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The Public Trust Doctrine, Property, and Society

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Abstract

The public trust doctrine creates a set of sovereign rights and responsibilities with regard to certain resource commons, obligating the state to manage them in trust for the public. In the last century, the doctrine has gradually transformed from an affirmation of sovereign authority over trust resources to a recognition of sovereign responsibility to protect them for present and future generations. Especially in the United States, it has evolved through common, constititional, and statutory law to protect a broader variety of resources and associated values, including ecological, recreational, and scenic values. Today, the doctrine is frequently invoked in natural resource conflicts, some defending environmental regulations against constitutional takings claims, and some of which push the boundaries of previously recognized trust values, such as recent appeals to public trust principles in support of meaningful climate governance.

After reviewing the origins of the public trust in early Roman and English law, this chapter explores its development in US law to protect different values, applied to different resources, and vindicated by different legal mechanisms in different states. It reviews the two most famous American public trust cases over a hundred year span, the U.S. Supreme Court's 1892 decision in *Illinois Central Railroad v Illinois* and the California Supreme Court's 1983 *Audubon Society* decision at Mono Lake, and then explores the incorporation of the doctrine in different state constitutions. It considers the expanding role of the doctrine as a defence to constitutional takings claims and considers whether it should be understood as a constraint on all sovereign authority, including federal authority, and the significance for climate-related public trust advocacy. It concludes with reflections on the ongoing development of public trust principles and contrasting environmental rights internationally.

Keywords: Public trust doctrine, natural resource commons, navigable waters, submerged lands, Justinian, Magna Carta, Forest Law, *Illinois Central vs. IL*, Mono Lake, *Audubon Society v Superior Court*, *Juliana v US*, constitutional takings, environmental law, atmospheric trust, California public trust, Pennsylvania Environmental Rights Amendment, Hawaiian constitutional trust, climate governance, environmental rights

Introduction

This chapter[1] explores the development of public trust principles from early Roman and English law through modern US law as a public commons approach to natural resource management. The public trust doctrine creates a set of public rights and responsibilities with regard to certain natural resource commons, obligating the state to manage them in trust for the public. It is thought to be among the oldest doctrines of the common law, with roots extending as far back as ancient Rome and early Britain, where it primarily protected public values of navigation, fisheries, and commerce associated with waterways. Over these hundreds and even thousands of years, the common law came to recognise that some resources, such as navigable waters, are so critical that they cannot be owned by anyone in particular – instead, they must belong to everyone together. To prevent private expropriation or monopolisation of these critical public commons, the government – be it the Emperor, the King or, later, the elected executive and legislative branches – was entrusted to manage them on behalf of the public.

In the last century, the doctrine has gradually transformed from an affirmation of sovereign authority over these resources to a recognition of sovereign responsibility to protect them for present and future generations. Especially in recent decades, it has evolved through US common, constititional and statutory law to address a broader variety of natural resources and a broader scope of public values associated with them, including ecological, recreational and scenic values. Today, the doctrine is frequently invoked in natural resource conflicts, some involving constitutional takings claims, and some of which push the boundaries of previously recognised trust values, such as appeals to public trust principles in support of meaningful climate governance. Although it has not been matched in the courts, a vigorous scholarly debate asserts its rightful application not only to state sovereign authority, but also to federal authority.

After reviewing the origins of the public trust in early Roman and English law, this chapter explores its development in US law from a common law doctrine emphasising state ownership of submerged lands to a set of principles protecting different values, applied to different resources, and vindicated by different legal mechanisms in different states. It reviews the two most famous American public trust cases over a hundred year span, the US Supreme Court's 1892 decision in *Illinois Central Railroad v Illinois* and the California Supreme Court's 1983 *Audubon Society* decision at Mono Lake, and then explores the incorporation of the doctrine in different state constitutions. It considers the expanding role of the doctrine as a defence to constitutional takings claims, especially against environmental and land use regulations. Finally, it considers whether the doctrine should be understood as a constraint on all sovereign authority, including federal authority, and the significance for climate-related public trust

[1] This chapter is based on material originally published in Ryan 2020 and contains material also presented in Ryan, forthcoming (2023). For a more thoroughly supported treatment of this material, please see those works.

advocacy. It concludes with reflections on the ongoing development of public trust principles and contrasting environmental rights internationally.

