§3.2 Problems in the Creation and Enforcement of Property Rights

Property rights are not only less exclusive but less universal than they would be if they were costless to enforce. Imagine a primitive society in which the principal use of land is for grazing. The population of the society is small relative to the amount of land, and its flocks are small too. No technology exists for increasing the value of the land by fertilizer, irrigation, or other techniques. The cost of wood or other materials for fencing is very high and, the society being illiterate, a system for publicly recording land ownership is out of the question. In these circumstances the costs of enforcing property rights might well exceed the benefits. The costs would be the costs of fencing to keep out other people’s grazing animals, and would be substantial. The benefits might be zero. Since there is no crowding problem, property rights would confer no static benefits, and since there is no way of improving the land, there would be no dynamic benefits either. It is no surprise that property rights are less extensive in primitive than in advanced societies and that the pattern by which property rights emerge and grow in a society is related to increases in the ratio of the benefits of property rights to their costs.\footnote{1}

The common law distinction between domestic and wild animals illustrates the general point. Domestic animals are owned like any other personal property; wild animals are not owned until killed or put under actual restraint (as in a zoo). Thus, if your cow wanders off your land, it is still your cow; but if a gopher whose burrow is on your land wanders off, he is not your property, and anyone who wants can capture or kill him, unless he is tame — unless, that is, he has an \textit{animus revertendi} (the habit of returning to your land). (Can you think of an economic argument for the doctrine of \textit{animus revertendi}? It would be difficult to enforce a property right in a wild animal and pretty useless; most wild animals, as in our gopher illustration, are not valuable, so there is nothing to be gained from creating incentives to invest in them.

The leading American case for the rule of capture — the rule that you obtain ownership of a wild animal by taking possession of it — is the curious old case of \textit{Pierson v. Post}.

\footnote{2} Post organized a fox hunt. While he and the other members of the hunt were pursuing a fox on unowned land, Pierson — who was not a member of the

§3.2 1. There is an extensive economic literature on the historical development of property-rights systems; for example, in the prehistoric, primitive, and ancient world (see, e.g., Smith article in §3.1 supra, note 1; Martin J. Bailey, Approximate Optimality of Aboriginal Property Rights, 35 J. Law & Econ. 183 (1992); D. Bruce Johnsen, The Formation and Protection of Property Rights Among the Southern Kwakiutl Indians, 15 J. Legal Stud. 41 (1986)); in the Middle Ages (see, e.g., Carl J. Dahlman, The Open Field System and Beyond: A Property Rights Analysis of an Economic Institution (1980)); and in the nineteenth-century American West (see, e.g., Mark T. Kanazawa, Efficiency in Western Water Law: The Development of the California Doctrine, 1890-1911, 27 J. Legal Stud. 159 (1998); Terry L. Anderson \& Peter J. Hill, The Race for Property Rights, 33 J. Law & Econ. 177 (1990)). For a synthesis, see Robert C. Ellickson, Property in Land, 102 Yale L.J. 1315 (1993).

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hunt—appeared and killed the fox. The suit was over who owned the dead fox, and the court ruled for Pierson. But wasn’t Pierson a free rider? Wouldn’t allowing him to seize the fox reduce the utility of hunting to the hunters? But who gets to keep the dead fox isn’t the issue, is it? And how would your analysis be altered if foxes were (as in fact they were) regarded as pests because they killed chickens and other domestic animals?

Suppose, contrary to the last example, that the wild animals in question are valuable. Unless there are property rights in valuable fur-bearing animals, such as sable and beaver, hunters will hunt them down to extinction even though the present value of the resource will be diminished by doing so. The hunter who spares a mother beaver so that it can reproduce knows that the beavers born to her will almost certainly be caught by someone other than himself (so long as there are many hunters), and he will not forgo a present benefit to confer a future benefit on someone else. Property rights would be desirable in these circumstances, but it is hard to imagine a feasible scheme for giving the hunter who decided to spare the mother beaver a property right in her unborn litter. The costs of enforcing such a property right would still exceed the benefits, though the benefits would now be substantial.

There are two possible solutions. The more common is to use the regulatory powers of the state to reduce hunting to the approximate level it would be at if the animals were hunted at an optimal rate; this is an example of how regulation can be a substitute for property rights in correcting a divergence between private and social costs or benefits. The other solution is for one person to buy up the entire habitat of the animals; he will then regulate hunting on his property optimally because he will obtain all the gains from doing so.3

Of great concern today is overfishing: If the spawning grounds for some species of edible fish are neither owned by anyone nor subject to regulation that mimics ownership by limiting access, fishermen may overfish until the species is extinct. A fisherman who limits his catch will just be leaving more fish for his competitors to take unless he can make a legally enforceable agreement with them to limit the amount of fishing that all do; and this will be infeasible if there are many fishermen. But this problem of collective action can be, and to a degree has been, solved by a combination of nations extending their claims to exclusive control of fishing from 12 to 200 miles from their coasts, so as to enable them to regulate all fishing within that zone, and international treaties regulating fishing. Because there are fewer fishing nations than there are individual fishermen, forging an agreement among nations is more feasible than leaving the control of overfishing to the market.

Many of the methods used to prevent overfishing are, however, inefficient compared to either user fees or “cap and trade” regulations modeled on the successful system of tradable permits to emit sulfur dioxide (see §13.5 infra). An example is shortening the fishing season, which may have little effect beyond motivating fishermen to buy larger boats in order to increase their catch during the shortened season.

