How Spontaneous? How Regulated?: The Evolution of Property Rights Systems

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ABSTRACT: The property rights literature has had an extensive debate over the extent to which systems of property rights can be spontaneously generated by custom and common practice, without the positive intervention of the state. This Essay takes a divided view on that question, noting that these property rights, often with uncertain stability, can be created when it is possible to create a system of absolute priorities, as with land, or a system of proration, as with riparian property rights. The simple definition of rights, easily known and scalable, make this possible, so that government intervention, often through statutes of frauds and recordation are used to improve the overall stability, not to reconfigure those rights. More complicated systems—such as those used for preserving fish wildlife, for creating prior appropriation of water rights, pooling of oil and gas rights—require complex regulatory interventions, which should be crafted in a form that seeks by using principles of just compensation, the prior rights holders under simpler legal regimes.

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I. INTRODUCTION

There has been a longstanding debate in the judicial and academic literature about the role of custom and law in the formation of various property rights systems. For these purposes, I shall stress the opposition between custom and law, and not their similarities, which is consistent with my focus on the early emergence of property rights systems. With regard to their differences, it is best to think of custom in its earliest sense, where it functions as an application of general natural law principles, a phrase that is not in entirely in good order today. The point of this stipulation is not to resolve a longstanding debate on whether natural law conforms to reason or to common practice, both within and across social settings. Instead, it is quite sufficient to say that these two approaches are mutually reinforcing in the broad run of cases, such that the emergence of a rule that responds to both imperatives enjoys an extra measure of permanence and legitimacy.

What then, for these purposes, is "natural law"? In this discussion, I use the phrase to address two issues. The first treats natural law as a mode for creation of legal rights and duties. The second is a powerful but often underappreciated feature of natural law rules: under a natural law system, the state cannot become the titleholder to any form of property, for the simple reason that there is no organized state in a state of nature.

Starting with the former, the emphasis is on the mode of creation, and not its legal or ethical content. The term "natural law" is intended to highlight the simple proposition that these "prepolitical" rights and duties develop prior to the formation of a formal state, which, in its Austinian[1] and Weberian[2] sense, exercises a monopoly of force within the jurisdiction. The norms that emerge are decentralized, both in their creation and enforcement. Down the road these norms help legitimize the transition to a territorial state, which need not rise to the size and complexity of the modern nation state, but also encompass smaller city states that have defensible borders marked by defensive walls.

Within these newly emergent states, legal actors can consciously adopt and ratify substantive norms that have already achieved a fair measure of community durability and legitimacy. Durability is relatively easy to measure, by looking at the period that a particular norm has lasted, subject to, as will always be the case, small incremental adjustments at the edges. Legitimacy is

1. *See* JOHN AUSTIN, THE PROVINCE OF JURISPRUDENCE DETERMINED, at vii (1832) ("Laws proper or properly so called, are commands: laws which are not commands, are laws improper or improperly so called."). *See generally* HANS KELSEN, GENERAL THEORY OF LAW AND STATE (Anders Wedberg trans., Russell & Russell 1961) (1945).

2. 1 MAX WEBER, ECONOMY AND SOCIETY 54 (Guenther Roth & Claus Wittich eds., 1968) (1922) (stating that an organization or group counts as "a 'state' insofar as its administrative staff successfully upholds the claim to the *monopoly* of the *legitimate* use of physical force [das Monopol legitimen physischen Zwanges] in the enforcement of its order"). This definition obviously does not take into account the complications of a federalist system.

always more difficult to assess, but for these purposes, it is established by satisfying the following simple condition: the loser in a particular dispute is willing to accept the outcome because he respects the decisional process and thus regards the norms it produces as working in his long-run interest.[3]

Any such situation is likely to prove stable so long as, for the disappointed litigant, the long-term gains from continuing in the practice exceed the short-term losses in a particular dispute.[4] That disappointed litigant (or his allies) could form that last judgment from either selfish or benevolent reasons. That actor could think that the loss in one case will lead to victories in future disputes, or will lead, alternatively, to higher overall levels of output, which, going forward, he will share with other members of that community. Given that we are in pre-state mode, the communities in question are often tribes or clans. Accordingly, any given actor has affective ties to a large fraction of individuals with whom he repeatedly interacts, measured by a shared genetic inheritance, which reduces, but does not eliminate, conflicts of interest.[5] For these purposes, the exact mixture of the influence of moral judgment and pragmatic self-interest does not matter, assuming that these two forces can be disconnected. What does matter is that the emergent customs and practices in the state of nature cannot be treated as a consequence of conscious deliberation and supervision by the state.

The second distinctive feature of natural law is that the state cannot be a rights holder of any resource, for the simple reason that there is no state at all. At this point there are two options for resource control. By the first, resources can be said to be *res commune*, which means that these are subject to an open access regime. The key text in regard to this position comes from Justinian, who writes: "Thus, the following things are by natural law the law common to [mankind]—the air, running water, the sea, and consequently the sea-shores."[6] The consequence of treating these resources as *res commune* is that no person who abides by the rules can be denied access to these common resources. But it is critical to note that these resources are not owned by anyone, and, furthermore, that they can never be reduced to private ownership by individual actions, including damming or diverting a river. Therefore, the typical effort to locate the public trust doctrine in this passage is historically misguided because that doctrine rests on the notion of a political sovereign—one with duties to manage these assets for its citizens—

3. For discussion, see Richard A. Epstein, *The Path to* The T.J. Hooper*: The Theory and History* of *Custom in the Law of Tort*, 21 J. LEGAL STUD. 1 (1992), addressing these practices in the context of contract and tort litigation.

4. *See generally* Benjamin Klein & Keith B. Leffler, *The Role of Market Forces in Assuring Contractual Performance*, 89 J. POL. ECON. 615 (1981).

5. *See* W.D. Hamilton, *The Genetical Evolution of Social Behaviour. I*, 7 J. THEORETICAL BIOLOGY 1, 1–8 (1964).

6. J. INST. 2.1.1 (J.B. Moyle trans., Oxford Clarendon Press 5th ed. 1913).

who plays no part in the natural law system.[7] By the same token, on the other side of the line lie those things that are not held in common, but rather are *res nullius*: things owned by no one, which can be reduced to ownership by occupation (for land) or by capture (for animals and chattels).[8] Once again the creation of ownership requires no state involvement for its completion, and thus qualifies as a natural law doctrine in the sense used here.

In contrast with both modes of natural law acquisition lie those formal interventions that require the existence of a formal state that exhibits some combination of legislative, executive, and judicial power. In these situations, the common law in its formative stages is likely to exhibit properties that are derived from the customary law on which it builds. A wise judge will seek some good warrant to dislodge older rules, given the heavy costs of transition. But even the most judge-centered system incorporates statutory interventions, which include such notable private law standbys as statutes of limitation and the statute of frauds, both of which are intended to facilitate and strengthen the private law relationships governed by the rules of property, contract, and tort that are developed under the natural law, and do not resemble in the slightest conscious social planning. The question then arises, how do these natural law customs and practices emerge, and what are their substantive content? The issue is not only important in a state of nature. A similar mechanism is often at work in modern informal norms that are not the subject of direct legal enforcement, where the small stakes and the expressed desires of the parties preclude any legal involvement.