Historical origins of the public trust doctrine

Modern public trust principles, which assign state responsibility for natural resources held in trust for the public, are most commonly associated with American law. Legal scholars have long debated the merits and mechanics of the doctrine, but the central idea of the public trust has roots in some of the oldest doctrines of the common law tradition. Many accounts date its origins to early English law, and some go back to ancient Rome. Versions of the public trust doctrine now operate in every American state and many other nations. This part of the chapter presents the conventional historical account of the development of the modern public trust doctrine (see Ryan 2020).

The Roman and Byzantine Empires: The Institutes of Justinian

The earliest written accounts of public trust principles date back to Byzantine Emperor Justinian I's codification of the previous era of Roman Common Law. In the Institutes of Justinian, published in 533, he documented the *jus publicum*, a principle addressing the common ownership of certain natural resources: 'By the law of nature these things are the common property to mankind – the air, running water, the sea, and consequently the shores of the sea' (Sandars 1869, 2.1.1). Thousands of years later, it is hard to know exactly how these principles helped govern the Roman Empire, but this commanding early statement of public commons has echoed through common law jurisprudence ever since, in both judicial decisions and constitutional affirmations. Analogous principles of public commons ownership, especially pertaining to waterways, also appear in civil law countries with legal codes that draw on ancient Roman law, including France, Spain and other post-colonial nations with related legal systems.

Early English law: the Magna Carta, Forest Charter and common law

Some *jus publicum* principles were later incorporated into early English law, beginning with the Magna Carta. In 1215, King John of England issued the Magna Carta (Great Charter), promising his rebellious barons that he and all future sovereigns would operate within the rule of law (Blick 2015). Widely credited as a progenitor of Western democracy and constitutional law, it also set forth rights to speedy justice and trial by jury, and against unusual punishments, and incorporated into English law certain principles of Roman common law, including elements of the *jus publicum*. Chapter 33 required the removal of all weirs in the Thames and Medway Rivers and 'throughout the whole of England' that interfered with fishing or navigation. Negotiated among a common pool of aristocrats, the Magna Carta effectively decreed these navigable waters a public commons for such purposes.

The Charter of the Forest, added to the Magna Carta in 1217 by King Henry III, further protected public rights to access natural resources on certain undeveloped royal lands (Magna Carta, ch. 12; Robinson 2020, 84–87). Re-establishing traditional rights in public commons that

had been eroded by William the Conqueror, the Forest Charter promised that the King would not interfere with commoners' rights to graze animals, forage, plant crops, and collect lumber on designated open lands (Langton n.d.), presenting an early affirmation of public rights in natural resource commons that would align with later expressions of the modern public trust doctrine.

Early English law also made reference to public trust principles in a series of cases and authorities affirming sovereign authority over submerged tidelands, the progenitor of the later public trust in submerged lands. For example, in 1611, the King's Bench held that while the beds of non-navigable waterways could be privately held, navigable waters were owned by the sovereign for public use (Royal Fishery of the River Banne 1611 at 543).

In the United States, the doctrine made its first American appearances in key state court decisions during the early nineteenth century and was repeatedly affirmed by the Supreme Court by that century's end. While these decisions created uniquely American law going forward, they drew heavily on the historical roots of the doctrine in early Roman and British law. Some scholars have debated the extent to which ancient legal practice does or should provide justification for the evolution of the modern public trust doctrine (Huffman 2007, 20–23; Frier 2019, 643). However, these arguments remain a footnote to the mainstream scholarly account (Sax 1970; Ruhl and McGinn 2020), and American courts have referred to the English and Roman roots of the doctrine for over two hundred years. Regardless of its origins, the modern public trust doctrine finds its most important jurisprudential roots in the long chain of American judicial decisions and other sources that affirm its foundational role in American law.

