SIXTH EDITION

Law & Economics

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Choosing the more efficient rule in a case such as *Hammonds* requires balancing the incentive to overinvest under the rule of first possession against the cost of administering and enforcing ownership without possession. (Besides first possession and tied possession, other ways of allocating initial rights include auctions, lotteries, and preferences based on attributes such as needs, accomplishments, ethnicity, and gender.)

QUESTION 5.15: Here is the critical part of the case of *Pierson v. Post*,[34]

> " . . . Post, being in possession of certain dogs and hounds under his command, did, 'on a certain wild and uninhabited, unpossessed and waste land, called the beach, find and start one of those noxious beasts called a fox,' and whilst there hunting, chasing and pursuing the same with his dogs and hounds, and when in view thereof, Pierson, well knowing the fox was so hunted and pursued, did, in the sight of Post, to prevent his catching the same, kill and carry it off. A verdict having been rendered for [Post, who was] the plaintiff below, [Pierson appealed] . . . However uncourteous or unkind the conduct of Pierson towards Post, in this instance, may have been, yet his act was productive of no injury or damage for which a legal remedy can be applied. We are of opinion the judgment below was erroneous, and ought to be reversed."

Does this decision implement a principle of tied ownership or a principle of first possession? Note that the case, which is a staple in introductory courses on property law in American universities, seems irrelevant to modern conditions because first possession of foxes apparently does not lead to capturing too many of them too soon.

Economic analysis suggests that it should not be because of concerns about which hunter owns a fox. Explain the costs and benefits to weigh in an efficiency analysis of this case.

QUESTION 5.16: Can you make any sense of the proposition that the rule of first possession is a principle of "natural justice"?

B. When to Privatize Open-Access Resources: Congestion versus Boundary Maintenance

We have discussed various examples from history of unowned resources that become private property. *When* do unowned resources become owned? Economics suggests an answer.

The rule of first possession often applies when property is owned in common and accessible to the public. Property that is accessible for use by a broad public is called an *open access resource*. To illustrate, the seas are common property to which the public has access. In many cases, the fish and mammals in the sea can be owned by whoever catches them. Consequently, fish and marine mammals have been hunted far

[34] Cal. R. 175, 2 Am. Dec. 264 (Supreme Court of New York, 1805).

beyond the economic level, some to the brink of extinction. Similarly, in much of the world, common hunting land is over-hunted, common pasture land is over-grazed, and public forests are over-harvested. Much of the world's soil erosion and forest depletion is caused by the open-access rule.

Some technical terms follow to help explain the economic irrationality of the situation. The "maximum sustainable yield" is the largest yield sustainable in the long run. To maximize the yield, the application of labor and capital must expand until the marginal products of labor and capital are zero. All of the world's major fisheries are currently fished beyond the maximum sustainable yield, which means that the marginal product of labor and capital is negative. In these circumstances, the catch on the fisheries would increase simply by making less effort and reducing expenditures on labor and capital. Similarly, the yield on many open-access forests would increase by investing less effort and cutting fewer trees, and the yield on many open-access pastures would increase by investing less effort and keeping fewer animals. Overused fisheries, forests, and pastures are analogous to a factory with so many workers that they get in each others' way and slow each other down, so the factory's total product would increase merely by reducing its total employment. Nothing could be more irrational than assigning people to work at jobs with negative productivity.

Preventing overuse of common resources involves controlling use by means other than the open-access rule. Tied ownership is one method. For example, to prevent overgrazing of common pastures, small communities in Iceland traditionally tied access to common pastures to production on private pastures. Specifically, farmers were allowed to graze animals in the common, high lands in the summer according to a formula based on the number of animals each farmer sustained in the winter from hay grown on private pastures in low lands.[35]

Another method to prevent overuse is *privatization*, which means in this context converting from public to private ownership. To illustrate, many people could homestead land, fish in the sea, or gather coral from reefs. In contrast, a private owner can exclude others from using his or her resource. Granting private property rights over land, whales, or elephants would close access by limiting it to the owner. Thus, homesteading land converts it from public to private ownership; some salmon streams have been converted to private ownership; and some villages have been given ownership of coral reefs.

