000 is needed. Eventually an auction is held. The land is sold on condition that any purchaser can build a single family home on it. Charming.

That clearly illustrates the type of public choice misbehaviour that can occur if the takings clause is removed. And the lesson is not specific to the United States. In effect, if somebody can obtain something for nothing, and if they value it positively, they may try to take it. There can also be complicated problems of jurisdiction. When a state body imposes a restriction on a local community, strangers are effectively entering that community and coercing individuals. In the United States this is a problem of federalism. The takings clause stops that particular misbehaviour.

Could the problem with the Lucas *case have been that the initial buyer of the beach front property was taking a gamble because significant erosion was occurring, and the land was falling away?*

That was the view taken in the South Carolina court. But that in itself is a strong argument for prohibiting the government from subsidising flood or erosion insurance for beach front properties. Moreover, even if those subsidies are eliminated, such land increases in value. In the *Lucas* case the neighbouring plots had risen in value over time. Far from erosion occurring, the opposite happened. There was no insurance involved in that particular case, and the value of the land was $500,000. That value took into account the probability of a natural disaster, and the need for subsequent reconstruction. Land values in that area remain very stable, even though every 20 years a hurricane comes along and wreaks havoc. If people are prepared to take a risk, and value the land subject to that

risk at $500,000, why should the government say: 'Yes, there is a risk. Therefore the land is worth zero'. That is nonsense. We know what the risk is worth because that same information is public when the property is purchased by anybody else. As it happens, within a year of that particular case, the sea went out another 50 metres. The buyer won the gamble. Can winning a gamble on that land be worth zero? That cannot be the correct interpretation.

This argument has important public choice implications. The US coastline is very vulnerable to natural disasters. One of the scandals in the United States is that most of these landowners have managed to persuade those of us who live in Illinois, and other northern inland states, to provide huge subsidies for them to rebuild their homes at our expense. That is another public choice perversion. Special constitutional restraints are needed to prevent such activity. We have already seen how one should not allow general taxes to be imposed for localised benefits. In that context, the takings clause has a creeping imperialism that is generally benevolent: it prevents certain forms of taxation.

When people cared about these things in the United States – which was until around 1930 – there was an elaborate law on special assessments designed to ensure that such taxes fell only on those who benefited from them. Following that principle will not solve the entire public choice problem, but it will help. If a road was to be built, the usual rule was that the neighbours needed to benefit overall after paying their assessment, since they were the primary users. In the 1960s there was a case involving the construction of a road. A railroad was running alongside the road. A special assessment was levied on the railroad to pay for the highway, on the theory that somehow the railroad benefited from the adjacent road. The case went to the Supreme Court. The court essentially said: 'Apparently a legislature can think that blue is pink. We will not overrule them'. The entire structure of special assessments fell apart. It became merely a political decision as to whether a railroad should be forced to subsidise a highway competitor, or whether the project should be financed more rationally out of a road tax.

The question is not just: 'We have this nice road. Who pays for it?'. If a railroad can be made to pay for a road, that road will be built, even if it is worthless. But if a worthless road must be funded by its own users, it surely will not be built. Systems of taxation do not merely involve questions of equity. They have profound implications for resource allocation. Any number of horror stories can illustrate the fact that the faction-ridden politics dominating public policy often do not bring the best social outcomes.