

Accession, Riparianism, and the Colorado Doctrine

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Introduction

Rights to water from surface water courses (here, “water rights”) come in two basic varieties in U.S. law.² Eastern jurisdictions tend to apply “riparian” principles, which give riparian land owners limited property rights to use water flowing by their lots reasonably. Prominent Western jurisdictions apply a “prior appropriation” regime, also known as “the Colorado doctrine” because it is famously associated with the 1882 Colorado case *Coffin v. Left Hand Ditch Co.*³ The Colorado doctrine’s greatest innovation is to put non-riparians on the same footing as riparians; in contrast with riparianism, the Colorado doctrine gives non-riparians equal opportunity and access to claim property in river water. When water prospectors appropriate riparian water or its flow, the Colorado doctrine then gives them stronger property rights, for appropriative rights aren’t as contextual or limited by reasonable-use norms as riparian rights. Although some states have instituted mixed or dual systems (most notably, California⁴) riparianism and the Colorado doctrine supply the basic theoretical alternatives for common law treatment of water rights.

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² In this Article, I use “water course” as a capacious term covering rivers and other tributaries carrying flowing surface water. I use “riparian” as an adjective to describe things (especially water) associated with water courses.

³ 6 Colo. 443 (1882).

⁴ See *Lux v. Haggin*, 10 P. 674 (Cal. 1886).

Lawyers and scholars also assume a shared set of justifications explaining the differences between these two regimes. The conventional justification holds that each regime is suited to different locales. Riparianism is better-suited to the relatively humid climatic, hydrological, and economic conditions typical of the U.S. eastern seaboard and the Mississippi River basin, while the Colorado doctrine is better-suited to the arid and semi-arid conditions in the Rockies and western U.S. The U.S. Supreme Court has taken judicial notice of these differences.⁵ These differences are relied on in the most prominent exposition of the Colorado Doctrine, *Coffin*: In the arid west, "[t]he climate is dry, and the soil, when moistened only by the usual rainfall, is arid and unproductive; except in a few favored sections, artificial irrigation for agriculture is an absolute necessity."⁶ In the legal academy, among scholars who specialize in water law, these differences are also basically accepted. I'll cover some examples later in this Article, but for preliminary confirmation consider standard water law case books. Many leading casebooks start not with the law of water—but with an introduction to how hydrology, climate, and water uses vary by geography across the U.S.⁷

That justification, however, should prompt a puzzle. Water rights are said to be property rights. If property has any internal coherence, lawyers and scholars should be able to explain *how* property-related concepts and policies take cognizance of climatic, hydrological, and other relevant differences. To date, that connection has been overlooked in water law scholarship.

Since this puzzle is about property, one would expect the puzzle to be answered by property-related scholarship. Until very recently, however, property scholarship has not been adequate to answer the puzzle. The inadequacy hasn't just been due to lack of interest—it's been due to a lack of an adequate theoretical and conceptual vocabulary.

In property-theoretic terms, the transition from riparianism to the Colorado doctrine implicates two important design choices. The first deals with whether resources should be classified as commonses or as objects of private ownership. These choices are fairly well-known—in both economic⁸ and legal⁹ literature.

⁵ "[I]t was early developed in [western states'] history that the mining industry in certain states, the reclamation of arid lands in others, compelled a departure from the common-law rule, and justified an appropriation of flowing waters both for mining purposes and for the reclamation of arid lands., and there has come to be recognized in those states ... a different rule,—a rule which permits, under certain circumstances, the appropriation of the waters of a flowing stream for other than domestic purposes." *United States v. Rio Grande Dam & Irrigation Co.*, 174 U.S. 690, 704 (1899).

⁶ 6 Colo. 441, 446 (1882).

⁷ See, e.g., A. Dan Tarlock et al., *Water Resource Management: A Casebook in Law and Public Policy* (7th ed. 2014); Robert W. Adler et al., *Modern Water Law* (2013).

⁸ See Garrett Hardin, *The Tragedy of the Commons*, 162 *Science* 1243 (1968); Harold Demsetz, *Toward a Theory of Property Rights*, 57 *Amer. Econ. Rev.* 347 (1967).

Climate, hydrology, and economics create broader common-pool uses in the east, and fewer in the west. But once it’s settled that flowing surface water—or any other resource—should be treated as a proper object for private property, a second question arises: How exactly should property law define the legal things or *res* to which property status attaches? Climate, hydrology, and economics all lead bundles of water and land rights to be scaled or composed differently across east and west. But, until very recently, there has not been an adequate property vocabulary to articulate how background factors filter into property design.

Here and there, there have been efforts to articulate how property law matches real-life resources to the *res* or “things” on which property law operates. Frank Michelman¹⁰ and Henry Smith¹¹ have both spoken of the “composition” of legal rights in relation to ownable resources. Dean Lueck got at similar issues by distinguishing first-possession regimes depending on whether they establish property over “flow” to a resource or the entirety of the “stock” of a resource.¹² Christopher Newman has spoken of the problem of “transformation” of “identity,”¹³ and I have referred to the problem of “scaling” legal *res*, rights, and responsibilities to external resources.¹⁴ In a 2010 article, however, Thomas Merrill associated these doctrines, concepts, and policies with the term “accession.”¹⁵ “Accession” matches onto many (though not all) doctrinal examples of this entitlement-composition or -scaling problem. Because Merrill’s article seems to have captured the imagination of property scholars, his term accession seems likely to stick.

The thesis of this Article is this: Traditional riparianism and the Colorado doctrine represent two different applications of accession- or entitlement-scaling-related policies to property rights in flowing surface water. And accession-related law and principles provide the vehicle through which property doctrine internalizes the basic climatic, hydrological, and economic justifications for treating eastern surface water differently from western surface water.

I hope this Article makes three contributions to contemporary scholarship. First, I hope it helps property and water law scholars read seminal water law cases with keener eyes. Several surface-water cases are canonical in property and water

⁹ See, e.g., Richard A. Epstein, On the Optimal Mix of Private and Common Property, 11 Soc. Phil. & Pol’y 17 (1994); Robert C. Ellickson, Property in Land, 102 Yale L.J. 1315 (1993); Carol M. Rose, The Comedy of the Commons, 53 U. Chi. L. Rev. 711 (1986).

¹⁰ Frank Michelman, Ethics, Economics, and the Law of Property, in Ethics, Economics, and the Law: Nomos XXIV, Chapman & Pennock eds. (New York: New York University, 1982), 1, 8.

¹¹ Henry E. Smith, Exclusion Versus Governance: Two Strategies for Delineating Property Rights, 31 J. Leg. Stud. S453, S454 (2002).

¹² Dean Lueck, The Rule of First Possession and the Design of the Law, 38 J.L. & Econ. 393 (1995).

¹³ Christopher Newman, Transformation in Property and Copyright, 56 Vill. L. Rev. 251, 274 (2011).

¹⁴ Eric R. Claeys, Productive Use in Acquisition, Accession, and Labour Theory, in Philosophical Foundations of Property Law 13, 29 (Penner & Smith eds., 2013).

¹⁵ Thomas W. Merrill, Accession and Original Ownership, 1 J. Leg. Anal. 459 (2010).

law scholarship. *Tyler v. Wilkinson*¹⁶ probably gets pride of place among riparian rights cases, and *Coffin v. Left Hand Ditch Co.* for the Colorado doctrine. These authorities assume and apply the principles of accession and entitlement-composition developed here. To date, however, these connections to accession and entitlement-composition have been overlooked.

My second goal is to offer two minor amendments to property scholarship on accession and property entitlement-design. First, we property scholars interested in the arcana of accession disagree about what "accession" really covers. The water rights studied here provide partial confirmation that accession is a broader phenomenon than Merrill suggests in his treatment, that "accession" is really identical with the right legal composition or scaling of property rights to ownable resources. Separately, surface-water law highlights a variation on accession problems previously overlooked. In the paradigm case of accession, the issue is: Should a resource be treated as a standalone resource, or an accessory to some other nearby and more prominent resource? The alternatives get more complicated when the resource in question could also be classified as part of a nearby commons. Property rights in river water have to deal with that possibility.

My last goal is to clarify the role that property concepts and policies play in scholarship on water rights. In that scholarship, some argue that property concepts inject too much, too little, or the wrong sorts of "property" into the law of water rights. These arguments don't take adequate cognizance of the way in which property concepts help focus policy debates. Property is better understood not as one monotonic legal strategy but rather as an open-texture network facilitating several different strategies in different situations. The Colorado doctrine and riparianism are both property-based strategies. Each strategy fits a certain range of conditions influencing the likely uses of riparian water—and accession-related property law and policy internalize the considerations dictating when each strategy is preferable.

I. Riparianism Versus the Colorado Doctrine

A. Public Property: Navigable Rivers

Let me start by clarifying the similarities and differences between riparian and appropriative regimes. It is best to take note of the public commons that *limit* the possible scopes of the rights in those regimes. When surface water courses are navigable, states have jurisdiction to ensure the citizenry's free access to them for navigation, fishing, and (more recently, and subject to more variation) recreational uses. Early authorities (quite often, English authorities) stressed on this basis that

¹⁶ 24 F. Cas. 472 (C.C.D.R.I. 1824).

river water is common—it is “publici juris,” or “affected with a public interest.”¹⁷ American jurisdictions have strengthened this concept, such that navigable waters became subject to a public trust. The public trust prevents a state from alienating the trust subject permanently—or its responsibilities to protect the public uses of the waters.¹⁸ Private possessions can and do coexist with these public waterways, but in cases of conflict public rights trump over private property.¹⁹

B. Riparian Rights

When the use of surface waters doesn’t interfere with public uses or trusts, however, individuals may acquire property in it. Riparian and appropriative regimes both establish property relations, but quite different ones.

In riparian regimes (and, at common law), access to the use of water or its flow is reserved for proprietors of riparian land. Each riparian proprietor is entitled to use and enjoy the flow running by her riparian property.

Riparian regimes entitle each riparian to a general right to enjoy and even consume water flow, subject to context-specific responsibilities to use water reasonably.²⁰ A reasonable-use norm entitles riparians to divert, use, or enjoy limited amounts of water for private purposes. But riparians must not divert or consume so much water that they interfere with concurrent similar uses of other riparians. If there is not enough water to support all concurrent uses, uses are rationed. The uses most essential to human survival are protected with highest priority, while the uses merely conducive to human convenience get lowest priority and get prohibited first. (If a river is navigable, reasonable-use norms prohibit riparians from interfering with the public uses of the river as well.) In contrast with the Colorado doctrine, then, riparian rights are relatively limited in law. Because they are conditioned by reasonable-use limits, riparian rights vary in response to changes in climate, fluctuations in the water supply, and the diversions and uses of other riparians. On the other hand, riparian rights are more valuable in a practical sense, because water satisfies the uses generating the rights more often for riparian rights than for appropriative rights.