The conversion from common ownership to private ownership involves this tradeoff: A rule of open access causes over-use of a resource, whereas private property rights require costly exclusion of non-owners. This formulation suggests when an economically rational society will change the rule of law for a resource from open access to private ownership. When the resource is uncongested and boundary maintenance is expensive, open access is cheaper than private ownership. As time passes, however, congestion may increase, and the technology of boundary maintenance may improve. Eventually, a point may be reached where private ownership is cheaper than open

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[35] See T. Eggertsson, *Analyzing Institutional Successes and Failures: A Millennium of Common Mountain Pastures in Iceland*, 12 INTN'L. REV. LAW & ECON. 423 (1992).

access. An economically rational society will privatize a resource at the point in time where boundary maintenance costs less than the waste from overuse of the resource.[36]

This theory makes definite predictions about privatization. For example, it predicts that the invention of barbed wire, which lowered the cost of boundary maintenance in areas where there were few fencing materials, would promote the privatization of public lands in the American West. As another example, it predicts that property rights will be created in the electromagnetic spectrum when broadcasters begin to interfere with each other. The predictions of this theory are confirmed by some facts and disconfirmed by others. Apparently, societies are often rational, as the theory assumes, but not perfectly rational. Politics leads to bargains and compromises that violate the requirements of economic efficiency. For examples of these compromises, read the box entitled "Owning the Ocean."

Owning the Ocean

Water covers 70 percent of the Earth's surface in the form of oceans; yet, almost all of that vast amount of water is unaffected by well-defined property rights. In the late sixteenth and early seventeenth centuries, the great voyages of discovery and the resulting sea-borne empires in Europe necessitated internationally accepted rules on rights to use the ocean. These rights were first catalogued in the famous *Mare Liberum* of Hugo Grotius of Holland. He noted that the "sea, since it is as incapable of being seized as the air, cannot have been attached to the possessions of any particular nation." In the system that Grotius suggested and that prevailed in international law for nearly 300 years, each nation was to have exclusive rights to the use of the ocean within three miles of its shoreline, with that area to be called the "territorial seas." (The three-mile distance was not picked at random; it was the distance that an early seventeenth-century cannonball could carry.) Beyond the three-mile limit, Grotius urged that the "high seas" should be a common resource from which none, save pirates, could legitimately be excluded.

Increasing use of the high seas in the early and mid-nineteenth century led to the replacement of the doctrine of "free use" with that of "reasonable use." After World War II, the increasing importance of shipping, fishing, offshore oil and gas deposits, and seabed mining caused the legal system of ocean rights to crumble. In 1945 President Truman announced that the United States' exclusive rights to subaqueous organic resources—such as oil and natural gas—extended to the edge of the continental shelf or margin, an area that stretched 200 miles from the Atlantic Coast of the United States. Other nations quickly made similar claims. Unlike these unilateral actions, attempts at international cooperation have achieved mixed results.

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[36] This is the central point made by Harold Demsetz in *Toward a Theory of Property Rights*, 57 AM. ECON. REV. 347 (1967). He argues, for example, that American Indians did not establish property rights in land when the costs of administering the rules exceeded the benefits from private ownership. Proceeding along these lines, he tries to explain why certain North American Indian tribes, such as those in the Northeast, whose principal economic activity was trapping animals for their fur, developed a notion of property rights and others, such as the Plains Indians, whose principal resource was the migratory buffalo, did not. The extent to which his arguments can be squared with history or anthropology is still open to question.

To illustrate, when the third United Nations Convention on the Law of the Sea (UNCLOS) convened in 1973, there was widespread agreement that the territorial sea would be established at the 12-mile limit and that there should be an "exclusive economic zone," largely but not completely controlled by the coastal state, stretching to 200 miles beyond the shoreline, the general extent of the continental shelf.

There was not general agreement on what to do with property rights to the areas beyond this 200-mile limit, and it was the disposition of these areas that raised the really hard issues. The developed countries urged a private-property-rights-based system of development, whereas the developing countries offered a common-property-rights system. In the end a compromise, called the *parallel system,* was agreed on. There would be both private development and a UN-funded and UN-operated company, called the "Enterprise." In order to give the Enterprise the ability to compete with the more advanced countries of the developed world, an International Seabed Authority (ISA) would be created to allocate rights to mine the oceans. The conference specified an ingenious variant of the "I cut, you choose" method of cake-cutting in order to allocate mining rights. Before it could begin operation, a private or state organization had to submit to the ISA two prospective sites of operations. The Authority would then choose one of those sites for later development by the Enterprise and allow the applicant to proceed with the mining of the other.