Evolving public trust principles in American law

The doctrine of sovereign authority over submerged lands was received in the United States through individual states' reception of English common law and appeared in litigation within a few decades of the nation's founding. The emerging doctrine established sovereign ownership over the lands beneath navigable waterways, usually up to the mean high-water mark (the maximum rise of the waterbody over surrounding land). In the expanding territory of the new United States, where the shores of the sea are matched by thousands of miles of navigable rivers and enormous freshwater lakes, the doctrine was expanded from the British focus on coastal tidelands to navigable waterways more generally. The doctrine was first recognised by state courts during the early 1800s and, by the end of that century, the US Supreme Court had affirmed it several times as an underlying feature of the American common law (*Shively v Bowlby* 1894 at 57).

Over the two centuries since the doctrine was received in the United States, the American public trust doctrine gradually developed from a doctrine about *sovereign authority*, focusing on the prerogatives of ownership, to one that is also about *sovereign responsibility*, emphasising the sovereign's specific obligations to the public with regard to public trust resources. This is evident in two separate spheres of American law: (1) the ongoing development of the common law trust, and (2) the independent development of the doctrine

as a feature of state constitutional law. Today, there are growing points of intersections between the public trust doctrine and federal law, some of them controversial. This part of the chapter briefly reviews these separate realms of doctrinal evolution, beginning with the US Supreme Court's leading case, an early decision showcasing the traditional public trust, advancing a century forward to a modern case demonstrating the adaptation of public trust principles as a tool for environmental protection, and concluding with examples of the parallel evolution of public trust principles in state constitutional law.

With power comes responsibility: Illinois Central Railroad Co. v Illinois

In 1892, the US Supreme Court made its most famous statement of the traditional American public trust doctrine in *Illinois Central Railroad Co. v Illinois* (at 452), and one that is routinely quoted in later cases:

> [T]he State holds the title to the lands under the navigable waters . . . in trust for the people of the state, that they may enjoy the navigation of the waters, carry on commerce over them, and have liberty of fishing therein, freed from the obstruction or interference of private parties.

The language echoed previous decisions affirming the principle of state sovereign ownership of submerged lands. Yet the theme of state ownership of trust resources is limited by the fact that the state only holds title *in trust* for the public. With great power comes great responsibility.

The public trust's doctrinal infrastructure shows that it doesn't just protect the public nature of these common resources; it also assigns responsibility for their protection, specifically, to the government. Analogising to the property law construct of the legal 'trust', the government, acting as trustee, is responsible for protecting the trust resource for the public benefit. With narrow exceptions, the trustee can neither alienate the trust resource nor allow its destruction. This means that, when it is acting as trustee, the government does not own trust resources in the same way that it owns more ordinary public lands under its jurisdiction. Instead, it holds the resource 'in trust' for the real legal owner – the public it serves. Some scholars have described the difference as one between state 'sovereign' and 'proprietary' ownership, in which resources held as sovereign property are subject to the trust, while those subject to proprietary ownership may be alienated by the state on terms more like ordinary private property (Slade, Kehoe and Stahl 1997, 6–8).

As in conventional trust relationships, the public beneficiary of the trust can hold the government trustee accountable for failure to manage trust resources in accordance with the trustee's responsibilities. If the public feels that the government is failing its obligations, citizens can enforce their rights in court. In this way, advocates have argued that the doctrine acts not just as a *grant* of sovereign authority with regard to trust resources, but also as a *limit* on sovereign authority with regard to the same resources, constraining what the government can and cannot do to ensure against private expropriation and monopolisation (Brief for Law Professors et al. as Amici Curiae in Support of Granting Writ of Certiorari, *Alec L. ex rel. Loorz v McCarthy* 2014, 1–2, 7).

In *Illinois Central*, the Court not only affirmed sovereign authority over submerged lands, it also clarified the nature of the sovereign's obligations to the public as trustee of those lands – and the facts of the case demonstrate how powerful the public trust obligation can be. In 1869, the Illinois state legislature conveyed the better part of Chicago Harbor – the most valuable submerged lands in all of Lake Michigan – to a private railroad company (at 438–39). After a series of transactions in which the legislature granted the railroad rights to construct infrastructure along the lakeshore, the legislature enacted the *Lake Front Act of 1869*, which conveyed ownership rights in perpetuity to the Railroad (Kearney and Merrill 2004, 818–23, 860–77, 800–01).