¹⁷ See, e.g., S. Wiel, *Water Rights in the Western States* (3d ed. 1911), citing *Williams v. Moreland*, 107 Eng. Rep. 620 (1824); *Liggins v. Inge*, 7 Bing. 692 (1831); *Mason v. Hill*, 110 Eng. Rep. 692 (1833).

¹⁸ See, e.g., *Ill. Cent. R. Co. v. Ill.*, 146 U.S. 387 (1892); *Martin v. Waddell*, 41 U.S. (16 Pet.) 367, 412 (1842); *Rose* 1986, 727-29.

¹⁹ See, e.g., Carol M. Rose, *Energy and Efficiency in the Realignment of Common-Law Water Rights*, 19 J. Leg. Stud. 261, 288 & n.98 (1990). See also *National Audobon Society v. Superior Court*, 658 P.2d 709 (Cal. 1983); *U.S. v. Rio Grande Dam & Irrig. Co.*, 174 U.S. 690 (1899).

²⁰ See chs. 6 & 7, *Waters and Water Rights* (Robert E. Beck & Amy Kelley eds., 2010); David H. Getches, *Water Law in a Nutshell* 16-58 (4th ed. 2009).

C. The Colorado Doctrine

In contrast, the Colorado doctrine creates a separate and clearer proprietary right in the use of water flow. To acquire appropriative rights, at common law, citizens must satisfy three elements to appropriate flow: They must divert water from a watercourse; they must deploy that water to a beneficial use; and they may also need to exhibit some sort of intent to appropriate the water and put it to beneficial use.²¹ To preserve this property, the appropriator must continue to divert and use the same volume of water in the same regular period of time.

The Colorado doctrine institutes a system of *prior* appropriation because appropriation claims are rated in time. In case of drought, the earliest first appropriator's claims get highest priority, then the second-earliest appropriator's claims are satisfied, and so on in order of earliest diversion.

Appropriative rights are stronger than riparian rights because they're not subject to reasonable-use limitations or other correlative responsibilities. An appropriator mustn't divert water until senior appropriators have recovered their shares and then, out of respect for junior appropriators, he also mustn't exceed the scope of his established diversion or beneficial use. Within those constraints, however, an appropriator may consume all of the water he appropriates without considering the possible effect of that consumption on anyone other than a senior appropriator.²²

II. Property Talk in Water Scholarship

Riparianism and the Colorado doctrine are justified in different ways. Frequently, however, they're justified in relation to expectations associated with the concept "property." Yet these justifications contradict each other. Scholars disagree about what "property" is. Or, even if they agree what "property" is, they disagree about whether it's good for water law to be informed by property law.

A. The Demsetzian View

²¹ See, e.g., *State ex rel. Reynolds v. Miranda*, 493 P.2d 409 (N.M. 1972); Beck, "Elements of Prior Appropriation," in *Waters and Water Rights 2010*, § 12.02(c).

²² Robert Beck reports that California relies primarily on riparianism while respecting some appropriative principles, that Oklahoma and Nebraska enforce vestigial traces of riparianism, and that Alaska, Nevada, Oregon, Washington, the Dakotas, Kansas, and Texas employ a combination of both approaches while terminating acquisition of future water uses. See Beck, "Prior Appropriation: Introduction and Beyond," in *Water and Water Rights 2010*, § 11.04. But these don't raise any accession issues not already covered, because such regimes constitute hybrids of the two dominant regimes.

I'll call one view here the "Demsetzian" view. This view is expressed in legal and in economic scholarship on such rights.²³ This view is "Demsetzian" because it applies Harold Demsetz's 1967 article *Toward a Theory of Property Rights*. Demsetz assumed that "property rights" referred to social institutions conferring on holders broad authority to decide how the resources covered by property would be used and how access to them would be allotted. Demsetz argued that property rights emerge when their social benefits exceed their social costs—and specifically, when the gains from letting one person manage all the externalities associated with a resource outweigh the administrative costs of maintaining such rights.

In the Demsetzian view, the paradigm case of a property right is a strong right to exclude, and this is a beneficial paradigm to apply to water courses. As one article put it, "an allocation of rights based on the appropriative doctrine preserves incentives for investment that would be foregone under the riparian scheme because of the common property characteristics of water under riparian allocation of rights."²⁴

B. The Property-Limits View

I'll call the second view a "property-limits" view. Like the Demsetzian view, the property-limits view holds that the paradigm for a property right is a strong right to exclude. Scholars who subscribe to this view accept that exclusion may be a useful policy strategy in some contexts. As applied to the law of water rights, however, scholars who subscribe to this view holds that an exclusion paradigm is at present a bad paradigm to apply to water.

Two prominent examples stand out. In their co-authored book *Searching Out the Headwaters*, Sarah Bates, David Getches, Lawrence MacDonnell and Charles Wilkinson associate the Colorado doctrine with property concepts "derived solely from possession and use." Although these concepts may have been advantageous when first implemented, more recently they have "caused considerable confusion."²⁵ Joseph Dellapenna takes a slightly different tack. He assumes that there are at least two major property-related strategies—a hard-edged exclusionary approach, and a context-driven approach better associated with nuisance. Dellapenna argues that appropriative doctrine embodies the former approach. Yet Colorado and other western states did not embrace the Colorado doctrine "from a careful analysis of the

²³ See, e.g., Gary D. Libecap, The Assignment of Property Rights on the Western Frontier: Lessons for Contemporary Environmental and Resource Policy, 67 J. Econ. Hist. 257, 281-84 (2007); Timothy D. Tregarthen, Water in Colorado: Fear and Loathing of the Marketplace, in Terry Anderson ed., *Water Rights* 119 (1983); Terry L. Anderson & P.J. Hill, The Evolution of Property Rights: A Study of the American West, 18 J.L. & Econ. 163, 176-78 (1975); J.W. Milliman, Water Law and Private Decision Making: A Critique, 2 J.L. & Econ. 41 (1959).

²⁴ H. Stuart Burness & James P. Quirk, Appropriative Water Rights and the Efficient Allocation of Resources, 69 Am. Econ. Rev. 25, 25 (1979).

²⁵ Sarah Bates et al. *Searching Out the Headwaters: Change and Rediscovery in Western Water Policy* 136, 144 (1993).

legal needs of western states”; appropriationism was “[v]igilante law” imposed by miners, and “[i]n significant respects [it] did not serve its communities well.”²⁶

C. The Reasonable-Use View

A third approach is to deny that the paradigm form of property comes from broad rights of exclusion—and to insist that the *real* paradigm for property is some regime characterized primarily by norms of reasonableness or context-sensitivity. I’ll call this view here the “reasonable-use view” of property. According to the reasonable-use view, it’s not the Colorado doctrine but *riparianism* that exemplifies the paradigm case of property, and riparianism is preferable because it exemplifies this paradigm.

This view is illustrated by Eric Freyfogle’s 1989 article *Context and Accommodation in Modern Property Law*.²⁷ Freyfogle analyzes modern, riparian-based water law cases from California. He reads these cases as confirming a trend: “Autonomous, secure property rights have largely given way to use entitlements that are interconnected and relative,” “water is the most thoroughly advanced form of property, and its model should prove particularly influential.” “If property law does develop like water law,” Freyfogle concludes, “it will increasingly exist as a collection of use-rights, rights defined in specific contexts and in terms of similar rights held by other people.”²⁸

III. Accessory Rights in Riparianism and the Colorado Doctrine

A. Accession as a Scholarly Term

Yet these three views all deserve a closer look, because all don’t account sufficiently for the way in which property law and policy structure the *res*, the legal things, around which property institutes rights. In this Article, I call the relevant legal and policy principles “accession” principles. Legal and scholarly usages aren’t totally settled about how to define the relevant issues here. So let me begin by clarifying how I define and use “accession” in this Article.

In practice, “accession” is most familiar as a specific property doctrine relevant to remedy disputes. This doctrine applies when individual *A* owns chattel *C* and individual *B* then: converts *C*; works on *C*; and generates a new and valuable product *E*. Thus, if *B* converts *A*’s wood and then makes valuable barrels from the

²⁶ Joseph W. Dellapenna, The Law of Water Allocation in the Southeastern States at the Opening of the Twenty-First Century, 25 U. Ark. Little Rock L. Rev. 9, 20-22 (2002).

²⁷ 41 Stan. L. Rev. 1529 (1989).

²⁸ See *id.* at 1529-31 (citing *In re Water of Hallett Creek Stream System*, 749 P.2d 324 (Cal. 1988), *cert. denied sub nom. California v. United States*, 109 S. Ct. 71 (1988)).

wood, accession principles regulate whether and in what circumstances *B* may claim property in the barrels when *A* sues for conversion or replevin of the wood.²⁹

Another familiar usage of accession comes from David Hume. In this usage, *A* owns crop *C*, the fruit produces fruit *E* ... and it's open to dispute whether *A*, the crop owner, or *B*, the fruit-picker, acquires *E*. In this usage, one resource (the crop) is dominant, another (the fruit) is proximate to the first, and the latter is subsidiary to the former because its value is produced by the former. Here, "accession" means an increase in value (the crop's producing fruit) and also the relation between the dominant and subsidiary resources (the fruit runs with the crop).³⁰

Thomas Merrill has defined accession in relation to examples like the two just given. In his definition, "[t]he principle of accession holds that ownership is established by assigning resources to the owner of some other thing that is already owned."³¹ Stated formally, accession principles deem resource *E* an accessory of resource *C* when *E* has the right sort of relation to *C*. The "right sort of relation" arises through a combination of several overlapping factors: *C* is proximate to *E*, *C* is more valuable than *E*, and *E*'s value is somehow associated with or attributable to likely uses of *C*.

I understand the issues raised by "accession" more broadly—as a meta-issue about how to scale or compose legal property entitlements in relation to the resources they cover. Hume's crop example and the accession doctrine in conversion raise two specific examples of this phenomenon. In other situations, however, entitlement-composition or -scaling problems arise in fact patterns unrelated to "accession" in its specific sense. Consider the problems that arise when a river moves and creates new land on one bank. Property law needs to specify whether the newly-accreted land is open for acquisition. American property law holds that ownership of the newly-accreted land goes to the owner of the adjacent land. Merrill's definition of accession and black-letter usages of accession both capture this legal usage. Yet there is a second property-related transition on the other side of the river. "Avulsion" refers to the fact that the owner on the other side of the river loses any claim to property over the land now submerged by the river's new course.³² On that side of the river, the land owner's property entitlements change—but neither Merrill's nor the law's senses of "accession" capture the change.

²⁹ See *Wetherbee v. Green*, 22 Mich. 311 (1871).

³⁰ See David Hume, *A Treatise on Human Nature* 509 (2d ed. L.A. Selby-Bigge & P.H. Nidditch eds., 1989).