II. A SPARE SET OF TOOLS

The initial challenge to any natural law system for the emergence of property rights is the limited number of tools at its disposal. This is a matter of special concern in property rights, because they are intended to bind the rest of the world, and thus cannot depend on specific and repetitive interactions between a small class of individuals with a close working relationship with each other, as often happens in particular trades or industries, where denser understandings may arise from custom or from a repeated course of dealing. Indeed, in looking at the basic setup for property rights, it is best to start with two basic permutations, after which it is possible to add in further refinements.

The basic point here is that any property rights system in the state of nature necessarily has to commit itself to one of two strategies: single priority

7. *See, e.g.*, Nat'l Audubon Soc'y v. Superior Court, 658 P.2d 709, 718 (Cal. 1983) (in bank) ("From this origin in Roman law, the English common law evolved the concept of the public trust, under which the sovereign owns 'all of its navigable waterways and the lands lying beneath them 'as trustee of a public trust for the benefit of the people.'"). The word "evolved" conceals all the important changes that have to be made to move from the open system of natural law to the modern public trust doctrine.

8. G. INST. 2.66 (Edward Moste trans., 1904); J. INST. 2.1.12.

or pro rata division. The first strategy involves a set of strict priorities on a winner-takes-all basis, without any division of the spoils. Under this view, it is only possible for either A or B to own the property in question. It is not possible to have a priority in limited amount, such as exists—and this point will become crucial—with respect to a single asset after which others are entitled to their share of the take. Put otherwise, so simple a device as a mortgage, let alone a set of mortgages, is not possible under this scheme. The second strategy veers in the opposite direction, insofar as it relies on a pro rata scheme that gives no one any temporal priority over any one else. To refer again to the credit situation, the pro rata rule is one that treats all general creditors with equal standing, regardless of the time that they acquired or perfected their claim. For all of their obvious differences, both rules present clear metrics that are easily observed, which reduces the cost of their creation and enforcement in any informal community.

The next step is to match the particular form of entitlement with particular cases. In dealing with this issue, the earliest resources of note were movables, land, and water. The early emergence of property rights systems began with the movables, which were the chief permanent possessions that people had in hunter-gatherer communities, which by definition did not lay down any fixed roots in any given territory.[9] Before the rise of agriculture, the basic economic calculations were as follows. Any effort to set down roots (the phrase is used literally here) is costly because it requires clearing land for cultivation and defending a set of fixed borders against all intruders. Hunting and gathering, however, will be quickly exhausted in any one spot, so that groups and tribes will have to remain on the move in order to replenish their limited resources. The communities, moreover, have to be kept small enough to allow for rapid deployment, but large enough to allow them to organize in self-defense or, all too often, attack. It therefore makes no sense to stake permanent claims in land when those claims provide no permanent value, which is why these interests are sometimes described as "usufructuary," i.e., pertaining only to the use and fruits. One partial qualification involves primitive tribes that use a cave, for example, as a base of operations for some defined period of time. These will be defended exclusively for that duration, and in time may be the source of transition to the territorial state.

Movables are, by definition, a different case, and for these some exclusivity is surely needed. Even here the movables may be common property of some members of the group, which then requires a complex division of divided control within a tighter group—the larger clan versus the nuclear family. At this point, there is an instructive intersection between the rule of individual acquisition through first possession and the sharing norms that allocate those resources, once acquired, among various members of the group

9. For discussion, see Carol M. Rose, *Possession as the Origin of Property*, 52 U. CHI. L. REV. 73, 87 (1985).

or subgroup. It is highly likely that any individual acquirer could escape familial or clan obligations, even for those forms of property that were individually acquired. The point is important because it indicates that elements of constrained redistribution of wealth constitute an early and important feature of primitive life. But by the same token it is highly unlikely that any of these rights could develop through common law type actions that feature suits between two, or very few, private individuals. Indeed, to this day, private lawsuits are never used to support these obligations. Within the private law, these are said to rest on "imperfect obligations" that rely on conscience and social pressures for their enforcement.[10] Within modern law, they are almost always imposed by statute as a charge on the general state, which is not possible under state of nature theory. Apart from noting the lack of extended discussion of redistribution in connection with private rights of action, I shall not discuss this topic more here.

This basic scheme fits very neatly into the Lockean version of the labor theory of value, which specifies that individuals as of right own their own labor and are entitled to gain ownership of those things with which they mix their labor. That last term, "mix," has given rise to unnecessary confusion because it suggests that much work has to be done to perfect a title that is previously inchoate, thereby creating a lengthy and risky transitional period. But as Locke then quickly explains, taking the acorn into possession is all that is needed to reduce it to ownership, and thus to use or consume it, even by the addition of labor.[11] The norms of this system can be self-administered, and require no external force to prop them up. Thus for land it is possible for the owner to mark the boundaries of his or her possession in ways that give notice to the world, wholly without recourse to any public registry. The same is not true, for example, with the well-established property rights in copyrights and patents, which necessarily require some government agency to define the scope of the right and to establish some registry to give notice of the claims to the rest of the world. Trade secrets, in contrast, do not require (and indeed consciously avoid) any such form of public registry and thus qualify as natural rights within this typology.

As a resource, land works far better under exclusive ownership than it does under the open regime that proves more attractive for water. Hence land acquisition follows a strict priority system: *prior in tempore is potior in iuris*, or prior in time is higher in right. There is no sharing rule in this case, so oftentimes this rule results in the outcome of first come, first served. This rule is ideal for forming a focal point equilibrium because it allows a single owner to give notice to the rest of the world to keep off, and then to rely on the

10. For an early discussion, see Joseph Story, *Natural Law*, *in* ENCYCLOPEDIA AMERICANA 151–53 (Francis Lieber ed., 1843), *reprinted in* JOSEPH STORY, JOSEPH STORY AND THE *ENCYCLOPEDIA AMERICANA* 122–23 (2006).

11. JOHN LOCKE, TWO TREATISES OF GOVERNMENT 306–07 (Peter Laslett ed., Cambridge Univ. Press 1970) (1689).

advantages of having the inside position to ward off attacks from others. Since in general it is easier to defend than to attack, the outcome can be an uneasy truce so long as the relative strengths of the parties are not too disproportionate, so that one thinks that it can conquer the other. Moreover, the first come, first served rule does not preclude others from taking possession of other properties nearby, so that the decentralized control lays the basis for a diffusion of political power.

The principle in question, moreover, not only applies to any dispute between the first possessor and the subsequent takers, but is also a complete rule in the sense that, even if the original possessor is out of the picture, it applies to any conflict by giving any earlier taker a clear priority over any subsequent one. The point is then hammered home by rejecting the *ius tertii* defense—if C dispossesses B, he cannot defend that action by appealing to the position of A. At this point, there are no lacunae within the hierarchy of rights that could lead to the instability that arises whenever the law creates or tolerates a void in the system of ownership that no one is allowed to fill. The system meets the demands of natural law because the entire operation does not require state intervention to define the property rights that are so acquired.