The United States refused to sign the final treaty, although 117 countries eventually signed it in December, 1982. Over time, the U.S. objections to the missing provisions of UNCLOS III have faded or been proven unfounded. The treaty went into effect in 1994. The U.S. has signed the treaty, but Congress has not ratified it.

QUESTION 5.17: In what ways do these historical developments respond to efficiency, and to what extent do they respond to political power and distribution?

QUESTION 5.18: Read the following account of the history of water law and discuss whether the law appears to have evolved toward economic efficiency.

Water has always been one of the most valuable natural resources, but because it tends to run away, there have always been problems in defining and assigning property rights in water. Centuries ago in England, the general rule was that rights were vested in the "riparian owner," that is, in the person who owned the land on the bank of the river. The riparian owner's principal right was to a flow of water past his land. It would be a violation of someone else's rights for an upstream user to use the water that passed by his property in such a way as to reduce the flow to downstream users. The upstream user could not, therefore, divert so much of the water to his own use that the flow was significantly diminished for those downstream. A riparian was restricted in his ability to sell water to nonriparians (that is, people who do not own land along the water).

However, in the nineteenth century, this legal arrangement had to be altered because industrial demand on the natural flow of a river frequently exceeded the supply. In the eastern United States, these issues were resolved by elaborating the natural-flow theory of water rights that had been adopted from the English common law. An alternative theory of water rights appeared in the western United States. Under the *reasonable-use theory*, the riparian owner is entitled to use the water flow in any reasonable way. It was

deemed reasonable for one owner to use all of the water in a stream or lake when others are making no use of it. Under the reasonable-use theory, a riparian owner does not have a right to the natural water flow. Furthermore, a riparian owner may transfer rights to nonriparians.

C. Recording and Transferring Title: Verification Costs versus Registration Costs

Branding cattle, stamping a serial number on an automobile engine, stenciling a Social Security number on a TV—these are some ways that private persons try to prove their ownership of valuable goods. In addition to these private remedies, the state sometimes provides registries of ownership. Thus, trademarks are registered to avoid duplication or overlap. Brand inspectors employed by the state or private companies may police violations. Despite these devices, people sometimes "buy" goods that were not the seller's to sell. This section concerns verifying ownership and remedies when a good is "sold" without the owner's permission.

Suppose you decide to fulfill a lifelong dream and buy a farm. You find a parcel in the country that you like and approach the farmer who is living there. After discussing the parcel's boundaries, fertility, and drainage, the farmer offers to sell the land at an attractive price. You shake hands to seal the agreement. The next week you return with a check, hand it over to the farmer, and shortly thereafter move onto the property. Two weeks later, a man knocks at the cottage door, announces that he is the owner of the property, and explains that he has come to evict the nefarious tenant who rented the cottage in which you are living. At this point you recall the joke that begins: "Hey buddy, how would you like to buy the Brooklyn Bridge?"

When you buy property, you should ascertain the rightful owner and deal with him or her. A reliable and inexpensive method for determining ownership prevents fraudulent conveyances, such as tenants representing themselves as owners. There are various ways to create a record of ownership. Consider the story—presumably apocryphal—of "recording" title in England in the Middle Ages, when few people could read. It is said that the seller handed the buyer a clod of turf and a twig from the property in a ceremony before witnesses known as *livery of seisin*. Then, the adults thrashed a child who had witnessed the passing of turf and twig severely enough so that the child would remember that day as long as he or she lived, thus creating a living record of the transfer.

Fortunately, we now have better methods of recording title in land. In the United States, there is no uniform method of land registration,[37] but each of the fifty states has some system for the public recording of title to land. A change in ownership of real

[37] There is an alternative land registration system, known as the *Torrens system*, after Sir Richard Torrens, who introduced this simplified mechanism into South Australia in 1858, and that system or something like it is in use in many parts of the world. In the Torrens system, the state operates a registry and a title insurance fund. Defects in title caused by the state record-keeper are compensated from the insurance fund. Several of the United States tried the Torrens system, but every one of them has abandoned the system, because incompetent bookkeeping caused such a drain on the state-operated title insurance funds that the funds went bankrupt. (See SHELDON KURTZ & HERBERT HOVENKAMP, AMERICAN PROPERTY LAW 1151–1244 [1987].)