³¹ Merrill 2010, at 460.

³² See, e.g., *Nebraska v. Iowa*, 143 U.S. 359 (1892).

My differences with Merrill also lead us to differ in our portraits where the doctrine fits in property law. Merrill portrays accession as a vehicle for establishing first ownership of a resource, an alternative to acquisition. In my opinion, compositional issues are logically prior to questions about acquisition, and tort disputes about whether one party takes another's property, and contract disputes about what transferred. In all these situations, property law and policy specify what the

There are a lot of examples of these sorts of entitlement-recomposition problems running throughout property law. If I were writing on a blank slate, I would prefer to speak (as Henry Smith and Frank Michelman do) of “composition” issues or (as I’ve suggested) “scaling” issues. Nevertheless, “accession” seems to have stuck in law and scholarship, thanks to some combination of Hume, Merrill, and the specific accession doctrine. So both to ease exposition and to avoid idiosyncratic usages, I’ll refer here to “accession-related” policies as a shorthand not only for paradigm cases of accession but also for entitlement-scaling problems generally. To avoid generating a usage inconsistent with Merrill’s discussion or mainline understandings of accession, however, I create another possible idiosyncratic usage.

In my understanding, accession issues arise not only when there is a dominant *C*, a subsidiary *E*, and an increase-in-value relation between *C* and *E*. In general terms, in my understanding, an accession problem arises when individual *A* has a resource *C*, individual *B* has a resource *D*, and resource *E* is proximate both to *C* and to *D*. The accession problem is capable of three clean solutions. Two solutions implement “accession” strategies: to make *E* an accessory to *C*, or to make it an accessory to *D*. The third solution makes *E* a resource separate from *C* or *D*.³³ Merrill treats this strategy as a “first possession” strategy different from and alternative to accession. In my opinion, accession and separate property are two different legal conclusions emanating from the same policy and doctrinal meta-choices.

B. Accession Around Surface Water Courses

When accession is understood in my broad sense, both riparianism and the Colorado doctrine rely on accession connections. Entitlements to use or manage the use of flowing surface water could be assigned in three different ways. One is to make the entire water course a single *res*. In this approach, the water-course could be unownable, or owned by the government. Alternately, property law could specify that the water course be owned by a single proprietor.

The second approach is to make entitlements in the use of flowing water accessories to ownership of adjoining land. Riparianism institutes this approach. The 1824 decision *Tyler v. Wilkinson* is often treated as the most important or at least the first major restatement of riparian rights by an American court. U.S. Supreme Court Justice Joseph Story (riding circuit) restated riparianism as follows:

“thing” in dispute is before (respectively) property, tort, or contract settle who acquired, took, or failed to perform with it.

³³ Claeys 2013. In text, I say there are three “clean” solutions. There can be partial solutions. For example, ownership of *E* can run with ownership of *D* on condition that *B* compensate *A* for some of the value of *E*.

“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.”³⁴ Similarly, Joseph Angell’s seminal treatise on water law holds that “a right to the use of the water, as it flows in its natural state, is incident to the land through which it flows.”³⁵ In both sources, the term “incident” signifies that riparian water rights are legal accessories to property in the riparian land.

The last approach makes riparian entitlements an asset or assets separate from the entirety of the water course and also from riparian land. This is the strategy deployed in the Colorado doctrine. *Coffin* repudiates riparianism by announcing that, because of aridity and water scarcity, “[w]ater in the various streams thus acquires a value unknown in moister climates. Instead of being a *mere incident* to the soil, it rises, when appropriated, to the dignity of a distinct usufructuary estate, or right of property.”³⁶ Some states’ statutes institute this claim into statutory law.³⁷

Although the Colorado doctrine severs the accession connection between riparian land and water, it creates two new accession connections. First, the Colorado doctrine makes future water diversions accessories to early diversions. Ordinarily, when a hunter hunts fowl, he keeps only the birds he shoots or nets, not the entire flock.³⁸ When several prospectors drill for oil, the oil becomes the separate “property of the person into whose well it came.”³⁹ In appropriative doctrine, however, the property right is broader than the water actually caught. As *Coffin* puts it, the proprietor acquires not merely the water extracted but a broader “usufructuary estate.” This usufruct guarantees the prospector an expectancy in diverting the same volume of water regularly and annually in future years, to sustain the beneficial use she has already begun.⁴⁰

Second, in contrast with riparianism, the Colorado doctrine reverses the relation between water and riverbank: It recognizes implied easements in land and makes them accessories to appropriative rights over the use of surface water. The implied easements are ditch easements. Ditch easements confer rights of way to construct and maintain irrigation canals or other water-transporting ditches between the water course supplying the water and the site of use. This ditch-easement rule was announced early and most famously in the 1872 Colorado case

³⁴ 24 F. Cas. 472, 474 (C.C.R.I. 1824).

³⁵ Joseph K. Angell, *A Treatise on the Common Law in Relation to Watercourses* 27 (2nd ed. 1833).

³⁶ 6 Colo. at 446 (emphasis added).

³⁷ See, e.g., Kan. Stat. Ann. § 82a-701(g); Beck, “Elements of Prior Appropriation,” in *Waters and Water Rights* 2010, § 12.02(e).

³⁸ See Raymond Brown, *Law of Personal Property*, § 2.1 at 13 (3d ed. 1975).

³⁹ *Kelly v. Ohio Oil Co.*, 49 N.E. 399 (Ohio 1897); see *Hall v. Reed*, 54 Ky. 479 (1854); Terence Daintith, *Finders Keepers?* (Earthscan 2010).

⁴⁰ See Beck 2010, § 12.01.

Yunker v. Nichols.⁴¹ Ditch easement rights have been codified in state constitutions⁴² and statutes.⁴³ Since the easements arise as necessary to sustain appropriative rights, they are accessories to those appropriative rights.

C. Accession and Property Talk in Water Law

Accession complicates the property-related arguments recounted in the last Part. Consider first the reasonable-use view. Again, this view holds that the most sophisticated or paradigmatic strategies of property regulation are context-specific use norms, and it cites riparian rights as confirmation. This view seems more problematic once it's clear that riparian rights are accessories to the ownership rights in riparian land. Property starts with relative clear and formal rights of exclusion in the land. It may rely on nuisance rules to smooth over relations between neighbors and riparian rights to smooth over relations between fellow riparians, but those rules don't make the basic rights any less important. To borrow an analogy popularized by Merrill and Henry Smith, property law is a pyramid with simple and formal rules of exclusion at the base and more context-sensitive "governance" strategies at the apex, and the fact that property law has some governance at the top doesn't take away from how important exclusion is at the bottom.⁴⁴ So in water law, when riparian rights focus on context-dependent factors, they do so primarily because property law makes those rights peripheral to a larger *res* built around riparian lots of land.

Similarly, accession highlights a way in which the Demsetzian view is overly simplistic. Although Demsetz's externality-internalization theory is useful, it has its limits. One oversimplification has already been noted elsewhere, in legal scholarship about common property. Demsetz's theory can be understood to suggest that property law should operate as a one-way ratchet, from common property to private property. Some resources are put to their highest and best uses for public or common uses, however, and for such resources the Demsetzian theory doesn't fit.⁴⁵ Accession highlights a parallel problem. Some supposedly "Demsetzian" transitions don't reflect shifts from common property to private property; instead, they represent shifts from an accession strategy to a private-property strategy.

And this limitation applies to the transition from riparianism to the Colorado doctrine. David Schorr noticed this problem in his historical study of the Colorado

⁴¹ 1 Colo. 551 (1872). See David Schorr, *The Colorado Doctrine: Water Rights, Water Corporations, and Distributive Justice on the American Frontier* 55-57 (2012).

⁴² See, e.g., Colo. Const. art. II § 14.

⁴³ See, e.g., Colo. Rev. Stat. § 37-86-102. See *Roaring Fork Club, L.P. v. St. Jude's Co.*, 36 P.3d 1229, 1231-32 (Colo. 2001).

⁴⁴ See Thomas W. Merrill & Henry E. Smith, *What Happened to Property in Law and Economics?*, 111 Yale L.J. 357, 398 (2001).

⁴⁵ This is the main lesson from Rose 1990; and it's also an important theme in Richard A. Epstein, *The Allocation of the Commons: Parking on Public Roads*, 31 J. Leg. Stud. 515 (2002).

doctrine: "No argument, geographic or otherwise, was required to convince that water should be considered private property.... The claim in *Coffin* is, rather, that water's special value in the West elevates it to a '*distinct*' estate, that is, one not related to the rights of riparian owners, not a 'mere incident to the soil.'"⁴⁶

Demsetz's externality-internalization thesis may shed light in a general way on why riparianism gave way to the Colorado doctrine. But the theory needs to be qualified significantly to account for the fact that riparianism isn't strictly speaking a common-property regime.

D. On the Relation Between Property, Accession, and Policy

Accession highlights a deeper problem with all three views, though most particularly the property-limits views. In the Demsetzian and property-limits views, "property" refers to an exclusion-based strategy, and in the reasonable-use view, "property" refers to a reasonableness strategy, but all assume that property has one definitive or paradigmatic strategy. None of these views considers a different, more open-texture relation between property law and policy. It could be that property law has at its core one overarching policy goal, but it also then generates several midlevel, differing indirect-consequentialist strategies for pursuing that goal in different situations.

To appreciate how an open-texture system works, it may help to think through a well-worn example popularized by Ronald Dworkin. In *Riggs v. Palmer*, a grandson killed his grandfather, to stop the grandfather from revising his will and diminishing the grandson's share in favor of a new wife. Two of the grandson's aunts sued for an injunction against executing the will and giving the grandson his share. If the law of wills and estates consisted only of a few core black-letter rules, there would not have been any tools in the law to stop the grandson from taking under the will. Yet the Court of Appeals for New York believed that the directives in the grandfather's will (and in the New York Wills Act) were impliedly bounded by a moral limitation, that the literal meanings of the directives shouldn't be enforced in situations in which a devisee commits a gross wrong to accelerate his taking under the will. Dworkin used *Riggs* to illustrate how specific summary rules of law are bounded and coordinated by broader normative principles. Those normative principles serve as a law more fundamental than the specific content of the summary rules.⁴⁷ Although Dworkin's treatment of this distinction is well-known, the distinction isn't unique to Dworkin. Specialists on the common law distinguish between precedents and the policies that harmonize precedents,⁴⁸ and Hart and Finnis have made space for the same relation in their accounts of law.⁴⁹

⁴⁶ Schorr 2012, 60 (quoting *Coffin*, 6 Colo. at 446 and adding emphases).

⁴⁷ See Ronald Dworkin, *Taking Rights Seriously* 22-26 (1978); see also *Riggs v. Palmer*, 22 N.E. 188 (N.Y. 1889).

⁴⁸ Edward Levi, *An Introduction to Legal Reasoning* (2d ed. 2013).