Whether the legislative grant was an example of flagrant government corruption or a well-intended plan to spur economic development, the Illinois public reacted with indignation and voted in new legislators. Responding to significant public pressure, they attempted to undo what the previous legislators had wrought. In 1873, the legislature sought to reestablish public control over the full Harbor by repealing the original conveyance. Ten years later, when the railroad continued to assert ownership rights, the state sued to establish public ownership of the lakebed, and the railroad fiercely resisted the claim.

In court, the Railroad argued that the new legislature could not repeal the Chicago Harbor conveyance made by the prior legislature. It argued that these submerged lands were now its private property, conveyed by the *Lake Front Act*, and that the state lacked authority to reclaim property that had already passed in a fully executed conveyance. As the Railroad argued, the state could not formally convey a thing of such value and then just take it back, as if the conveyance had never happened.

It bears noting that in fact, the state *could* have just taken it back for public use, paying just compensation, under its power of eminent domain (see United States Constitution, amend. V). But Illinois Central staked its claim on the power of the original legislative grant and the lack of state authority to undo it.

The state deployed public trust principles as a novel legal shield. Illinois argued that its power to undo a fully executed conveyance was immaterial under the circumstances. Conceding that there might have been a legal problem if there really had been a legal gift, the state argued that in this case, there was not an actual problem because – thanks to the public trust doctrine – there had not been any actual gift. Even if it looked as though the previous legislature had conveyed the bed of Chicago Harbor to the Railroad, in fact, no such thing had happened. The bed of Chicago Harbor was subject to the public trust doctrine – held by the state in trust for the public – and therefore, as a matter of law, could not be alienated (at 453–56).

The state argued that the previous legislature lacked the power to make a gift of lands encumbered by the public trust. Such an act would be *ultra vires* – literally, beyond the authority of the state – at least without taking more heroic measures to clarify why such an unusual conveyance was in accord with its public trust obligations. As a result, there was no actual gift, and accordingly no harm in repealing it, and, therefore, no legal foul.

Accepting this argument, the Supreme Court affirmed that the operation of the public trust doctrine had prevented the legislature from ever alienating the harbor in the first place. The Railroad had never been the owner of the submerged lands, and so its legal claims ended there. In this way, Illinois successfully reestablished public ownership of Chicago Harbor on the grounds that the public trust doctrine had limited the state's ability to convey trust lands away (see at 453, 463).

Illinois Central demonstrated that the public trust doctrine functions not only as a grant of affirmative state authority over submerged lands, but also as a limit on state authority with regard to the management of those lands. This is because the state is required to manage them as trustee for the public benefit. The public, as the beneficiary of this trust relationship, is entitled to call the state to account for errant management choices in the courts. If members of the public believe the state has failed its obligations as trustee, they can pursue their legal claim under the public trust doctrine in court.

The premise affirmed in *Illinois Central* provided critical impetus for the development of the common law public trust in nearly all of the United States. Today, the common law public trust doctrine offers meaningful protection of navigable waterways as public commons in nearly every state. Over the years, as plaintiffs across the country have litigated to vindicate and define public trust obligations, the doctrine has developed differently from one state to the next. Some states protect different resources under the doctrine and some assign different levels of protection to trust resources, but, at a minimum, most share the common principle of sovereign authority over lands beneath navigable waters held, in trust, for the public.

Mono Lake

One hundred years after *Illinois Central*, the public trust doctrine continued to evolve. One of the most famous public trust legal developments since then occurred in the Mono Lake case of California, *National Audubon Society v Superior Court* (1983). Since Mono Lake, the doctrine has become increasingly associated not only with the protection of such traditional trust uses as boating, commerce, fishing and swimming, but also environmental protection. This has inspired the application of public trust principles to other resources as well, including groundwater, wildlife, and atmospheric resources.

The Mono Lake case arose over water conflicts between Los Angeles and the Mono Lake Basin, the eastern watershed of Yosemite National Park, four hundred miles to the north. Potable water has long been considered 'wet gold' in Los Angeles, the second most populated desert city on Earth. Located on the southern California coast, Los Angeles is home to about ten million people. The Los Angeles River traverses the city but has enough water to supply a population of only a few hundred thousand. Moving water to Los Angeles has thus been a California state priority since the turn of the last century, when groundwater supplies began to run out (for a fully supported account, see Ryan 2015).