Even with proper regulations, a commercially valuable species may become extinct if the rate at which a species reproduces is lower than the market discount rate (call this “efficient extinction”). Suppose the discount rate is 10 percent but the

reproduction rate is only 2 percent. To hold off harvesting the species in order to have 2 percent more to harvest a year from now would not make commercial sense unless rising scarcity was expected to raise the future price of the species by (almost) 10 percent. Deferring harvesting in such a case would be like borrowing money at 10 percent interest to buy a bond that would yield only 2 percent.

Property rights are correlated with scarcity. This point is illustrated by the difference between the water law systems of the eastern and western states of the United States. In the eastern states, where water is plentiful, water rights are communalized to a significant extent, the basic rule being that riparian owners (the owners of shoreland of a body of water) are each entitled to make reasonable use of the water—a use that does not interfere unduly with the uses of the other riparians. In the western states, where water is scarce, exclusive rights can be obtained by appropriation (use).

Now consider the example of things—often very valuable things, such as the treasure in a shipwreck—that once were owned but have been abandoned. Here the general rule is finders keepers. In a sense this is the same rule as for wild animals (including nonfarm fish) and for water in western states; ownership of the thing is obtained by reducing it to actual possession. Until then the thing is unowned (the unborn beavers, the abandoned ship), and it is this gap in ownership—that interval when no one has a property right—that creates the potential for wasteful use.

But the problem is slightly different in the animal and treasure cases. In the first, it is too rapid exploitation; in the second, too costly exploitation. Suppose the sunken treasure is worth $1 million and it will cost $250,000 to hire a team of divers to raise it. Because the expected profit of the venture is so high, someone else may decide to hire his own team and try to beat the first team to it. A third and even a fourth team may try, too, for if each one has the same chance (25 percent) of reaching the treasure first, the expected value of the venture to each one ($1 million × .25) will still cover the expected cost of each. If all four try, however, the cost of obtaining the treasure, $1 million, will be four times what it would have been had only one tried. The social loss from this competition will be less than $750,000, because the competition will result in the treasure's being found sooner (thus increasing its present value) than if only one salvager were trying. But the savings in time may be too modest to offset the additional expenditures that accelerated the search.

There would be no such waste had the treasure not been abandoned; the owner would simply have hired one of the four salvagers for $250,000. But when we call property "abandoned" in the legal sense we mean that the cost of revesting the property in the original owner is prohibitive, either because it is impossible at reasonable cost to find him or because he considers the property (perhaps incorrectly) to be worth less than the cost of finding or using it, and so he has washed his hands of it. (Abandonment is discussed further in §3.13 infra.)

An exotic illustration of the problem of optimizing investment in obtaining property rights is offered by a comparison of three nineteenth-century rules for obtaining legal possession of a whale. Under one rule, if the first whaler to strike the whale with his harpoon could not hold on, he had no right to the whale if it was eventually killed by another whaler; that whaler would become the owner. Under a second rule,
the first whaler was entitled to half the whale, and under the third he was entitled to the whole whale provided the point of the harpoon remained in the animal, even though the line had been cut. If the right to the whale went to the first whaler to stick his harpoon into the whale, the ocean might be blanketed by amateurs good at flinging harpoons but not good at actually killing whales. This would be an example of a socially wasteful race to be the first “discoverer” of valuable property. If instead the law gave the property right to the whaler who killed the whale, this might discourage cooperative activity, which is more important to efficient whaling than to most hunting, where the rule that ownership can be obtained only by possession prevails. The “half a whale” solution can be understood as a method of encouraging cooperation, and suggests that an optimal regime of property will often combine possessory (or use) and nonpossessory rights.

Still another common law rule that reduces wasteful rent-seek ing in the quest for abandoned property is the rule that abandoned treasure trove (currency and bullion), if found, escheats to the government rather than becoming the property of the finder. This rule reduces the investment in finding to whatever level the government thinks proper; the government sets the level by deciding how large a reward to give the finder. In the case of currency (as distinct from treasure that has historical, aesthetic, or collectors’ value), the optimal level is very low, perhaps zero. Finding money does not increase the wealth of society; it just enables the finder to have more of society’s goods than someone else. The optimal reward may therefore be very low—maybe zero. The trend in the common law is to expand the escheat principle of treasure trove into other areas of found property and thus give the finder a reward rather than the property itself; this makes economic sense.

Nothing might seem more remote from sunken treasure than patented inventions, and yet the economic problem created by patents is remarkably like that of abandoned property. Ideas are in a sense created but in another sense found. Suppose that whoever invents the widget will, if allowed to exclude others from its use by being granted a patent, be able to sell the patent to a manufacturer for $1 million. And suppose that the expected cost of inventing the widget is $250,000. Others will try to be first to invent it. This competition (a “patent race”) will cause the invention to be made sooner. But suppose it is invented just one day sooner; the value of having the widget a day earlier will be less than the cost of a fourfold increase in the cost of the invention.

As the discussion in this section shows, the denial of a property right can be as much an economizing device as the creation of one. As a further illustration, note that legal protection of a trademark requires actual sales of the product or service that the trademark designates. You cannot just dream up names for products that you or someone else might someday want to sell, and register the names with the Trademark Office and by doing so obtain a right to exclude others from using these names. Allowing such “banking” of trademarks might draw excessive resources into the activity of thinking up trademarks, and also clutter the trademark registry with millions of marks, making it more costly for sellers to search the registry in order to avoid infringing a registered one.

Another illustration of the economizing function of denying a property right is the doctrine of public trust, 6 under which navigable waterways, tidelands, and

certain beaches are reserved for public access—no one may establish a property right in them. If a resource is valuable but not scarce (a paradox?), the creation of property rights does not serve an economizing function. All it does is incite rent-seeking and resulting resource dissipation. Another reason for the doctrine of public trust, however, may be to limit rent-seeking by forbidding government to give away valuable public property. We shall come back to this issue in Chapter 4.