⁴⁹ See H.L.A. Hart, *The Concept of Law* (3d ed. 2013); John Finnis, *Natural Law and Natural Rights* (2d ed. 2011).

Property law internalizes similar relations, and the fact that it does confounds arguments that reduce property to single-issue strategies. Let me illustrate with two other examples. Like the choice between riparianism and the Colorado doctrine, both examples deal with property transitions at the interface of a public resource and a private resource.

One example is the transition in aerial trespass law between 1920 and 1940. Low-level airspace lies between public high-altitude air and private land. Before 1920, it was largely assumed that any penetration of a land owner's lot consisted of a trespass. By operation of accession principles, the air column superjacent to an owner's lot is ordinarily part of the *res* for the surface of the lot.⁵⁰ As air travel became feasible and then popular, however, courts declared that this accession principle had only ever been a presumptive rule, and it was rebuttable on a showing that owners didn't have significant interests in the use or possession of the air space and that airplanes did.⁵¹

The aerial trespass transition is often cited to suggest that property rules are plastic and can be revised to suit a wide range of policy goals. As I have shown elsewhere, the transition actually illustrates a subtler relation between property law and policy. Property contains its own internal normative principles, to coordinate the most effective concurrent uses of resources. Before the aviation transition, air space was best used as an accessory to private property—as a buffer zone protecting land owners' effective possession and enjoyment of their lots. After the transition, air space was better used as part of an aerial commons.⁵² Normative principles internal to property justified and directed a switch. Contra Demsetz's commons-to-private ownership theory, it was appropriate for property law to scale back private property in airspace, to expand effective common use of the air.

The other example involves transitions between ordinary city parking rules and informal social norms that govern in blizzards in Chicago and a few other northern U.S. cities. Ordinarily, in a city, all public streets, sidewalks, and parking spaces are public property. Drivers have limited rights to occupy parking spaces on a "first come, first served" basis, but those rights cease as soon as the drivers leave. In Chicago, Boston, and a few other northern cities, however, residents follow and enforce a different, informal and customary regime during blizzards. As a district court judge described the custom, it allows Chicagoans and residents in other similar cities "to place a chair, or some other placeholder, in an on-street parking

⁵⁰ See Merrill 2010.

⁵¹ See *United States v. Causby*, 328 U.S. 256 (1946); *Hinman v. Pacific Air Transp.*, 84 F.2d 755 (9th Cir. 1936); *Swetland v. Curtiss Airports Corp.*, 41 F.2d 929 (N.D. Ohio 1930), modified on other grounds, 55 F.2d 201 (6th Cir. 1932); Stuart Banner, *Who Owns the Sky?: The Struggle to Control Airspace from the Wright Brothers On* (2008).

⁵² See Eric R. Claeys, *On the Use and Abuse of Overflight Column Doctrine*, 2 *Brigham-Kanner Property Rights J.* 61 (2013).

spot that they've freshly shoveled, thereby calling 'dibs' and saving the space for themselves."⁵³ Space-shovelers insist that other drivers stay out of dibs-claimed spaces; they retaliate against dibs-deniers by keying their cars, letting air out of their cars' tires, or other low-level vigilantism.

Customary snow-dibs norms have been cited as strong vindications of Demsetz's externality-internalizing thesis.⁵⁴ These norms do confirm that thesis—but they also highlight its limits.⁵⁵ Like low-level air and surface water, parking spaces sit at the interface of private resources (privately-held homes and stores) and public ones (streets and sidewalks). Ordinarily, property norms facilitate the best concurrent use of parking spaces by making them predominantly common resources. In these circumstances, in Demsetzian terms, the costs of private property outweigh the potential benefits. When there aren't blizzards, little effort or other investments are needed to create spaces.⁵⁶ Exclusive property rights thus restrict access to a resource that could and should be open to everyone, without contributing significantly to the creation of new and useful resources. This cost-benefit analysis shifts when blizzards cover over spaces with snow. Then, digging expands the store of usable parking spaces and confirms Demsetz's property theory. But the private property lasts *only* as long as the blizzard, after which Demsetz's theory ceases to apply and the public regime takes over.

Equally important here, these dibs systems show what is problematic with the property-limits criticism. That criticism assumes that "property" refers to a single legal paradigm and a single policy strategy. Neither accurately portrays property law; property law operates as an open-texture system. As a social and legal institution, "property" comes with a built-in overarching policy goal, to facilitate the beneficial use of a resource by a wide range of people interested in its use. Property makes available several different mid-level strategies to pursue that goal—commons property, private ownership and management of the resource as a standalone resource, and private ownership and management as an accessory to a more valuable resource. Ordinary parking rules deploy the first strategy for parking spaces, while snow-dibs customs apply the second on an as-needed basis during blizzards. (And one can also see examples of the third strategy, when city governments tie access to neighborhood parking spaces to ownership of a lot or a condominium space in the same parking zone.⁵⁷)

⁵³ Flores v. Lackage, 938 F. Supp.2d 759, 763 (2013); Boston.com, "Parking-spot savers: a winter guide"; George, "A Helpful Refresher on Chicago Winter Driving (and Parking) Basics," The AllState Blog, Dec. 6, 2013; Straight Dope Chicago, "How did parking-spot 'dibs' start in Chicago, and What Are the Rules?," Feb. 13, 2011, <http://chicago.straightdope.com/sdc20110203.php>. Cite also Clowney SSRN article.

⁵⁴ Fred S. McChesney, "Snow Jobs," Oct. 15, 2001, Library of Economics and Liberty, <http://www.econlib.org/library/Columns/Mcchesneysnow.html>.

⁵⁵ Epstein 2002.

⁵⁶ Beyond cities' sunk costs to create the spaces, and their ongoing costs to maintain them.

⁵⁷ See Merrill 2010, 472; Epstein 2002.

The property-limits view and the reasonable-use view suggest that the concept "property" creates too much exclusion in appropriative water law, while the Demsetzian view suggests that there's too little "property" in riparian water law. As the last Part suggested, we should be open to a possibility, that the field of "property" has room for concurrent strategies, using different combinations of common property, private property, and accession tools to scale private property differently. In the next two Parts, I hope to show as much.

IV. A Labor-Based Justification for Riparianism and the Colorado Doctrine

I am going to explain the accession relations in water law using two different normative justifications for property. In this Part, I'll apply a natural law-based labor theory; in the next, I'll survey several relevant economic justifications. In part, I cover both approaches just to confirm that accession can be explained (and overdetermined) by rights-based and economic approaches to property. In part, I cover both bases because different relevant materials emphasize one or the other. Much of the best scholarly work on water rights explains the differences between riparianism and the Colorado doctrine economically. In seminal water cases, however, judges have relied heavily on natural-law- and labor-based reasoning.⁵⁸

A. The Moral Context for Labor

Lockean labor theory may be understood in several different ways, some of them less plausible than others. I find most satisfying, and I read seminal water authorities to have assumed, a moral theory of labor grounded in foundations of human flourishing. Consider again the passage from *Coffin* cited in the last Part: the appeal to "vast expenditures of time and money ... made in reclaiming and fertilizing by irrigation portions of our unproductive territory."⁵⁹ The "vast expenditures of time and money" didn't generate a moral right to labor in and of themselves; they did so because they made "unproductive" territory *productive*. This contrast is one of several hallmarks of a natural-law influenced understanding of labor. I'll refer here to this understanding of labor as "productive labor morality."

In productive labor morality, "labor" and "use" consist of purposeful activity reasonably likely to produce or contribute to the actor's well-being. Because labor and use are supposed to contribute to well-being, the right to labor rests on objective, flourishing-based foundations. In practice, however, labor is structured to avoid trying to encourage flourishing directly, so it seems relatively subjective.

⁵⁸ On English riparian common law, see Joshua Getzler, *A History of Water Rights at Common Law* esp. ch. 1 (2006). On American riparian law, see Richard A. Epstein, *Playing by Different Rules? Property Rights in Land and Water*, in Daniel H. Cole & Elinor Ostrom, *Property in Land and Other Resources* 317 (2012). On the labor-based origins of the Colorado doctrine, see Schorr 2012, pp. 25-31.

⁵⁹ 6 Colo. at 446.

Political communities are relatively competent at securing the most urgent and basic goods for human life—"Preservation," and particularly of "Life, Liberty, or Possession." Yet political communities are relatively *incompetent* at identifying or helping particular individuals obtain the particular excellences or need they're best-situated to acquire. Here, I'll refer to this low and solid understanding of flourishing as "self-preservation and improvement."

In this context, "labor" means intelligent and purposeful conduct aimed at pursuing and acquiring some rationally-defensible good to the laborer.⁶⁰ Labor is a justifiable activity because (and only insofar as) it contributes to "Subsistence and Comfort of ... Life," or "the best advantage of Life, and convenience."⁶¹ This activity generates a right because people deserve zones of non-interference in which to labor in pursuit of their own interests in self-preservation or -improvement.

Productive labor morality generates four principles applicable to property. Two principles state necessary conditions to have property, while two others mark off limitations that *non*-owners may cite to disregard or override property claims. The first necessary condition is a requirement of productive use. A person must actually labor on a resource—i.e., use it in a manner that makes some objective, non-trivial contribution to her self-preservation or -improvement. The second requirement is called here "claim-marking." Even if a laborer is using a resource productively, she must still adequately mark her claims to the resource she is using productively in order to perfect that claim. This requirement follows from the fact that the moral right to labor is a right claimed in a community. Since every member of the community is an equal to every other, each person's right to labor is "a right only to such freedom as is compatible with the equal freedom of others.... We may make property with our labor only in what is not already fairly taken as 'part of the labor' of another."⁶²

Even when a person perfects a claim to a moral property right over a resource, such a right is impliedly qualified by two limitations. One limitation is the necessity proviso. If a claimant faces a well-founded threat to his life (not created by any opportunism of his own), his needs take priority over the other claimant's use-interests—even if the other claimant has property in the resource.⁶³ The second limitation is the sufficiency limitation. Anyone who appropriates property does so on the ground that the resources she is appropriating are reasonably necessary for her to produce things contributing to her self-preservation or -improvement. Yet every person in a community has the same basic liberty to, interest in, and right to labor as anyone else. So the property "reasonably necessary" for one's own use needs to be limited, to respect the equal liberty interests every person has in using resources for self-preservation or -improvement.

⁶⁰ See A. John Simmons, *The Lockean Theory of Rights* 269-75 (1992).

⁶¹ Locke, 1st Tr. § 92, 2d Tr. § 26.

⁶² Simmons 1992, 275.

⁶³ Locke calls what I call the necessity proviso a "title" of "charity." 1st Tr. § 42.