Moving on, it is possible to adopt a similar natural law regime for the capture of animals, where again a first possession rule works, but with this modification: animals have wills of their own, and they will do what they can to elude capture. So whether hot pursuit, wounding, or actual capture is needed to perfect title becomes an issue. In most cases, the choice of rule will not matter because the party who initiates the chase is likely to first wound and then capture the animal.[12] But in cases where there is conflict, there is the well-known difference of views in *Pierson v. Post*—between Judges Tompkins and Livingston—where the former opts for formal rules derived from jurisprudence principles and the latter assumes that the custom of the hunt (which was said to follow a hot-pursuit rule) should prevail.[13]

This particular dispute leads to the following general response. It may well be that as between strangers, the simple fact of initial possession should dominate, because it leads to a situation where private force is unnecessary to dislodge a particular thing from another person. But where customs are embedded in a larger community, with repeat players, the customary rule may be preferable because it avoids all sorts of "tumults" that come as two (or more) men on horseback head on a collision course with their rivals.

The customary rules on acquisition are, moreover, often highly animal specific. Accordingly, the allocation rules for captured fin-back whales, where direct collisions are unlikely, take a very different form to reflect the contributions of two or more parties. As was well stated in *Ghen v. Rich*, the law

12. Richard A. Epstein, *Possession as the Root of Title*, 13 GA. L. REV. 1221, 1224–25 (1979).

13. *See* Pierson v. Post, 3 Cai. R. 175 (N.Y. Sup. Ct. 1805).

will respect a local custom that provides a small reward to the finder of a beached whale.[14] A stable equilibrium arises because a party receives a return for his respective labor that is greater than his anticipated cost, with an effort to measure the reward in accordance with the level of investment. If the finder could keep the whale and its sperm oil, no hunting would take place. If the finder did not get compensated, the whales would rot on the beach. The custom answers the question of sequential performance by parties in asymmetrical positions.

Any system of ownership also has to allow for the possibility of *transfer* from one person to another. These transfers can take two forms. The first form is an outright transfer from one party to another, so that the transferee becomes the exclusive owner against all, including the transferor. The second form of transfer is far more complex because it allows for the division of control between two (or more) parties along one of two dimensions. The first is that of *concurrent* ownership, whereby the original owner retains some interest in transferred property, which is now subject to divided interests. The second is *sequential* ownership, where a given thing passes from hand to hand in accordance with some pre-established timetable. Clearly the two forms can be combined to create still more complex capital structures, with both concurrent and consecutive claims.

Within the natural law tradition, both forms of transfer can be accomplished by a simple delivery with an intention to pass ownership. But even in the simplest case, to evidence intention to pass ownership (as opposed to a loan or license) the transferor must express that intention. The situation becomes still more complicated with the full range of divided interests in property because possession alone does not, and cannot, reveal adequate information about the state of the title. In these cases, it is possible within a natural law tradition to develop private formalities that clarify when a transfer takes place and its specific terms. But these are limited in their ability to give notice to outside parties as to the state of the title. It follows therefore that early systems tended to impose limitations—the so-called *numerus clausus*—on the kinds of partial interests that could be created by deed or will in land, in order to reduce the search burden on outsiders to the title who wanted either to buy from or lend to its current owner(s). This difficulty of searching can be reduced by introducing a state-run recordation system, which must necessarily operate as a single index. In other words, the state creates a local monopoly to which all must have access, so that potential buyers or lenders know where to look to determine the state of the title. It is also then necessary to develop a remedial structure that allows each party to protect its own interest against

14. Ghen v. Rich, 8 F. 159, 160–62 (D. Mass. 1881). For a more detailed discussion of these rules, see OLIVER WENDELL HOLMES, JR., THE COMMON LAW 211–13 (Paulo J.S. Pereira & Diego M. Beltran eds., 2011) (1881); Robert C. Ellickson, *A Hypothesis of Wealth-Maximizing Norms: Evidence from the Whaling Industry* 5 J.L. ECON. & ORG. 83 (1989); Richard A. Epstein, *From Natural Law to Social Welfare: Theoretical Principles and Practical Applications*, 100 IOWA L. REV. 1743, 1750–52 (2015).

the others, and for both parties together to gain protection against outsiders, itself a long and complex legal tale.[15] Historically, the most controversial step of this system was the first: why do the unilateral actions of one person create rights to a given thing that are good against the rest of the world? The common philosophical criticism disparages a system where there is, to use the evocative term of Richard Schlatter, the ability "to grab." Under this system it was claimed that eventually "everything would . . . pass into private ownership, and the equal right to grab would cease to have any practical value."[16]

There are two replies to this criticism. The first is that Schlatter is incautious insofar as he assumes that the first possession rule applies to all forms of property when, as the discussion of the *res commune* reveals, it does not. Indeed, it misses the extensive obligation that a single or group of first possessors have toward their family grouping, with its implicit element of redistribution.

Second, to reject this rule for its egoistic implications requires that the critic propose a substitute rule that will do as well if this rule is rejected. Most critically, that proposal must do as well or better in state of nature settings, which lack any centralized authority to organize or structure transactions. The most common suggestion, often attributed to the late Ronald Dworkin, is to organize, with clamshells perhaps, some kind of auction that allocates property in ways such that each person under the system is happy with his holdings relative to those that others get under this system.[17] But the institutional constraints of a state of nature make it impossible to organize this auction in that setting.

The least of the problems is that clamshells in nature are not fungible, for that issue could be overcome by creating private moneys, to obviate the need for barter, which in general requires an advanced stage of social development in which an exchange economy between strangers is already developed. The more serious issue is that any centralized system of allocation requires a government that can exert the monopoly power that defines the Weberian state. It also requires a means to identify who counts as a relevant bidder for the auction and articulated rules to determine the metes and bounds of the land to be auctioned off. The details of any auction protocol cannot be constructed in a state of nature, which is why the first possession rule dominates in practice, even as it is rejected in much modern philosophical theory. Ironically, what is regarded philosophically as its

15. For discussion, see Richard A. Epstein, *Possession and Licenses: The FCC, Weak Spectrum Rights and the LightSquared Debacle*, *in* LAW AND ECONOMICS OF POSSESSION 237 (Yun-chien Chang ed., 2015).

16. RICHARD SCHLATTER, PRIVATE PROPERTY: THE HISTORY OF AN IDEA 131 (1951). For criticism in a similar vein, see LAWRENCE C. BECKER, PROPERTY RIGHTS: PHILOSOPHIC FOUNDATIONS (1977).

17. *See* RONALD DWORKIN, SOVEREIGN VIRTUE: THE THEORY AND PRACTICE OF EQUALITY 65–71 (2000).

greatest detriment—the ability of unilateral acts to generate claims that are good against the world—is its greatest advantage. One person can pull the deal off, so that the (imperfect) checks in the system come from the parallel actions of others with nearby plots of land, not with formal checks on the amount that can be occupied and held against all others.