Los Angeles lies in the arid bottom of the state, far from the many Sierra Nevada rivers that furnish northern Californians with more abundant water resources. However, three enormous aqueducts converge at the city, delivering redirected water to the large population centres in the south. The Los Angeles Aqueduct, tapping the eastern slope of the Sierra Nevada, runs four hundred miles north from Los Angeles all the way to Mono Lake, due east of San Francisco near the California–Nevada state line. Forty years after this first aqueduct began tapping the Owens Valley, Los Angeles leaders realised that the growing city needed still more water. They also realised that there was a wealth of additional, unappropriated water in the next watershed up from the Owens Valley, just two hundred miles to the north – the Mono Lake Basin.

Twice the size of the city of San Francisco, five times deeper than the Great Salt Lake in Utah, and three times saltier than the Pacific Ocean, Mono Lake is part of a unique ecosystem. The lake is home to trillions of a unique species of tiny brine shrimp, and hordes of tiny alkali flies, which are tasty as pupae and have long been a dietary staple of the local Kuzediaka'a Paiute community. The ecosystem is thriving, but simple: the flies and shrimp survive on the base of the lake's food chain, benthic algae, and virtually everything else in the ecosystem – including the native people – survives by eating the flies and shrimp. The lake provides critical sanctuary for enormous flocks of migratory birds over this vast desert expanse of journeys from as far north as the Arctic to as far south as Latin America, and is home to important breeding populations of native birds, such as California gulls.

In the 1940s, Los Angeles acquired the riparian rights and requisite permits to connect the Mono Basin to the Aqueduct. Water began to flow south to Los Angeles and the lake gradually began to decline. As it had for the past three million years, water in the lake continued to evaporate off the surface, leaving dissolved salts behind. The falling lake level caused formidable air quality problems for the region, as lakebed that had been submerged for millennia became increasingly exposed and airborne. The decreasing amount of water in Mono Lake also caused enormous problems for its ecosystem.

As it became increasingly clear that the Mono Basin ecosystem and community were on the brink of collapse, a concerned group of scientists, environmentalists, landowners and other local citizens decided to fight back. They formed the Mono Lake Committee and eventually filed a lawsuit claiming that the state could not allow the destruction of Mono Lake, a navigable waterway, because it would violate the public trust doctrine.

In *National Audubon Society v Superior Court*, the plaintiff argued that the State of California could not allow Los Angeles to continue water exports that were destroying Mono Lake, a navigable water held by the state in trust for the people (at 716). The plaintiffs maintained that the water rights had been illegally granted in violation of the public trust doctrine, which prevents the state from alienating or allowing the casual destruction of navigable waterways. The doctrine acts as a limit on state sovereignty, they argued, and thus it must trump whatever appropriative rights the state might try to grant in dereliction of its duty as trustee. Because the state had an obligation to protect Mono Lake in trust for the public, the Water Board, acting for

the state, lacked authority to permit Los Angeles to destroy it by draining it away (at 712–14, 728–29).

The California Supreme Court issued a memorable opinion that both affirmed and disappointed the central arguments made by both sides. The prior appropriations statute does not foreclose the common law public trust doctrine, it concluded, but neither did the public trust doctrine determine the future of California's massive and entrenched water works. Solomon-like, the court announced that neither of the two sets of law at issue trumps the other, and that the state must somehow find an accommodation between them (at 712, 727).