B. Productive Labor and Distributive Justice

This portrait of labor-based morality differs slightly from the portrait David Schorr gives of Lockean morality in seminal Colorado sources. In Schorr's portrait, "water rules of the Colorado [authorities] ... had as their guiding principle *equality* (of opportunity, since only some claims would turn out to be valuable), modified by a guarantee of *sufficiency*."⁶⁴ Schorr describes this equal-opportunity principle as a tenet of distributive justice.

Schorr is right that a labor-based morality can be committed to equal opportunity and distributive justice—as long as those commitments are understood the right way. The main intended contribution of *The Colorado Doctrine* is to show—contrary to leading law and economic interpretations—that distributive justice concerns were significant factors contributing to the formation of the Colorado doctrine. (Here, I use "distributive justice" as Schorr does, as a class term for moral norms justifying the assignment or redistribution of ownable resources to effectuate a fair distribution across society.⁶⁵) In the well-worn distinction, previous law and economic accounts proved how water law changed as necessary to expand the social pie; Schorr means to show that the law changed as well to equalize the sizes of individual slices.

Some rights-based theories may accept that compartmentalization, whereby justice focuses (only) on fair distribution. But not all do.⁶⁶ Productive labor morality doesn't, either. The sufficiency limitation guarantees that individual citizens have equal spheres of opportunity to access and use goods for their own self-preservation. But the productive-use requirement frees and requires owners to deploy these spheres of opportunity productively, i.e., to produce life-satisfying goods.

As a result, many if not most of the authorities Schorr canvasses have not only a fair-distribution dimension but also a productivity dimension. Consider *Yunker*, which Schorr regards (rightly, in my view) as deserving pride of place equal to *Coffin*. Chief Justice Moses Hallett wrote the lead opinion in *Yunker*. A landowner had granted an oral right of way to build an irrigation ditch across his land, but his successor later claimed that the right of way was never conveyed validly because it didn't comport with the statute of frauds. Hallett ruled for the plaintiff seeking to vindicate the right of way, in part by relying on a statute Hallett read to authorize ditch easements, and in part by appealing to common law principles to say land owners deserved easements of necessity. To justify that latter argument, Hallett argued:

⁶⁴ Schorr 2012, 16.

⁶⁵ For a helpful survey how this specialization came into common usage, see Samuel Fleischacker, *A Short History of Distributive Justice* (2004).

⁶⁶ See, e.g., Jules Coleman, *The Grounds of Welfare*, 112 *Yale L.J.* 1511, 1543 (2002).

In a dry and thirsty land it is necessary to divert the waters of streams from their natural channels, in order to obtain the fruits of the soil, and this necessity is so universal and imperious that it claims recognition of the law. The value and usefulness of agricultural lands, in this territory, depend upon the supply of water for irrigation, and this can only be obtained by constructing artificial channels through which it may flow over adjacent lands.... In other lands, where the rain falls upon the just and the unjust, this necessity is unknown⁶⁷

When Schorr presents this passage, he accentuates its distributive implications: The Colorado doctrine focuses in large part “on the limitations the law imposed upon private property (in land), subordinating to the necessities of others.”⁶⁸ But the same passage has productivity-related implications as well. In both temperate and dry communities, the imperative of the law is to give all owners concurrent equal opportunities “to obtain the fruits of the soil.”—i.e., labor productively. In temperate communities, “where the rain falls upon the just and the unjust,” owners can labor productively without ditch easements; in dry ones, they can’t labor productively without ditch easements. Equal distribution and production are two complementary parts of a single moral imperative to facilitate labor.

C. On Public Commons, Accession, and Property Rights

As Hallett’s opinion illustrates, productive labor morality justifies and facilitates practical moral reasoning. That is why Hallett was comfortable assuming that the riparian rules that worked well “where the rain falls upon the just and the unjust” wouldn’t be just in a “dry and thirsty” community. And here, productive labor morality requires indirect consequentialist reasoning. Different hypothetical general rules of law may work with different degrees of success to create conditions in which a common resource is used as much as possible for equal self-preservation and –improvement.

This possibility is often overlooked. For example, when John Locke sets forth his defense of labor-based property rights, he illustrates labor with examples involving the picking of fruit and nuts, the hunting of animals, the improvement of land, and “tak[ing]” water “out of the hands of Nature” by extracting water from a fountain with a pitcher.⁶⁹ These examples illustrate powerfully why appropriative and consumptive activity is morally valuable. But readers sometimes assume that labor rights apply only to resources like the resources in the examples—i.e., unowned resources, capable of appropriation. Actually, natural law-based labor norms lay foundations helping clarify when and why resources should be open for private appropriation.

⁶⁷ 1 Colo. at 553.

⁶⁸ Schorr 2012, p. 56.

⁶⁹ Locke, 2d Tr. § 29.

Before labor-based reasoning generates private property rights for a resource, it needs to address two logically-prior issues. First, the resource can't be appropriated unless it's marked off as a resource subject to some form of private property—i.e., it can't be reserved for the public as a common resource, or marked off as a resource incapable of ownership by any individual or political community. For some resources, the resource may be used for the concurrent self-preservation of all more effectively if it's kept in common than if it's hived off into private ownership. Although Locke suggests that spring water is capable of private appropriation, he suggests that oceans constitute a "great and still remaining Common of Mankind."⁷⁰

The lessons Locke suggests with oceans could apply with equal force to rivers and other surface water courses. On one hand, water in such courses is capable of individual appropriation and use for self-preservation and -improvement; on the other hand, water courses support many common uses, such as navigation and fishing. A political community may and should institute rough classifications that distinguish when water is best used for private or common uses. Anglo-American law has used navigability as such a rough proxy for water courses,⁷¹ and to avoid complications I'll assume here that this proxy is defensible.

Second, the resource can't be appropriated if it doesn't count as an independent "resource" of its own. A. John Simmons puts it, when labor is understood as purposive activity producing self-preservation or -improvement, "our property runs only to the boundaries of our implemented projects (and not to just whatever we might envision): it is 'the spending [labour] upon our uses' that 'bounds' our property."⁷² Here is where entitlement-composition or accession principles apply. Locke alludes to these principles as well. At one point, he suggests that the person who encloses and improves land acquires property not only in the land but also in the "Cattle and Product" on the land.⁷³ Morally, if a community has a reasonable empirical basis for doing so, it's permissible to make agricultural plants and domestic livestock accessories to land.

These accession classifications can be made using broad classifications and indirect-consequentialist reasoning. As Part III suggested, "accession"-related issues arise whenever the owner of a *C* resource, a *D* resource, or both have credible claims also to own *E* as an accessory to *C* or *D*. This sorting of *C*s, *D*s, and *E*s can occur case-by-case, as it does in classic accession disputes involving chattels that have been converted and improved, or with categorical rules, as it does in accretion and avulsion disputes. Furthermore, the requirements of productive labor informs the indirect-consequentialist reasoning. Regulators developing broad rules must

⁷⁰ Locke, 2d Tr. § 30.

⁷¹ See Rose 1986, at 721-22; Joseph Sax, *The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention*, 68 Mich. L. Rev. 471 (1970).

⁷² Simmons 1992, 276 (quoting Locke, 2d Tr. § 51).

⁷³ Locke, 2d Tr. § 38.

ask which packages of property entitlements seem most likely to give all members of the political community the greatest concurrent opportunities to use resources for reasonable life-benefiting projects. This inquiry generates two subsidiary inquiries: How much different rules facilitate the concurrent uses of *C*'s, *D*'s, and *E*'s; and how much different possible thing-delineations and boundary rules will generate claim-marking problems.⁷⁴ Quite often, however, the latter issue (about claim-perception and –marking) folds back into the former (about productive use). People tend to perceive resources in “things” or “entities” that seem organized in manners likely to generate goods legitimately useful to human life.⁷⁵

D. Accession, Riparianism, and the Colorado Doctrine

This process of reasoning isn't always spelled out explicitly in legal sources. But it does clarify assumptions in the sources—especially the sorts of contrasts that Chief Justice Hallett made in *Yunker* about the differences between humid and arid climates.

In accession terms, there are at least three ways to classify the water in water courses. One is to make property in flowing surface water an accessory to property in the entirety of the water course. To an extent, existing property law pursues this strategy, by preventing people from appropriating water from a water course to such a degree that they interfere with the course's navigability. The second and third strategies are to make the surface water an accessory to adjacent riparian land, or to make the water its own separate resource. These alternatives are the alternatives posed by the choice between riparianism and the Colorado doctrine.

Labor-theoretic reasoning helps constrain the choice between these two alternatives. Again, such reasoning focuses on the ways in which a resource can be used productively, and the degree to which the resource can effectively be marked or bounded as its own resource. The latter consideration creates a rough starting presumption: There shouldn't be any separate property in running surface water. Water is a fugitive resource (i.e., it moves in response to gravity), it doesn't have self-defining boundaries, and both constraints make it hard to perceive any quantity of water as a discrete “thing.” To be clear, these qualities don't require a conclusion that water be incapable of private appropriation. But they do create some sort of presumption that water not be reduced to private property except when captured consistent with pre-conventional understandings of capture.

As for general productive use, distinctions between humidity and aridity provide a quick, dirty, but effective way to settle accession issues at a “rule”-consequentialist level of practical reasoning. Assume that water rights could be accessories to land or separate things. There are possible error costs in both

⁷⁴ See Claeys 2013, 29-31; Newman 2011, 270-72.

⁷⁵ Newman 2011, 271.

directions.⁷⁶ If river water isn't separate, it's harder to appropriate on its own, and less water might be harvested. Yet if river water isn't a separate object of property, water prospectors may reasonably claim that that all lots of land near rivers needed to be servient to implied easements to acquire water. Those easements create the threats to secure control over land. The use of the water might matter more than the interference with the secure control over land. But that tradeoff is a serious tradeoff to consider.

This contrast explains why, in *Yunker*, Hallett thought land owners' rights varied in relation to ditch easements depending on whether the climate was arid or humid. The implied easement forces a choice that can be explained well using Henry Smith's contrast between "exclusion" and "governance" strategies for property rights.⁷⁷ To labor productively on land, owners need freedom from outside interference and clear property rights, but they also need a secure supply of water. The first two needs (security, and clarity) create a presumption in favor of exclusive control over land and against implied appropriative easements. In temperate communities, "where the rain falls upon the just and the unjust," that presumption isn't overridden, because rain supplies most or all of the water necessary for agriculture and other beneficial uses of land. Land owners stand to suffer more interferences from water prospectors than they stand to gain labor by having a right to prospect for water for themselves.

But this judgment is contingent on land's being capable of supporting a wide range of uses. That judgment is satisfied in humid communities but not in arid communities. In the latter, the most basic, preservation-related uses of land are difficult without significant labor to capture water and direct it to arable land. Even if labor-based morality generally avoids recognizing priorities between different uses of property, it does make exception for uses especially central to basic human self-preservation. Aridity triggers the sorts of conditions where necessity-based needs can take priority. Then, governance looks attractive. Even though ditch easements threaten to diminish every land owner's free control over land, they give every land owner the possibility of and means to acquire water to produce life conveniences on the land.