It follows, therefore, that there is no reason to accept either of the two standard theories that were put forward to justify the rule.[18] The first of these theories is the implied consent of mankind, a useful fiction that encapsulates the view that the actions in question, if repeated by others, tend to create overall improvements, to which all should (rationally) consent. The second is that there is some special metaphysical link between the person and the thing, which generates the claim of right by the fact of occupation. Blackstone refuses to choose between the two theories, perhaps because both are wrong. There is no strong and necessary claim that comes from this position. It is just that the alternatives are worse. The overall situation looks not just at the actions of a single person with respect to a single plot of land, but to the overall system when many are allowed the same option. The stability of possession allows for cultivation, construction, and sale, and so counts as an improvement over the state of nature where no long-term investments are, as Blackstone notes, precarious.[19] So who gets what turns out, systematically, to be less important than the idea that everything can have an owner even in the absence of a centralized authority.

The second objection to Schlatter's position is equally telling. The standard philosophical critiques of the occupation rules fall because they do not consider the settings in which common ownership applies. Implicit in the "grab" theory is that both water and land can be reduced to private ownership in the same fashion. Take a plot of land and it is yours. Stick a cup in the river, and the water you draw out is yours as well. Nonetheless, that hasty conclusion ignores the partial adoption of common property regimes with respect to water, which in equilibrium had a mix of collective and separate ownerships. The reason for *res commune* was with respect to the small, stable, and gentle English streams—it did not take deep knowledge of water sciences to conclude that a flowing river was worth more than the entire river water was worth in the barrel. Hence a negative customary rule that prevented the

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18. The rules go back to Blackstone, who reports the controversy as follows:

> Grotius and Puffendorf insisting, that this right of occupancy is founded on a tacit and implied assent of all mankind, that the first occupant should become the owner; and Barbeyrac, Titius, Mr. Locke, and others, holding, that there is no such implied assent, neither is it necessary that there should be; for that the very act of occupancy, alone, being a degree of bodily labour, is, from a principle of natural justice, without any consent or compact, sufficient of itself to gain a title. A dispute that savours too much of nice and scholastic refinement.

2 WILLIAM BLACKSTONE, COMMENTARIES *8.

19. *Id.* at *7.

diversion of the river into private hands, one that could easily be deduced and enforced on natural law principles, formed the appropriate baseline against which future adjustments in rights over water could be judged.

The way in which this is commonly expressed in the Anglo-American law is that the riparian owners who occupy land next to the river have only a "usufructuary" interest in the water. The usufruct in classical Roman law was best understood as an inalienable life estate in possession in real estate owned by another called the "bare proprietor," as a form of temporal division noted above.[20] This estate usually covered the right to consume the fruits and the use of land, but not to destroy the principal that generated the fruits on the land that was used.[21] The term was imported into water law to signal that the ability to remove and use water was subject to limitations that had to be enforced in a natural law setting. The two sets of rules used to achieve this result related first to flowing water, and second to the consumptive use of water. On the first, the basic maxim opted for historical clarity to avoid the fights needed to establish an alternative baseline. Hence on the initial point the water in question had to continue to flow as it had previously flown. *Aqua currit et debet currere ut currere solebat* [water runs and ought to run as it is accustomed to run].[22] That maxim did not receive specific support from Blackstone, but instead worked its way into English law through the efforts of Joseph Angell on *Watercourses*,[23] after which it was incorporated into American law, as one might expect, through the writings of Joseph Story and James Kent, perhaps the two most preeminent legal American writers (both well respected in England) of the first half of the 19th century.[24] The point of this doctrine is to make sure that the private uses of the river by riparians did not deplete the value of a stream for its common uses of navigation, recreation, fishing and the like.

It is a mistake in this context to work off the static model of John Locke, which talks about requiring each person who takes water to leave "as much again and as good" in the common pool. That doctrine gives rise to deep skepticism that anyone can take out any water from a river, given that "as much again" will not be left. But the maxim is wrong for two reasons. First, many rivers are "increasing" streams, such that new water comes into the river from a variety of sources. Those sources can offset some limited removals of water from the river, without diminishing some supposed fixed supply of

20. For a brief account, see BARRY NICHOLAS, AN INTRODUCTION TO ROMAN LAW 145–47 (1962).

21. For further discussion, see generally Richard A. Epstein, *Property Rights in Water, Spectrum, and Minerals*, 86 U. COLO. L. REV. 389 (2015).

22. For its use in modern American law, see Keys v. Romley, 412 P.2d 529, 532–33 (Cal. 1966) (in bank).

23. *See generally* JOSEPH K. ANGELL, A TREATISE ON THE LAW OF WATERCOURSES (4th ed. 1850).

24. For the historical development of the maxim, see generally Samuel C. Wiel, *Waters: American Law and French Authority*, 33 HARV. L. REV. 133 (1919) (noting the French (and thus) civil law influence).

water. The first task therefore is to make sure that the diversions from the river do not exceed the point of destabilization. As a first approximation, it makes sense that the withdrawal of water should not take it below its historical levels, so as to make sure access to the stream is not compromised.[25]

Ideally, of course, it might be possible to find some better measure of the collective use of water than the historical levels, but those inquiries tend to be made only where preserving the water is of immense importance and the deviations from the ideal standard have been so profound that some more drastic intervention is necessary. Just that result was, for example, imposed on the withdrawals from Mono Lake under the rubric of the public trust doctrine, when wholesale diversion of the water from the Lake to Los Angeles resulted in a precipitous drop in water levels that turned islands into peninsulas that exposed isolated wildlife to dangers from a new set of predators.[26] In contrast, there was no need to invent a new baseline for Devil's Hole, a deep limestone cavern located in Nevada. In that setting, it was sufficient to enjoin groundwater use by neighbors that took water levels below the historical point needed for the Devil's Hole pupfish to reproduce.[27]

The second set of rules concerns the division of the consumptive uses of water from a river or lake among its potential takers. Here again, there are no devices in a state of nature that let any government agency take direct control over the water supply (which may well be a good thing). Instead some rule of thumb has to be used to allocate quantities of water to rival claimants. In this regard, the first doctrinal move restricts the consumptive use of water to riparians, so that others who can make their way into a (navigable) river have no right to take the water from it. Thus limiting the class of prospective claimants makes it easier to impose common governance restraints. Historically, it became quickly evident that water allocation in a riparian system could not be done on a first come, first served basis, lest huge quantities of water were consumed by riparians at the head of the river. The reduced flow would leave little water to go down river, with a loss of collective amenities and a shortchanging of the downstream riparians. By the same token, upstream riparians could not be forced to sacrifice their draws to the river for the sole benefit of the downstream users, less the imbalance be allowed to run in the other direction.[28]

At the same time, it became clear that no priorities could be established based on the time that given plots of riparian land were first occupied. Rivers and lakes can have extensive frontage that make it hard to know about the comings and goings of the various riparian claimants. Instead, the basic rule

25. *See, e.g.*, Harris v. Brooks, 283 S.W.2d 129 (Ark. 1955).