The Mono Lake case not only saved Mono Lake, it also established several important legal principles, interpreting the scope of public trust protections for different values, in application to different resources, and even the operation of the doctrine over time. The one for which this case is most often celebrated is the recognition that the public trust doctrine protects not only the navigation and fishing values traditionally associated with the common law doctrine but also the ecological, scenic and recreational values at stake at Mono Lake. In addition, the California Supreme Court articulated a duty of ongoing oversight for public trust resources, enabling the state to re-evaluate past decisions that may later portend harm to trust resources. Finally, *Audubon Society* extended the public trust doctrine to the non-navigable tributaries on which a navigable waterway relies and affirmed that it was not extinguished by statutorily granted water rights (at 720–28). In 2018, the California Court of Appeals applied this new doctrine protecting non-navigable tributaries of a dependent navigable waterway against withdrawals by water rights holders – but it extended that rationale to the new context of groundwater management. The court affirmed that the state has the authority and obligation under the public trust doctrine to regulate extractions of groundwater that affect public trust uses in the Scott River (*Environmental Law Foundation v State Water Resources Control Board* 2018 at 399–403).

Following its role in Mono Lake and other California cases, the public trust doctrine has been increasingly deployed in litigation as a tool for protecting environmental values associated with waterways and other public natural resource commons, including groundwater, wildlife and atmospheric resources. Most famously, the Mono Lake doctrine was invoked by youth plaintiffs nationwide seeking to remedy alleged failures by federal and state governments to regulate greenhouse gas pollution of the atmospheric commons – the air – which, they pointed out, was one of the original trust resources identified in the Justinian *jus publicum* (*Juliana v United States* 2016; see Ryan et al. 2018; Ryan 2019, 60–64).

Constitutionalising the public trust: Florida, Hawaii and Pennsylvania

The common law public trust doctrine continues to play an important role in the regulation of public waterways, but the trust concept has also developed independently through state constitutional law. Public trust principles have been incorporated into a number of US state constitutions, even where the doctrine is also part of that state's common law (see, for example, Thompson 1996, 866). Some are similar to the common law doctrine affirmed in

Illinois Central. For example, Florida's Constitution recognises public ownership of navigable waterways and protections for submerged lands (Art X, § 11):

> The title to lands under navigable waters, within the boundaries of the state, which have not been alienated, including beaches below mean high water lines, is held by the state, by virtue of its sovereignty, in trust for all the people.

Other state constitutions broaden the scope of the trust, sometimes far beyond the *Illinois Central* model. Hawaii's declares that the state holds all of its natural resources in trust for the public, including land, water, air, minerals, and energy sources (Art. XI, § 1):

> For the benefit of present and future generations, the State and its political subdivisions shall conserve and protect Hawaii's natural beauty and all natural resources, including land, water, air, minerals and energy sources, and shall promote the development and utilisation of these resources in a manner consistent with their conservation and in furtherance of the self-sufficiency of the State. All public natural resources are held in trust by the State for the benefit of the people.

The Environmental Rights Amendment to the Pennsylvania Constitution reveals a similarly expansive conception, adding natural, scenic, historic, and esthetic values to the body of the state's public trust resources (Art. I, § 27):

> The people have a right to clean air, pure water, and to the preservation of the natural, scenic, historic and esthetic values of the environment. Pennsylvania's public natural resources are the common property of all the people, including generations yet to come. As trustee of these resources, the Commonwealth shall conserve and maintain them for the benefit of all the people.

In contrast to the simple affirmation of public ownership of natural resources in Florida, the Hawaii and Pennsylvania doctrines establish a substantive commitment to protecting the environmental values associated with public trust resources, and they partner that commitment with an unequivocable ethic of intergenerational equity. Like the California Supreme Court in the Mono Lake case, the Hawaii Supreme Court has established that its public trust doctrine is not displaced by the statutory law of private water allocation (*In re Water Use Permit Applications* (*Waiahole Ditch*) 2000 at 445). However, it goes even further than California common law, and far further than the traditional *Illinois Central* version, in holding that all water resources – and not just navigable waterways – are protected by the doctrine. Demonstrating the power of this substantive commitment, the Pennsylvania Supreme Court famously invoked the doctrine to overturn a state law preventing local governments from regulating to avoid harm to waterways from hydraulic fracturing (fracking) (*Robinson Township v Commonwealth* 2013).