Now, *Yunker* itself didn't establish that appropriative rights are separate from land rights; it only held that possessory interests in land are servient to ditch easements, which the deciding judges called easements of necessity. But it applied a broad normative principle: water is so urgently needed for human preservation that the needs justify contracting the exclusive possession and managerial control normally associated with land. And that normative principle applies not only to the relation between a water-pro prospector and a land owner but also to the relation

⁷⁶ See Claeys 2013, at 41-42.

⁷⁷ See Smith 2002; see also Henry E. Smith, *Governing Water: The Semicommons of Fluid Property Rights*, 50 *Ariz. L. Rev.* 445 (2007).

between the flow in a water course and the water course itself. This is the transition confirmed in *Coffin*. There, the Colorado Supreme Court used the same arguments about aridity to conclude that "[w]ater in the various streams ... acquires a value unknown in moister climates." And this conclusion justifies a further conclusion, that "[i]nstead of being a mere incident to the soil, [river water] rises, when appropriated, to the dignity of a distinct usufructuary estate, or right of property."⁷⁸

To be clear, the judgments made in *Yunker*, *Coffin*, and similar cases are all implicitly contingent. The labor-based morality relied on creates a normative structure. That structure justifies broad indirect-consequentialist judgments. Specifically, it permits judges to make across-the-board comparative forecasts, about the ways in which (on one hand) riparian rights and (on the other hand) appropriative rights packaged with ditch easements seem likely to facilitate *and* impede the beneficial uses of land and surface water. But those comparative forecasts are implicitly empirical, on reliable information about how different packages of property rights facilitate and/or impede the uses of land and water. So in seminal riparian cases, and then again in *Yunker* and *Coffin*, judges may have made bad forecasts about the effects of different regimes on the uses of land or water. But these are the sorts of empirical issues raised by the choice whether to make land rights dominant and surface-water rights subsidiary or the other way around. The empirical and accession-related issues don't go away even when relevant empirical information is unavailable.

E. The Duration of Appropriative Rights in the Colorado Doctrine

The last section explained the accession principles that sever appropriative rights from riparian land, and the principles limiting possessory interests in land by ditch easements. Similar principles explain why water prospectors acquire property not only in the water that they capture but also in the usufruct, the expectancy of regular future acquisition.

Neither labor theory or property policy justifies having property rights of any single duration. The snow-dibs regime illustrates the point effectively. Ordinarily, car owners "keep" spaces only as long as their cars occupy them, in blizzards, dibs-claimers "keep" the spaces as long as the snow hasn't melted, and the difference is attributable to the amount labor it takes to clear a usable space in ordinary and wintry conditions.

A similar principle explains differences between appropriative usufructs and the more traditional capture norms seen for oil, gas, and wildlife. The same accession-based indirect-consequentialist reasoning applies. As a starting, presumptive matter, capture rules make sense and the usufruct doesn't. Barrels

⁷⁸ *Coffin*, 6 Colo. at 446.

and nets mark claims to (respectively) oil and wildlife far more clearly than do estimates of diversion and beneficial use.

Here, too, however, the starting presumption may be overridden. To get fresh water for productive use, it has to be acquired, and to be acquired, property may and should give prospectors the right incentives to acquire it. The incentives may be matched to the likely returns on prospecting. Here as in the last section, questions about legal rights, the incentives they create to gather useful products, and returns on investment are partially and implicitly empirical. In *Coffin* and similar cases, appropriative-rights courts probably made a rough judgment in the absence of complete and relevant empirical information: Water courses differ from oil reserves and wildlife stocks. Water courses replenish themselves (or, do so far faster than) reserves of oil or stocks of wildlife. For non-replenishable resources, it makes sound sense to make scale property rights to what's actually captured. If an oil prospector builds a rig capable of extracting oil for 20 years when the reserves only have 10, the extra investment into longer-lasting rigs count not as labor but as wasted effort. If fresh water replenishes regularly, however, similar investment into longer-lasting pumps and canals counts as labor.

V. Economic Justifications for Riparianism and the Colorado Doctrine

There are profound differences between rights-based accounts of law (like the labor-based one evident in *Yunker* and *Coffin*) and economic accounts of law. Among other things, is a legal system's main function to incentivize legal subjects to behave consistent with certain desired goals, or to order behavior with legitimate authority, claimed and demonstrating by laws' contributing to the well-being of the citizens bound?⁷⁹ For our purposes here, though, we can overlook these differences and focus on one set of similarities. Many prominent economic accounts of property justify the system as an indirect-consequentialist tool, using an open-texture system of decision making. As currently understood, the economic justifications for property most relevant to riparianism and the Colorado doctrine don't account quite rightly for the accession issues analyzed here. But all of them can be qualified or limited to accommodate these issues.

A. Economic Accounts of the Evolution of Property Rights

Three accounts of property rights are better and more salient than others. The first is Demsetz's *Toward a Theory of Property Rights*. As I've suggested by referring to a "Demsetzian view" toward property, it's tricky to say what this article's exact claim about property rights is. At a high level of generality, Demsetz's thesis is quite broad, and possibly indeterminate: property rights vary "with the emergence of new or different beneficial and harmful effects."⁸⁰ This general thesis is commonly understood to be narrower, and more determinate, as a

⁷⁹ See Coleman 2002, 1542-43.

⁸⁰ Demsetz 1967, 350.

thesis that "property" operates as a one-way ratchet in which public commons or open-access regimes transition to private property as resources become scarcer and more valuable.⁸¹ The former view is probably Demsetz's own view; the latter may not be Demsetz's own view, but it's influential in economic scholarship on property. And it has considerable support in *Toward a Theory of Property Rights*, because the case Demsetz chose to confirm his general thesis compared native American tribal property regimes toward fur-bearing animals and their habitat land. Tribes with less-valuable animals had common regimes; where animals were more valuable tribes switched to private-property regimes.⁸²

Riparian accession policy doesn't undermine Demsetz's argument, but it does qualify the argument somewhat. How and how much depends on how one understands Demsetz's "argument." If Demsetz's argument is limited to commons-to-private-property transitions, the argument is underinclusive. If the argument is broader, however, there are two upshots. The transition most commonly associated with Demsetz's thesis isn't the only major transition confirming his thesis, and the thesis shouldn't be understood exclusively in relation to the commons-to-private-property transition.

In commons-to-private-property transitions, there are low administrative costs to manage a commons system or an open-access system. When the resource becomes extremely scarce, the (positive) externalities from encouraging investment into, conservation of, and management of the resource justify the (negative) externalities from administering private property. In this fact pattern, it's assumed that the only viable way to keep low the administrative costs of private property is to avoid those costs, by keeping the resource in a commons or subject to open access. The choice between riparianism and the Colorado doctrine confounds this assumption. There is another way to keep the costs of administering a resource low: make the low-value resource a legal accessory to a proximate and high-value resource. That way, the costs of administering the low-value resource are subsumed into the costs of managing the resource making private property worth the trouble. In the arid West, the positive externalities of irrigation projects justified separate property in appropriative rights; back in the riparian East, those externalities didn't exist—but the solution is not to make riparian water a commons or an open-access resource but rather an accessory to riparian land.

B. Commons, Private Property, and Accession

Demsetzian accounts of the shift from common property to private property have already been criticized—specifically using water rights as an illustration.⁸³ The *locus classicus* on this topic is Carol Rose's *Energy and Efficiency in the Realignment of Common-Law Water Rights*. Rose challenges the suggestion that

⁸¹ See, e.g., Tregarthen 1983; Anderson & Hill 1975, 176-78.

⁸² See Demsetz 1967, 351-53.

⁸³ See, e.g., Smith 2007, 450-58.

Demsetz's justification for property rights operates as a one-way ratchet from common property to private property. The Demsetzian account, Rose argues, doesn't consider duly whether a resource may have concurrent private and public-good uses. In the arid West water is used overwhelmingly for consumptive uses, in the temperate East it's used for concurrent consumptive and non-consumptive uses, and the overlapping needs in the East justify riparianism as a mixed strategy.⁸⁴

Like Rose's account, the accession-based account provided here highlights limits on Demsetzian explanations of property. But the two accounts focus on different institutional imperatives. Rose's account focuses on how property law and policy accommodate public uses of water in stream. As a matter of general policy, those imperatives are certainly relevant to water law, but they're not the only relevant policy considerations. And doctrinally, public-good considerations seem directly relevant not to the structure of private property in water and land but to public limitations on both—like the public trust. And western and eastern water law don't differ significantly in relation to the public trust; in the West as in the East water can't be diverted when it threatens to interfere with navigation and other uses of water.⁸⁵

Accession-related policies provide an overlapping justification in policy and a closer fit in doctrine. As cases like *Yunker* and *Coffin* emphasized, two other major factors contributing to the Colorado doctrine were these: Fresh water is scarcer in arid communities than temperate ones, and surface water courses supply a greater share of the fresh water available in arid communities than in temperate ones. These factors justify strengthening property rights in the technology that collects and delivers appropriated water, even when such property rights conflict with or diminish the scopes of property rights in more traditional resources such as land. In doctrine, these factors relate directly to law and policy about entitlement composition—or accession.

C. Economic Accounts of Accession

Merrill's account of accession provides another corrective to Demsetz's account of property evolution along with Rose's.⁸⁶ But the choice between riparianism and the Colorado doctrine challenges Merrill's account of accession in two important respects. To begin with, surface water confounds Merrill's conceptual portrait of accession, as an important alternative to first possession.⁸⁷ Rather, "accession" refers to a meta-choice, how to scale legal property rights and the legal status of an ownable "thing" to all the resources that might be primary objects of ownership or incidents of ownership of other objects. First possession is

⁸⁴ Rose 1990, 290-94.

⁸⁵ See, e.g., *United States v. Rio Grande Dam & Irrigation Co.*, 174 U.S. 690, 699-703 (1899).

⁸⁶ See Merrill 2010, 493.

⁸⁷ See, e.g., *id.* at 462.

an alternative to accession only if there's been a logically-prior determination that the thing to be possessed is a thing separate from other resources.

The case studies recounted in section III.D (about airspace and parking spaces) already confound Merrill's portrait; surface-water rights provide further confirmation. For example, Merrill argues: "If we start with a condition in which most resources are unowned, then arguably the first stage in establishing ownership will be dominated by first possession, and only after significant ownership has been established can we switch, in a second stage, to something like accession."⁸⁸ Practically, it's more accurate to say that commons, separate property, and accession reflect three different strategies, each makes sense in different parameters, and there's no necessary reason why resources have to be assigned first through separate property and first possession and later by accession. In the case of aerial trespass, accessory property in air was limited, and air's common features expanded, in response to air travel. Parking spaces are treated as common resources, but they can become separate property in blizzards and they can be accessory property in high-rent districts. The choice between riparianism and the Colorado doctrine reflects a third pathway—from accession to separate property. This pathway runs in the direction opposite from the direction Merrill suggests.