26. *See* Nat'l Audubon Soc'y v. Superior Court, 658 P.2d 709, 718 (Cal. 1983).

27. Cappaert v. United States, 426 U.S. 128, 136–37 (1976).

28. *See, e.g.*, Dumont v. Kellogg, 29 Mich. 420, 423 (1874) (noting sharp limitations on the upper riparian "would give to the lower proprietor superior advantages over the upper, and in many cases give him in effect a monopoly of the stream").

reverses the temporal priorities in land by adopting a rule of parity among all riparians, which cuts out any incentive to engage in premature consumption to establish a temporal priority. That rule is, moreover, similar to the rule that allocates access to common utilities between early and late comers, and for the same reason.[29] The position is stated in florid terms that conceal its strong economic logic: "'The natural stream, existing by the bounty of Providence for the benefit of the land through which it flows, is an incident annexed by operation of law to the land itself,' and 'There may be, and there must be allowed *to all*, of that which is common, a reasonable use.'"[30] And further, "It is not like the case of mere occupancy, where the first occupant takes by force of his priority of occupancy."[31] These murky rationales notwithstanding, the basic norm of common and reasonable use is the polar opposite to the exclusive rights regime presumptively applicable to the ownership of land.

Nor is it difficult to supply functional explanations for this historical outcome. Quite simply, no system of temporal priorities is workable. Often times, variable flows make it difficult to predict how much water can be taken out of a river at any given time. The parity of access leads to a parity of reduction from some preexisting level.[32] The clear analogy is to general creditors who in bankruptcy share pro rata in the losses regardless of the time that their claims matured. But for what amounts? With debts this is straightforward because the loan amount is liquidated (an instructive word in this context), making it easy to determine the relative portions. But there is no such metric for water rights in the absence of any clear measure, so that the priorities are determined by a hierarchy of use—domestic first, agricultural next—again without state intervention.

It is also instructive to note how these riparian systems limit the alienation of water rights.[33] The riparian system has no direct measure of the water that each riparian removes from the river. If that device was available, then it would make sense to allow each to use or sell the water as he sees fit, just as with other resources. But in this instance, selling the water separately from the appurtenant land carries grave risks of overconsumption of water, which in turn is countered by tying the alienation of water rights to the alienation of the land. The system of free transfer that works for land is, at least in a natural law system, heavily constrained.

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29. State *ex rel.* Wood v. Consumers' Gas Trust Co., 61 N.E. 674, 677 (Ind. 1901).

30. *See* Wiel, *supra* note 24, at 137 (referring to Story).

31. *Id.* (internal quotation marks omitted).

32. Richard A. Epstein, *Why Restrain Alienation?*, 85 COLUM. L. REV. 970, 979–82 (1985). For a discussion of the pressures that build up on the system when use intensifies, see Mason Gaffney, *Economic Aspects of Water Resource Policy*, 28 AM. J. ECON. & SOC. 131, 137–41 (1969).

33. *See, e.g.*, Little v. Kin, 644 N.W.2d 375, 381 (Mich. Ct. App. 2002) (holding that, where riparian land is subdivided, it is possible to create an easement for the benefit of rear owners so long as the combined use does not exceed that before the land was subdivided).

In a state of nature, therefore, water and land move in opposite orbits. These rules, of course, only set presumptions, for there is nothing that says that common ownership always works for water and private ownership always works for land. Some sense of the complexity arises when local conditions call for deviation. Thus, one rule that is common to (nonnavigable) lakes is that access to the water is a limited commons for those who border on the lake, but the division of the subsoil, so critical for mining operations, follows the usual rules of exclusivity applicable to surface land.[34] Thus, in general, any riparian may have access to the full extent of the water, even if it is over the soil owned by another. The full run of the lake produces higher benefits for all relative to a system that confines owners to that portion of water located over their private subsoil. It would be intolerable for a set of buoys to separate the water. Yet, at the same time, if in a few cases a capacity constraint arises on water usage, the proper allocation scheme prorates usage, not to the length of the riparian border, but to the surface area of the underground land. At the same time, creating paths around the edge of a closed lake may also be common for all lake owners, subject to the implicit norm that only the owner can camp out on his own portion of the land.

The rules for natural lakes should also apply to artificial lakes that come, say, from filling up an abandoned quarry. Nonetheless, in one well-intentioned but misguided case, *Alderson v. Fatlan*, the court held that artificial lakes do not follow the so-called civil law rule that allowed all owners to use the entire lake, and thus permitted five owners to retaliate against lakefront owners blockading the customary path around the lake at both ends of their property.[35] The correct solution goes in the opposite direction. It does not matter that the new lake was created artificially. The effective allocation of the path, the subsoil, and the water is exactly what it is for a natural lake. It was instructive in that case that the customary circuit had quickly been accepted in practice by all the original owners, and that the deviation came only from one late-comer who bought their plot of land after the community norm had been established, which should have bound (and benefitted) them all. The court should have denied that both the lake and the surrounding path were wholly private property, as both contained a common element that made for their efficient deployment. Local customs often develop very rapidly when all the players stand in reciprocal positions to one another, so that each derives more benefit for the open use of the local path than from its division into six

34. *See* Johnson v. Seifert, 100 N.W.2d 689, 696–97 (Minn. 1960) (overruling Lamprey v. Danz, 90 N.W. 578 (Minn. 1902), to hold that riparian owners bordering a lake have a right to use the entire lake as long as it does not interfere with other owners). Doctrinally, the rights to use the water are riparian, while the rights to mine minerals and the like are not.

35. Alderson v. Fatlan, 898 N.E.2d 595, 601 (Ill. 2008). My thanks to ROBERT W. ADLER, ROBIN K. CRAIG & NOAH D. HALL, MODERN WATER LAW: PRIVATE PROPERTY, PUBLIC RIGHTS, AND ENVIRONMENTAL PROTECTIONS (2013), an excellent casebook that contains many of the cases that have spurred my thinking on the subject.

separate segments, even without an enforcement mechanism. But even customary norms can be violated. By failing to recognize the right mix of common and private property, the Illinois court achieved the worst of both worlds: privatization of the water *and* privatization of the surrounding path. The natural law regime still offers guidance in the most novel of modern situations.

III. WHERE SPONTANEOUS ORDER FAILS

The previous Part illustrated the many contexts in which the faithful exercise of natural law theory could produce reasonably sensible doctrinal results. Within this framework there is still much room for government intervention as a means to stabilize the rights in question by affording them better transparency and greater enforcement. In these contexts, it can be said that the creation of the state falls comfortably within the Lockean paradigm under which the great end of government is for "the *mutual preservation* of their lives, liberties and estates, which I call by the general name, *property*."[36] The passage of statutes of frauds (done in England just before John Locke wrote his Second Treatise), statutes of limitations, and recordation systems fall securely within this category. These all seek to lower the costs of voluntary transactions in order to facilitate the efficient use of resources.