Constitutionalised versions of the doctrine thus expand recognition for new public trust values beyond those traditionally protected at common law. Even so, some scholars have worried that these and other statutory versions of the doctrine may inadvertently displace the more flexible common law versions, undermining further development of public trust principles to respond

to emerging problems. They worry that this calcification could effectively freeze the public trust doctrine in time by stifling the organic process of common law development that has thus far enabled the doctrine to evolve with the changing needs of the community (Klass 2015, 457–59). Indeed, some states, such as Idaho, have committed the public trust doctrine to statute specifically to prevent the further development of the doctrine through the judicial common law process (Idaho Code § 58-1201–1203 (Ch. 12)).

The public trust as a constraint on sovereign authority

Operating as a matter of common or constitutional law, American case law has generally presumed that the public trust doctrine is a feature of state law (*Alec L. ex rel. Loorz v McCarthy* 2014 at 8; see also *PPL Montana, LLC v Montana* 2012 at 1235). Nevertheless, points of intersection between the public trust doctrine and important areas of federal law have become evident, especially its role as a background principle of law in constitutional takings analysis and in ongoing debate over the extent to which it should operate as a constitutive constraint on sovereign authority more generally, including federal authority.

The doctrine as a background principle in takings claims

The public trust doctrine is increasingly invoked in litigation brought under the US Constitution's Takings Clause (amend. V). *Illinois Central* effectively enshrined the public trust doctrine among what contemporary takings jurisprudence refers to as the 'background principles' of state common law, or those built-in legal norms that constrain owners' legitimate expectations about the suitable uses of different kinds of property (see, for example, Echeverria 2012, 931–34). This intersection between the public trust doctrine and federal constitutional law drew increasing recognition after the 1990s, when the Supreme Court issued a series of decisions that strengthened takings claims against regulations limiting property development, especially environmental laws.

In *Lucas v South Carolina Coastal Council* (1992 at 1027–30), the Court clarified that regulations constitute takings whenever they obstruct all economically viable use of private property, no matter what public interests are at stake. It was an important moment in the evolution of the Court's takings jurisprudence, because it removed these conflicts from the standard regulatory takings balancing test, by which courts normally assess the economic harm to the regulated owner against the public harm the regulation is designed to prevent. By sidestepping the balancing test, this new rule cleared an easier path for plaintiff owners to challenge environmental regulations limiting the development of fragile coastal or wetland property. However, the new *Lucas* rule contained an important exception: the rule does not apply if the challenged regulation is already among the 'background principles' of state property law – such as the common law of nuisance – that limit the owner's reasonable expectations about what they can do with their property from the start (at 1027–30).

The Supreme Court's nineteenth-century recognition that the public trust doctrine is a foundational element of state law thus took on new importance as its twentieth-century

takings jurisprudence expanded liability for environmental regulations that interfere with economic use. Today, the doctrine is increasingly invoked as a shield by state and municipal parties defending takings claims against regulations involving construction on tidelands and wetlands, public access to waterways, and interference with water rights. Many courts have affirmed the doctrine as a defence to takings claims in these circumstances, including state supreme courts in New Jersey, Hawaii, Wisconsin, South Carolina, Louisiana and Rhode Island, and the federal Ninth Circuit. Even so, the issue is not fully settled.

The public trust as a constraint on sovereign authority

In addition, some scholars have long argued that the doctrine is better understood not as a limit on only state sovereign authority, but as a quasi-constitutional 'constitutive' limit on sovereign authority in general, including federal authority (see, for example, Blumm and Wood 2017, 43–44; Torres and Bellinger 2014, 288). A constititutive limit is one that is built into the fabric of sovereign authority, such that it cannot be extinguished through normal judicial or legislative process, as are ordinary exercises of sovereign power.

State Supreme Courts in California and Hawaii, among others, have already made this determination with regard to the role of the doctrine in state law. Pursuing the same intuition, scholars and advocates increasingly suggest that relevant federal sovereign authority should also be subject to public trust limits. New litigation following this line of argument has asserted that as an inherent limit on sovereign authority, the public trust doctrine must also be an implied feature of federal constitutional law (*Juliana v United States* 2020). If so, then it may have application to waters under federal jurisdiction, and possibly to other natural resources that can be protected only by federal authority, such as the atmospheric commons under assault by greenhouse gas pollution (Wood 2014, 133–36).