This conceptual problem tracks an economic problem. Because Merrill doesn't conceive of accession as a principle tied up with the problem of entitlement-composition, he may not state the limitations on accession as forcefully as they deserve to be stated. Merrill argues that accession is more efficient than first possession when property rights are already thick, that it diminishes the information costs associated with property, and that it steers resources to owners likely to be better managers of the resources.⁸⁹ These claims are generally true—as long as one keeps in mind that they can all be refuted.

Here, the choice between riparianism and the Colorado doctrine illustrates well. In the riparian East, property rights were thick enough in relation to land. Property rights may not have been clear over publicly-owned land in the territorial west. But they *were* clear in relation to privately-owned land—territorial acts made (English and eastern American) common law binding. Authorities abandoned riparianism not because its rights weren't thick but rather because it restricted opportunities to prospect for and appropriate fresh water in a regular way. Next, accession certainly does sense as a strategy to minimize information costs and to steer resources to good managers. But the strategy deserves to be overridden when the gains from recognizing a new form of property override those information costs. In the arid West, the gains from creating regular expectancies in fresh water outweighed two sets of costs—the costs of blurring boundaries in land near water courses, and the costs of administering a system of water law measuring diversions

⁸⁸ Id. at 474.

⁸⁹ See, e.g., id. at 504.

and beneficial uses. And when the water is valuable in its own right, one can't presume any more that the owner of riparian land is a good steward of the water simply by virtue of being a good steward of the land.

VI. Conceptual Implications of Accession in Water Law

Thus far, I hope to have made good on my first two goals—to clarify an important issue previously overlooked in law and scholarship on the emergence of *Yunker* and *Coffin*, and to clarify the scholarship on accession and entitlement-composition most relevant to water rights. Yet water law scholars may still ask: Is there any *practical* reason to be interested in these lessons? In this Part I hope to answer that question (and make good on my last goal).

First of all, I reject the premises of the "Is there any practical reason?" question. The question suggests that a scholarly theory or method doesn't make a meaningful contribution unless it can supply a determinate normative prescription about a specific problem—say, whether common law riparianism, the Colorado doctrine, or some modern regulatory approach is the best possible regime for contemporary water policy. Sometimes, however, a legal insight doesn't make a deep and narrow difference; instead, it suggests broad and shallow differences. Instead of saying that one specific policy outcome is mandated, it suggests that that one category of possible results, or one class of arguments common to a field, beg questions previously overlooked.

So my first lesson here is a friendly warning, about the use and abuse of property-talk in legal argument and scholarship about water rights. All of the views about property recounted in Part III assume a certain relation between "property" and a specific kind of property right. These views, however, assume a mistaken understanding of "property" as a concept and a normative structure in law. The last Part should have made clear what is problematic in what I've been calling the "Demsetzian" view of property. In that view, the paradigm case for property is a right of exclusive control. As Rose's work shows, however—in economic terms—a property system leaves room not only for rights of exclusive control but also for context-dependent use-based rights and also public commonses as well. So although the Demsetzian view describes one property transition—and a common and important one at that—it creates a mistaken impression that rights of exclusive control are somehow more normal, inevitable, or desirable than other property arrangements.

The reasonable-use view suffers from a similar problem. Like the Demsetzian view, this view makes a normative argument by reasoning from a paradigm—the right of exclusive control for the former, and reasonable-use nuisance or riparian norms for the latter. Again, however, there's good reason to doubt that "property" creates any single paradigm case. Capture rules—and fairly exclusive rights over the use of surface water--prevail in the Colorado doctrine

because flowing surface water (in economic terms) is the main supplier of an extremely scarce resource or (in moral terms) creates unusually strong moral rights of access. Reasonable-use norms prevail in riparianism because rain, groundwater, and other sources of fresh water change the background. In economic terms, there's less need to incentivize the search for surface water (and to burden rights of land); in moral terms, nonriparians have weaker moral claims on access to surface water. Either way, it's better to restrict access to water courses, keep rights over the control of land unencumbered by ditch easements, and facilitate the use of water courses as closed commons. Like the Demsetzian view, then, the reasonable-use view creates a mistaken impression that rights of exclusive control are somehow more normal, inevitable, or desirable than other property arrangements. In reality, accession-related norms are more fundamental than exclusive-rights *or* reasonable-use norms, in the sense that the former explain when and why the latter are appropriate in different situations.

These insights also take most of the sting out of the charge made by Dellapenna, that the Colorado doctrine is a vigilante doctrine. Riparianism constituted a black-letter system appropriate for a community in which river water contributed only to a minor degree to the supply of fresh water available for all citizens' life needs. Assume that members of a community agree that the "property" in river water consists mainly not in any black-letter rule but rather in a system giving all citizens the right balances of individual and community opportunities to use river water for life-benefitting needs. If so, mining communities and early Western communities could reasonably believe that they were being more faithful to the core of property law by instituting a custom-based system of appropriation than by following an inapposite system of riparianism. In this light, it was just as legitimate for western settlers to switch to the Colorado doctrine as it is now for Chicagoans to institute dibs-respecting customs during blizzards. And this sort of switch isn't necessarily illegitimate vigilantism because it develops in informal customs before it becomes recognized in law. As Sonia Katyal and Eduardo Peñalver have shown, property law tolerates a little outlawry, to make sure that old property institutions adapt to new demands.⁹⁰

The property-limits view suffers from a similar criticism, though to a lesser extent. Again, Bates and her authors portray the Colorado doctrine primarily as a rule of capture "separated ... from its historical property moorings." Because a capture-based rule is so individualistic, they believe, it obscures and delegitimizes the "substantial inherent public claims on water."⁹¹ The portrait offered in the last two parts actually recognizes the concerns of Bates et al. to a substantial extent. If the concern is that the institution "property" is too exclusive or individualistic, they needn't be concerned. With surface water, parking spaces, and air, property has

⁹⁰ See Eduardo Peñalver & Sonia Katyal, *Property Outlaws: How Squatters, Protesters, and Pirates Improve the Law of Ownership* (2010).

⁹¹ Bates et al. 1993, 150, 147, 149.

shown itself quite capable of recognizing competing individual and community claims on property. To the extent the charge is that the Colorado doctrine is a rigid rule of capture, however, the charge portrays the Colorado doctrine in an inaccurate and unhelpful light. It is fairer (and it makes the Colorado doctrine seem less extreme) to say that the doctrine consists of a rule of capture *when* and *because* hydrology, climate, economics, and other salient contextual factors make capture appropriate.

At the same time, even if property norms aren't as monotonic as Bates and her co-authors suggest, the co-authors raise valid questions. This Article has shown that concept "property" isn't as narrow and pro-capture and -exclusion as they suggest. It has shown that the concept "property" is capable of justifying commons, separate-property, and accessory-property strategies concurrently for surface water. But this Article hasn't yet shown that the open-texture system described is capable of dealing with all the problems that trouble Bates and her co-authors. In part, those scholars are concerned in part about overextraction and consumption of surface water. Property law definitely generates capture rules, it seems capable of generating limits on such rules (as one can see from "correlative rights" case law over oil and gas⁹²), but it remains to be seen whether and how effectively correlative-rights concepts can deal with the problems that trouble the co-authors. In part, those co-authors are also concerned about the bad consequences that water-supplying watersheds suffer after a transbasin diversion.⁹³ Property law generates both use rights and nuisance-based limits on the exercise of those rights—but it remains to be seen whether and how effectively nuisance principles can deal with those adverse effects. Here, my main point is this: Property isn't as extreme as Bates and her co-authors suggest, by portraying "property" as a capture regime that applies to any the normative or empirical context.

VII. Policy-Related Implications of Accession

A. Comparative International Water Law

Yet this Article also suggests other, more "practical" lessons. The insights about accession raised here don't settle every aspect of any specific issue about water law. Any comprehensive understanding of property must consider at least six different dimensions of property, and accession-related issues deal primarily with two of them—the interface between private property and public commons, and the scales or compositions of private-property rights in relation to all the resources that could be owned.⁹⁴ Even so, these dimensions are basic and fundamental; any

⁹² See, e.g., *Elliff v. Texon Drilling*, 210 S.W.2d 558 (Tex. 1948).

⁹³ See Bates et al. 1993, 139-42.

⁹⁴ The six dimensions cover: the relation between private and public resources; the scope of legal rights over private resources; the acquisition of private resources; the duration of rights in resources;

system of property that gets these wrong will probably not succeed in other respects. So readers may care to look over contemporary water systems looking for mismatches between accession policies and contemporary water regulatory regimes.

Two sets of mismatches seem likely. One set seems likely to arise in other countries, particularly arid or semi-arid countries.⁹⁵ Many countries in the developing world used to be European colonies. English and continental water-law systems resemble American riparianism far more closely than they do the Colorado doctrine. Some arid countries may design their water rights with riparian principles when appropriative principles may be more appropriate.

For example, Middle Eastern countries build current water-regulatory systems on top of foundations set by the *Mejelle*, the legal authority of the Ottoman Empire. As David Schorr explains, the *Mejelle* "was not really a code in the sense of a systematic treatment of civil law topics with rules derived from general principles" but "rather, a compendium of rules and examples taken from authoritative Islamic (Hanafi) legal sources, not necessarily harmonized or made internally consistent" or "coherent."⁹⁶ Similar to Colorado's constitution, the section on water law (really, the section on jointly-owned resources) declares water a free resource over which the public are joint owners. Subsequent sections entitle prospectors to the water they capture. But prospectors are entitled *only* to the water they catch, i.e. they can't preclude other prospectors from diverting water from the same course for their own uses.⁹⁷ Middle Eastern legal scholars may care to study whether the *Mejelle* can be interpreted to legitimize principles of prior appropriation. Or, if not, whether Middle Eastern water rules based on the *Mejelle* might helpfully be reformed with appropriation principles.

The same possibility applies to semi-arid South Africa. Early in South Africa's history as a colony, Dutch colonists introduced Roman-Dutch natural law principles stressing water's public nature and an administrative system, in which water use-licenses could be claimed by riparians *and* nonriparians. In 1806, however, the British took possession of the Cape of Good Hope. Gradually, British legal sources started to percolate into the South African system and replace local sources.⁹⁸

the way in which rights coordinate the use of and exclusive control in relation to those resources; and the alienation of resources.

⁹⁵ I thank Reed Watson for encouraging me to discuss the topics raised in this section.

⁹⁶ David Schorr, *Water Law in British-ruled Palestine*, SSRN draft April 3, 2014, p. 3, <http://ssrn.com/abstract=2419974>.