Yet it is quite clear that the creation of the state is not limited to these ends, for in many cases, what is strictly needed is a *transformation* of property rights from one legal regime to another. The problem here arises for a variety of reasons, most of which have a single cause—namely, that the more extensive exercise of traditional property rights produces outcomes that work to no one's long-term advantage, such that forcible reassignment of property rights is needed to achieve some end unattainable through voluntary transactions, given the number of parties involved. At this juncture, there is always a two-stage progression. The first involves the introduction of a new regime. The second involves the inevitable challenge that this state-induced change results in a taking of private property without just compensation—an inquiry that yields some surprising results.

A. *WILDLIFE*

One area that has cried out for specialized rules deals with animals, fish, and birds. When the level of activity is low, there is usually no need to alter the rule of capture. But as the activity level increases, the common-pool problems assert themselves, and some bag limits are needed to offset the excessive destruction from unlimited capture. These regimes cannot be designed or enforced by natural law methods, but must rely on a specific government design that determines the permissible levels of the catch and allocates it to various players, where the differences in output can be huge

36. LOCKE, *supra* note 11, at 368.

depending on the particular scheme chosen.[37] These systems also raise implicit takings issues because it must be decided whether imposing the new limitations will or should wipe out all previous entitlements. In my own view, some effort should be made to avoid that by reserving some portion of the new catch rights to individuals who previously participated in the capture of the common resources, as a way to protect their earlier investments.[38]

B. OIL AND GAS

A similar problem in specifying property rights arises with the imposition of various restraints on the production of oil and gas. The only natural law prohibitions on drilling for oil and gas available under natural law theories were prohibitions against slant drilling and malicious drilling. But owing to the construction of oil and gas fields, this system led to excessive drilling that dissipated the field. The cure required limits on the number of wells that could be placed in some fields. The spacing regulations precluded some landowners from drilling at all. The takings issue was whether they could also be excluded from any share of the profits for oil located under their land, to which in general the correct answer was no.[39] Instead, each party derived a share of the net profits equal to his contribution to the overall fields, after bearing its pro rata share of the expenses needed to get the oil and gas out. This result not only produced a regime of fairness between the parties, but it also eased the complications of introducing the system in the first place. If it is known that losers under any unitization will go home empty-handed, the political jostling will begin as landowners each seek a plan that allows them to continue their drilling operations, while suppressing that of their neighbors. The compensation mechanism from pooling stabilizes the situation, for now all landowners have an incentive to locate the wells in ways that optimize production, so long as they receive their prorate share of the net profits.

C. WATER RIGHTS

A similar situation results from the intensification of use on water, only here the problem is far more difficult to solve because of the multiple uses that can be made of any river. One early way in which this problem manifests itself is within the limitations of the *res commune* model of water rights, especially in navigable rivers. The open access regime goes a long way to ensure that all persons can gain access to public waters, but it does nothing to

37. R. Quentin Grafton, Dale Squires & Kevin J. Fox, *Private Property and Economic Efficiency: A Study of a Common-Pool Resource*, 43 J.L. & ECON. 679, 709 (2000) (noting the high variation in efficiency levels of alternative schemes of common-pool regulation of fisheries).

38. *See* RICHARD A. EPSTEIN, TAKINGS: PRIVATE PROPERTY AND THE POWER OF EMINENT DOMAIN 223–24 (1985) (discussing Rossmiller v. State, 89 N.W. 839 (Wis. 1902), which denied preferences to individuals who cut and removed ice from public waters prior to the imposition of a state regulatory scheme).

39. *Id.* at 219–23.

ensure that the river will remain serviceable for navigation. As traffic gets heavier, it may well be necessary to establish rules of the road, to mark safe channels, to dredge or widen navigable passages, to remove obstacles from the river, and to control pollution from all sources on land and within the waterway. There is no single riparian who is in a position to effectively undertake that task, so the water system transforms itself from a *res commune* to one that has strong elements of government ownership and control. In addition, the older natural law rule, which held that the owners of land on either side of the river were the owners of the riverbed, also gave way, certainly by the time of Blackstone, into one that passed the riverbed of a navigable water into the hands of the state.[40] The same is true in the United States, where our federalist system complicates the overall situation by creating divided authorities under which states own the beds of navigable river while the control over navigation remains squarely in the hands of the federal government.[41]

The transformation of that control over navigation to government authorities is sufficient to overcome serious coordination problems to which private parties cannot respond in a state of nature. One way to describe this transformation is to say that the beds of navigable waters are held by the state in public trust. In England that meant that the Crown held the property not as part of its private wealth, but in the service of the people at large, and that trust notion can easily transfer to American states. But exactly how does that trust doctrine work? In this connection, the government acts as a private trustee, with duties of loyalty and care to all of its citizens.

Taking this approach affords a sensible way in which to critique the well-known Supreme Court decision in *Illinois Central Railway Co. v. Illinois*, which involved a complex transaction whereby in 1869 the Illinois Central Railroad received some land along the shore of Lake Michigan to build a new railway depot and rights to 1000 acres of submerged lands for running its operations.[42] In exchange, the City received $800,000 in cash, commitments from the Illinois Railroad that its operations would not interfere with navigation along the lakefront, and restrictions on the rates that the Railroad could charge for its operation as a common carrier. The initial grant was then revoked by the Illinois legislature in 1873. That decision was sustained by Justice Field on the ground that the title to the lakebed was held by Illinois in

40. *See* 2 BLACKSTONE, *supra* note 18, at *264.

41. *See, e.g.*, United States v. Twin City Power Co., 350 U.S. 222 (1956); United States v. Willow River Power Co., 324 U.S. 499 (1945). For the notable exception, see United States v. Cress, 243 U.S. 316 (1917).

42. Ill. Cent. R.R. Co. v. Illinois, 146 U.S. 389, 454 (1892). For a fuller statement of my (earlier) position, see generally Richard A. Epstein, *The Public Trust Doctrine*, 7 CATO J. 411 (1987). For an exhaustive discussion, see generally Joseph D. Kearney & Thomas W. Merrill, *The Origins of the American Public Trust Doctrine: What Really Happened in* Illinois Central, 71 U. CHI. L. REV. 799 (2004).

public trust, which could "no more abdicate" the public trust than it could relinquish control of its police powers.[43]

The purported parallel between the police power and the public trust doctrine is fatally flawed. The former, which involves the monopoly of force within the state, can never be transferred to private parties without incurring the risk of chaos or worse. But the transfer to a private party imposes no such peril if the deal makes sense on economic grounds. At this point the standard principles of trust law, applicable to private trustees, never require that a trustee keep all property that is entrusted to it. The usual view allows for property to be transferred to private parties so long as fair value is received in exchange. It is for that reason that governments are always allowed to sell off surplus property, but not to give them away to friends without full consideration in return. As applied to *Illinois Central*, it is clear therefore that no absolute bar on alienability should be imposed on the state with respect to lakebed property or indeed ordinary parkland. The ultimate inquiry should have been into the fair value of what was received in return.