Advocates maintain that, by the logic underlying the doctrine and the history over which it came into effect, all sovereign authority is subject to public trust principles when it governs resources appropriately subject to the trust. The logical argument is that there is no principled reason to differentiate between the state or federal nature of the sovereign power rightfully constrained by the doctrine when the sovereign acts in a manner contrary to the public interest in trust resources. Received as part of the English common law that forms the bedrock of all American legal institutions, the doctrine is a creature of neither state nor federal law, but a constraint on the sovereign authority delegated to each level of government within our federal system. Whatever sovereign possesses legal authority over critical natural resource commons must match it with responsibility for protecting the public interests in them that have been recognised since ancient Rome.

The historical argument asserts that the public trust doctrine must constrain federal as well as state authority, because there are neither logical nor historical grounds to differentiate their implicit origins. Except for the first states, the trust obligations of most American states arose by delegation of federal authority over lands previously held in federal ownership. Today, the doctrine most often constrains state authority because, under the equal footing doctrine of the

US Constitution, states own the submerged lands beneath navigable waterways (art. IV, § 3, cl. 1; *Pollard's Lessee v Hagan* 1845 at 222, 230), and under the *Submerged Lands Act of 1953*, they are the primary regulators of tidelands within three miles of shore (43 U.S.C. §§ 1311–1312 (2012)). But other than the original thirteen colonies, all states inherited their trust obligations through the medium of federal sovereignty that applied before their lands were carved out of federal holdings. The states must have inherited a pre-existing trust obligation, goes this reasoning, because there is no clear legal moment when new trust obligations were expressly conferred. Therefore, the doctrine must have implicitly inhered at the federal level before it was delegated to the states, and by this theory, it remains there in application to all trust resources that were not delegated to the states (Blumm and Schaffer 2015, 400).

Advocates thus argue that the trust simply establishes a constraint on sovereign authority at whatever is the relevant level to protect public trust resources from private expropriation or monopolisation. Nevertheless, the Supreme Court has not squarely considered the issue, leaving open to question the ultimate role of the doctrine as a limit on federal authority. To be sure, such a finding would have to overcome formidable hurdles in other Supreme Court dicta suggesting that there is no cognisable federal public trust (*PPL Montana, LLC v Montana* 2012 at 1235, noting, in dicta, that the doctrine is a feature of state law). It remains to be seen whether this dicta will hold firm over time or be dislodged by more directed Supreme Court litigation in the future.

The issue was most recently raised, together with other novel claims, in *Juliana v United States* (2020), the 'Kid's Climate Case', in which youth plaintiffs sought injunctive relief for state and federal regulatory failures to protect the air commons from private appropriation by greenhouse gas polluters. The federal district court judge in Oregon initially agreed that the claim deserved its day in court, upholding the case against multiple motions to dismiss and two writs of mandamus by then President Trump (at 1164–66; for Judge Aiken's dramatic ruling against the initial motion to dismiss, see *Juliana v United States* 2016). After an extended period of consideration, the Ninth Circuit finally reversed the trial court and dismissed the case, over a vigorous dissent (2020 at 1175). The plaintiffs' appeal is now pending, but the future of their claim remains uncertain.

Conclusion

This chapter has traced the historical development of public trust principles, showing the evolution of the doctrine from an affirmation of sovereign authority over public natural resource commons to a recognition of sovereign responsibility to protect them for present and future generations. Although this chapter focuses on US law, public trust principles now appear in legal systems throughout the world, including India, South Africa, Pakistan, Kenya, Brazil and Canada (see Ryan, Curry and Rule 2021, Part II(D)). Variations on the idea that people hold rights in natural resource commons also have developed in various ancient legal systems simultaneously and independently, and in parallel ethical frameworks, such as the Rights of Nature movement. In contrast to the anthropocentrism of the public trust doctrine, the biocentric or ecocentric Rights of Nature movement locates environmental rights directly in the

natural systems that would benefit from protection, rather than the people who benefit from natural systems (Ryan, Curry and Rule 2021, Part III). Understanding the history of the public trust doctrine and alternative frameworks for protecting rights in natural resource commons provides an important foundation for using the law today to respond to contemporary natural resource conflicts and – better still – prevent them in the first place.

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