⁹⁷ *Mejelle*, book X, ch. v, sec. 4, arts. 1234, 1249-51, 1254-55 1262-65, in C.A. Hooper trans., *The Civil Law of Palestine and Trans-Jordan* pp. 321-27. (1913). See Schorr draft 2014, pp. 3-4; Richard Laster & Dan Livney, *Israel: The Evolution of Water Law and Policy*, in Joseph W. Dellapenna & Joyeeta Gupta eds., *The Evolution of the Law and Politics of Water* (2009), p. 121, 122.

⁹⁸ Michael Kidd, *South Africa: The Development of Water Law*, in Dellapenna & Gupta eds. 2009, 87, 88.

Over the course of the nineteenth century, South African courts started to replace prior authorities with riparian authorities from the United States. In an 1856 decision, *Retief v. Louw*, one of the two judges argued that there was a dearth of authority in South Africa on water law and concluded it was appropriate to consult persuasive authorities—particularly, Angell’s *Treatise on the Law of Watercourses*, a major nineteenth-century U.S. treatise on riparianism. The position taken by this judge gradually came to be endorsed in South African common law, especially in an 1874 decision.⁹⁹ As one commentator put it, looking back, “[i]t should have been obvious to the Courts that this position could not be tolerated in a country such as this where water is one of the scarcest and therefore one of the most valuable of our natural resources, and that the principles of the Roman Law were eminently better suited to South African conditions than was the doctrine of riparian rights.”¹⁰⁰ The commentator, however, doesn’t consider a separate possibility: In an arid jurisdiction like South Africa, the general policies fundamental to Roman law on water *and* riparianism might justify an appropriative regime instead.

South African water law is now regulated legislatively and administratively, primarily by the National Water Act 36 of 1998, with a combination of riparian rights limited by new regulatory goals. Since South Africa is semi-arid, old riparian rights and new regulated rights both seem inapposite. That mismatch doesn’t make vested riparian rights legally invalid. But to the extent that these rights have legal ambiguities, the mismatch justifies giving regulators more discretion than they might otherwise have to narrow the vested rights and free water for other uses.

B. American Regulated Riparianism

The second possible practical implication is this: Communities that institute riparian rights early may consider redesigning water rights later, to sever the accession connection riparianism establishes between riparian land and riparian rights. This is a possibility now worth considering in the eastern, riparian United States.

To be clear, when I say that it’s “worth considering” whether riparianism should be revised, I don’t mean to take a conclusive position here on whether riparianism does need to be revised. Accession makes sense when two resources are proximate and one has far less significant use value than the other. There is greater demand for fresh water now than there has ever been in the American east. That increased demand creates some justification for severing the accessory connection between riparian land and water. Whether the increased demand

⁹⁹ J.C. De Wet, Hundred Years of Water Law, 1959 Acta Juridica 31, 31-32 (discussing *Hough v. Van der Merwe*, 1874 Buch. 148; *Retief v. Louw*, 1874 Buch. 165 (1856)).

¹⁰⁰ De Wet 1959.

actually tips the scale for separate water rights raises empirical, normative, and institutional issues beyond the scope of this Article.¹⁰¹

To illustrate, let me recount some of the empirical claims made in contemporary water law scholarship. As of 1978, the U.S. Water Resources Council estimated that the eastern United States enjoyed a natural freshwater flow of more than 350 billion gallons per day.¹⁰² For a decade thereafter, water scholars recognized that, "[u]nder any supply standard, water [was] a plentiful resource in the Eastern United States" given conditions prevailing then or for a few decades afterward, and that "[p]recipitation is sufficient to sustain most farming without irrigation."¹⁰³ When water law scholars warn against eastern scarcity, they don't suggest there's scarcity in the sense in the American West or the Middle East. Instead, they warn (1) that in-stream water uses render most (e.g., 75% or more) of eastern surface water unavailable for off-stream uses, (2) that climate change will shrink existing supplies of fresh water, and (3) as result of shrinking water supplies existing water users will compete more intensely for existing water.¹⁰⁴ These arguments make a case that fresh water will be scarce in the eastern U.S., but they don't make a case that's clear beyond reasonable argument. Given the state of the empirical evidence, it's equally reasonable for dissenting scholars to insist that "the need for a new law of private eastern water rights [remains] only an untested hypothesis."¹⁰⁵

Assume, however, that water is or soon will be scarce in the American east. Legislators and judges would need to ask in what sense it is scarce, and how scarce. The Colorado doctrine is designed for communities in which fresh water is extremely scarce, to the point that fresh water isn't available for preservation-related human uses without creating canal systems. No one involved in current debates about riparianism is saying that fresh water is that scarce. As a result, it seems misguided to suggest that the Colorado doctrine be applied wholesale to the East¹⁰⁶--as was tried (temporarily, for a generation) in Mississippi¹⁰⁷ and is now instituted (partially) in South Carolina.¹⁰⁸

¹⁰¹ I thank Erin Ryan in particular for encouraging me to discuss the issues raised in this section.

¹⁰² See U.S. Water Resources Council Second National Water Assessment v. 1, p. 54 (1978).

¹⁰³ Robert H. Abrams, Charting the Course of Riparianism: An Instrumentalist Theory of Change, 35 Wayne L. Rev. 1381, 1406 (1989).

¹⁰⁴ See id. at 1405-30; Dellapenna 2002, 9-11.

¹⁰⁵ A. Dan Tarlock, Introduction, 24 Wm. & Mary L. Rev. 535, 538 (1983).

¹⁰⁶ Accord Tarlock 1983, 535-38.

¹⁰⁷ Dellapenna 2002, at 29-31; see also William Champion, Prior Appropriation in Mississippi—A Statutory Analysis, 39 Miss. L.J. 1 (1967).

¹⁰⁸ S. Car. Stat. §§ 49-4-20(25) (definition of "registered surface water withdrawer"), -25 (requiring permits), -35 (allowing only registrations for registered withdrawers), -80(B)(2) (listing criteria for permit reasonability, specifically including the effect on existing water course users). When I say that the South Carolina scheme is "partial," I mean the term in two senses. The scheme is partial in that it recognizes appropriation rights for existing users and requires permitting for new users; it is also partial to agricultural users because the registration system is structured such that agricultural

If fresh water is getting “scarcer” in the American east, then, scarcity signifies that demand for fresh water is increasing for a wide range of improvement-related uses. This sort of scarcity wouldn’t justify the hardest-edged features of the Colorado doctrine, meaning in particular its rules making land interests subservient to ditch easements. But this sort of scarcity would make it more legitimate to import the other two major features of the Colorado doctrine—separating water rights from land rights, and making the water rights last as long as the beneficial use of the water.¹⁰⁹

There is an imperfect tool for implementing such changes—“regulated riparianism.” Over the last two generations, eastern states have supplemented common law riparianism with administrative regulation, which centers on a permit system. Although eastern state permit systems vary widely in their details, “regulated riparianism” is a catch-all descriptive term covering this shift to a permitting model. Regulated riparianism assumes that riparian rights exist by common law authority without any administrative confirmation; the contribution of regulation is to overlay a permitting system on top of those common law rights. By definition, regulated riparian systems require prospective users to get permits to extract and use surface water; states vary widely in the requirements they impose for permits. Some systems merely require users to register and document their uses, others require users to apply for and get a license to use water as a requisite to such use, and still others use the registration approach for low-volume uses and the licensing approach for high-volume uses. Some systems use registration generally but then require licensing for “surface management areas,” basins with considerable pressure on water resources. When they make permitting rules preconditions of water use, different states condition permits on different factors, including but not limited to: need, the reasonability of the use, the connection of the use to public interests, the duration of the use and permit, and rationing provisos for shortages.¹¹⁰

If fresh water is scarce enough in the American east to justify separate-property treatment, some features of regulated riparianism could help facilitate the change, and other features seem likely to frustrate it. Here is the facilitating

uses are automatically grandfathered and exempted from permitting requirements. I am grateful to Josh Eagle for bringing the South Carolina scheme to my attention.

¹⁰⁹ Accord George A. Gould, *A Westerner Looks at Eastern Water Law: Reconsideration of Prior Appropriation in the East*, 25 U. Arkansas Little Rock L. Rev. 89 (2002).

¹¹⁰ See, e.g., Tarlock et al 2014, 109-10; *The Regulated Riparian Model Water Code: Final Report of the Water Laws Committee of the Water Resources Planning and Management Division of the American Society of Civil Engineers* (Joseph W. Dellapenna ed., 1997); Joseph W. Dellapenna, *Regulated Riparianism*, in *Waters and Water Rights* 2010, v. 1, ch. 9; Joseph W. Dellapenna, *Adapting Riparian Rights to the Twenty-First Century*, 106 W. Va. L. Rev. 539, 583-93 (2004); Gould 2002, 93-94; Robert E. Beck, *The Regulated Riparian Model Water Code: Blueprint for Twenty First Century Water Management*, 25 Wm. & Mary Envtl. L. & Pol’y Rev. 113, 118-25 (2000).

feature: Many if not most riparian state permitting systems entitle non-riparians to apply for permits to extract and use water, with legal rights of status equal to those of riparians.¹¹¹ By entitling nonriparians to seek permits, regulated riparianism undermines the principle that ownership of riparian rights is restricted to owners of riparian land.

Yet it's not clear that regulated riparianism creates "property" rights in the permits it recognizes in riparian water. If fresh water is scarce enough to warrant separate property, that judgment reflects an imperative: Rights to the use of fresh water are valuable enough that they should be managed independently of land, with entitlements that encourage prospectors to invest in technology to extract fresh water and connect it to its highest-value uses. Property rights can't supply these incentives unless their guarantees are fairly clear and secure. As currently practiced, regulated riparianism doesn't supply guarantees this clear or secure. Many of the conditions that regulated-riparianism statutes—especially limits on the reasonability of uses and duration limits—undermine that clarity and security.

In short, there isn't sufficient empirical evidence to say whether fresh water is scarce enough to warrant the separation of riparian rights and riparian land rights. If readers believe that fresh water is scarce enough, the regulated-riparianism framework provides a legal vehicle to separate the water rights—by entitling non-riparians to apply to use riparian water. But the same judgments that support separating water rights from land rights would also require the permitting system to be revised, to make permits convey stronger security than they do now.

Conclusion

Water law and scholarship hinge on important assumptions about how rights to the use of surface water relate to property in land. I hope this Article has identified and clarified those assumptions—using property concepts associated with accession. Conversely, water law provides an extremely important staging ground for property-based principles about accession and entitlement-composition. I hope this Article has clarified the meaning and limits of accession, using water law examples. By understanding the role that accession law and policy play in water law, water scholars can appreciate better that "property" principles make water law an open-texture network, and not a rigid structure requiring appropriationism or riparianism.

¹¹¹ Dellapenna 2010, § 9.03(a)(2).