On this point, there is some reason to question whether Illinois did receive full compensation for what was transferred. But the payment of direct compensation to the state is not the sole measure of that question. What also matters is the proper evaluation of the obligations that the Railroad incurred to serve the public on receipt of the property. There is some reason to think that the deal in question was too favorable to the Railroad,[44] but the fact-intensive question of whether the valuation was correct only matters for the resolution of that particular dispute. The larger issue is whether the total prohibition on alienation should yield to a rule that allows, as I have argued, for transfers when the state receives full and adequate consideration in return under the constitutional rubric, "nor shall public property be transferred to private use, without just compensation."[45] That principle can take into account not only common carrier obligations, but also environmental ones, which can be managed by imposing sensible covenants and restrictions on the alienation of property that offers important environmental benefits.

The inability to handle the appropriate legal transformations also arose with the use of navigable waters. As noted above, the control of navigation was said to rest on the federal government. The initial foray into the system was the Supreme Court decision in *Gibbons v. Ogden*, where the federal commerce power allowed the United States to regulate navigation not only at the border between two states, but also over river traffic as it extended into the interior

43. *Ill. Cent. R.R. Co.*, 146 U.S. at 453; *see also* Stone v. Mississippi, 101 U.S. 814, 817 (1879) ("All agree that the legislature cannot bargain away the police power of a State.").

44. For the strongest statement of the point, see Joseph L. Sax, *The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention*, 68 MICH. L. REV. 471, 489–91 (1969). For my more cautious acquiescence, see Epstein, *supra* note 42, at 422–30.

45. Epstein, *supra* note 42, at 417.

of each state.[46] Over time, and without any serious justification, the federal ability to regulate commerce was held to transfer to the federal government a paramount navigation servitude sufficient to trump all private rights in navigable waters, and to some extent, even in nonnavigable rivers. Henceforth the federal government could, without compensation, wall off a river from riparian owners,[47] and, as in *Willow River*, destroy a mill by constructing a downstream dam, thereby raising the tail waters,[48] or take fast lands (above the water) without compensating their owner for the loss of riparian rights on the ground that "[w]e deal here with the federal domain, an area which Congress can completely preempt, leaving no vested private claims that constitute 'private property' within the meaning of the Fifth Amendment."[49] These transactions would never be blocked to private trustees, who have broad powers of alienation over their trust property. The doctrine creates the usual distortions on public policy. The displaced common law baselines were intended to maximize the values that derived from the full set of correlative property rights. As with the public trust doctrine, there is no reason why the strong federal justifications for control over navigation should allow those common law rights to be wiped out. Once that is done, the usual story follows: excessive claims for federal water projects because the government need not take into account the losses of private rights any longer.

This general view has spread, moreover, from water to land, most notably in *Penn Central Transportation Co. v. City of New York*, which again shows the weakness of property protection with respect to partial interests in land and, in this instance, air rights, which may be recognized for private law purposes, but which states can systematically disregard in their regulatory activities.[50] The Supreme Court held that this argument failed because it was wrong to posit that the law constituted "a 'taking' because its operation has significantly diminished the value of the Terminal site," when the zoning cases "uniformly reject the proposition that diminution in property value, standing alone, can establish a 'taking.'"[51] But that position ignores the loss of air rights, and thus acts as if the regulation in question only imposes competitive losses. In so doing it ignores the critical difference between competition and the loss of property rights. The former is associated with overall welfare improvements, but the disregard of property rights is associated with overall social losses.[52]

The last episode of some note with water rights involves the creation of a prior appropriation system in the American West, which operates on radically

46. *See generally* Gibbons v. Ogden, 22 U.S. 1, 1 (1824).

47. United States v. Rands, 389 U.S. 121, 123 (1967).

48. *See* United States v. Willow River, 324 U.S. 499, 511 (1945).

49. United States v. Twin City Power Co., 350 U.S. 222, 227 (1956).

50. *See generally* Penn Cent. Transp. Co. v. City of New York, 438 U.S. 104 (1978).

51. *Id.* at 131.

52. *Id.* at 142 (Rehnquist, J., dissenting) ("Appellees do not dispute that valuable property rights have been destroyed.").

different principles from the riparian states in the East. As was recognized from the earliest of times, a system of riparian rights does not work in the West where rivers tend to be large and widely separated, and the land tends to be arid. Often times riparian land can derive only limited benefit from the use of water, while land located far away can benefit from extensive irrigation, which can only be put in place by building out extensive works to transfer the water, with high front-end costs. That difference in cost structure dictates in large measure the preferred system of rights because no one will take the position of a general creditor if required to make extensive front-end outlays that can be eroded by later entrants. The situation therefore parallels the rise of secured credit in land where a system of rigorous priorities enforced via a registration system is the order of the day. Recordation is of course not available in the state of nature, so the state must create a recordation monopoly to make secured lending possible.

The situation with respect to water is even more complex because water is a more difficult asset to manage. The system of priorities that is established requires a state agency to determine the amount of unappropriated water subject to appropriation that may be diverted from the river for some beneficial use—itself an elastic concept that is intended to control against hoarding by particular users.[53] The appropriation systems require that the amounts allowed to be removed be specified in advance, which requires public officials to close some sluice gates and open others. This public allocation function is intended not to displace standard property systems, but instead to implement them. Indeed, the prior appropriation system is then subject to further modifications intended to squeeze more water out of the overall river system. Thus the doctrine of augmentation allows a person who brings new unappropriated water to the river to claim a priority over existing users to the extent of that addition. The situation is quite similar to the rules whereby a lender who brings new capital to a failing venture is entitled to a priority to the extent of that new contribution, which would otherwise not be made at all. Owing to the high fluctuation in the amount of water that can come down a particular river, the rules generally vary so that all priorities are removed, and anyone can take water in flood conditions. Likewise, if water on a river will not reach a downstream appropriator with a higher priority, the upstream appropriator may take that water on the grounds that his out-of-sequence appropriation will not damage anyone else. All these actions can only be determined under some comprehensive system of direct state regulation, which in turn requires the creation of complex administrative water boards and commissions to police the hierarchies and rights structure so created.

53. For the standard definition, see CHARLES J. MEYERS, NAT'L WATER COMM'N, U.S. DEP'T OF COMMERCE, A HISTORICAL AND FUNCTIONAL ANALYSIS OF THE APPROPRIATION SYSTEM 4 (1971).

The same result applies with respect to the transfer of water rights. In general, appropriative rights are not necessarily tied to any parcel of land. So while the easiest transfer systems move water with land on the same plot, it is possible for separate alienation. But unlike the transfer of rights in land, the externalities that can be created by these transfers are serious.[54] This problem can arise in multiple guises. Thus, the transferee may seek to divert the water from a river at a different location from the transferor, and thus prejudice the flow to persons with a higher priority. Or the transferor may seek to divide the stream into two or more parts that could reduce the administrative strains on the system. Or the transferee may seek to make an "enlargement" of the water use relative to the transferor. In this context, there is no sensible regime of free alienability, so that extensive administrative oversight is often required to determine whether to allow—and if so, on what conditions—certain kinds of property transfers, and only after the receipt and interpretation of expert evidence on all disputed points.

There is, last of course, the same problem of legal transitions from older to newer regimes, which raise takings issues similar to those with riparian waters. On this score the most dramatic case by far is *Coffin v. Left Hand Ditch Co.*, an 1882 Colorado decision which found that the "imperative necessity" to improve the utilization of water from the Colorado River justified jettisoning the nascent English riparian system then in place in favor of a robust prior appropriation system that grew up side-by-side with it.[55] The judicial decision that set aside the earlier property rights system was open to strong challenge on takings grounds, given that these rights were "vested." But in this case, the Colorado court performed marvels of statutory interpretation to essentially read the riparian rights system off the books and anoint the prior appropriation system its successor. The case here is an instance of what might be called Kaldor–Hicks constitutionalism,[56] because in effect the huge, perceived aggregate net gains from this system (which in itself has major shortfalls) over the riparian systems was thought to overcome the distributional difficulties in the case. In most situations of this sort, the Kaldor–Hicks game is a high-risk operation, because when the relative gap between gains and losses starts to shift, the factional political activities necessarily start to increase, resulting in major social losses from all the familiar causes. Thus, in subsequent iterations, one serious problem is the strong and correct perception that it is no longer possible to maintain separate systems for (under)ground water and surface waters, given the interactions between them.

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54. *See, e.g.*, Barron v. Idaho Dept. of Water Res., 18 P.3d 219, 223 (Idaho 2001).

55. Coffin v. Left Hand Ditch Co., 6 Colo. 443, 450 (1882). For an extensive discussion, see generally DAVID SCHORR, THE COLORADO DOCTRINE: WATER RIGHTS, CORPORATIONS, AND DISTRIBUTIVE JUSTICE ON THE AMERICAN FRONTIER (2012).

56. For a further discussion, see generally Epstein, *supra* note 14.

The connection will, in most cases, require some retreat from the rule of capture as it applies to underground water under the venerable 1843 rule in *Acton v. Blundell*, which treats all forms of subsidence by neighbors as a form of *damnum absque injuria*, or harm without legal injury.[57] The rule was eventually qualified, so that the removal of water (like the digging out of land) that caused subsidence became actionable at the suit of a neighbor[58] and the malicious removal of water, narrowly defined as "for the sole purpose of injuring [a] neighbor," became actionable.[59] These rules are similar to the parallel restrictions placed on withdrawing oil and gas from common pools before unitization. In the end this system gave way to a reasonable-user regime, which, along with the overall increases in output, did much to blunt the possibility of any takings claim.[60]

That said, it hardly follows that all such transitions produce the kinds of overall net gains that immunize them from takings claims. For example, in some instances, groundwater claims are subject to priorities similar to those for surface water. In some instances, both groundwater and surface water develop under prior appropriation systems (whose advantages are less clear for groundwater).[61] In these instances, it seems wrong to subordinate all groundwater claims to all surface claims, regardless of their date of priority, when both systems purport to create vested rights. Linking them through a single priority listing may be better in cases where the substantial value of both sets of claims within well-established legal order reduces the attractiveness of the Kaldor–Hicks constitutionalism used in *Coffin*. Nonetheless, the Colorado court denied the claim, taking the view that the usufructuary rights in water meant that the holders of these claims "do[] not 'own' water but own[] the right to use water within the limitations of the prior appropriation [system]."[62] The difficulty with this argument is that it denigrates the value of partial interests in natural resources. The so-called usufructuary interest of the groundwater owners is a property interest that can be sold and mortgaged. There is no reason why, like the profit-interest in taking oil and gas from the surface, this interest should be subject to lesser protection when the uniform priority system could apply to both. Indeed, the weak level of property protection will, as usual, only intensify the factional tensions. There is no question that the state can choose whether to create these priority systems. But once they are created, the rights within them should be fully vested to the same extent as the prior appropriation rights to the surface water. Here is yet

57. Acton v. Blundell, 152 Eng. Rep. 1223, 1235 (1843).
58. Friendswood Dev. Co. v. Smith-Sw. Indus., Inc., 576 S.W.2d 21, 30 (Tex. 1978).
59. City of Corpus Christi v. City of Pleasanton, 276 S.W.2d 798, 801 (Tex. 1955).
60. *See* Meeker v. City of East Orange, 74 A. 379, 385 (N.J. 1909).
61. *See generally* Kobobel v. State, Dep't. of Natural Res., 249 P.3d 1127 (Colo. 2011) (en banc).
62. *Id.* at 1134.

another instance in which the transition of legal regimes provokes a valid constitutional response.

IV. CONCLUSION

The purpose of this Essay is to explain both the uses and limitations of the natural rights system to allow for the prepolitical or spontaneous creation of property rights without the explicit intervention of the state. Those systems can do much useful work with simple rules that govern priority and sharing, so long as they are matched to the right type of regime—as a first approximation, exclusivity through capture for land, chattels, and animals—and to an open access regime for water. But as use levels become more intense or as physical settings change, the limitations of a natural law system become more apparent, which calls for purposive legislation that can, if properly executed, generate substantial social gains.

At this point, it is important not to buy into the Hayekian story that all spontaneous orders are good and all planned orders are bad. There is little doubt that with respect to many key resources, the introduction of systems of regulation to thwart common pool problems of overuse with respect to fish, wildlife, oil and gas, and water were not met with determined opposition by those who had an undying attachment to common law rules. Instead, the situations were such that in many situations a sensible case for central planning allowed for the introduction of new regimes that produced not only aggregate gains over the prior common law systems, but also distributed those relatively evenly across participants in the overall system. The reason for this success was that the parties who put these schemes into place, whether by common law decision, legislation, or administrative action, did not suffer from either the fatal conceit in their abilities to plan or enormous ignorance over the consequences of their innovation. These systems were localized interventions in response to widely perceived problems that no one could ignore—the extinction of fish and animals, the exhaustion of oil and gas, the drying up of rivers and wells—that called for some concerted social response. Many of the rules in question performed their job well.

This narrative is, of course, not one that calls for uniform optimism, because legal transitions always create risks that are sometimes underappreciated by courts. Hence, side-by-side with the successful introduction of various control systems is a set of judicial decisions on takings that goes astray because it does not seek to identify those systems that produce, roughly speaking, Pareto improvements, but instead decides cases on the view that central planners should be allowed to operate free of the constraints that the Takings Clause might otherwise impose—in line with today's progressive mindset that expert administrators can faithfully implement new regulatory schemes almost as a matter of course. That system works no better with water rights than with anything else. Instead, the correct balance has a three-fold logic. First, it seeks to recognize and foster systems of customary rights that

generate overall social gains. Next, it allows for legislative changes to cut down on the problems that arise from new levels of intensive use. And finally, it uses the Takings Clause to see that the decline of customary rights does not produce massive shifts in wealth that could undermine the gains obtainable by sensible legislative and administrative action. No system of spontaneous evolution can cover the entire waterfront of property rights. But the legislative changes should work systematically to preserve the strong points of these customary systems while weeding out their systematic weaknesses.