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GREEN WOOD IN THE BUNDLE OF STICKS: FITTING ENVIRONMENTAL ETHICS AND ECOLOGY INTO REAL PROPERTY LAW[†]

Robert J. Goldstein*

I. Introduction: Green Wood

To be alive, wood must be rooted and green. Green wood will bend when twisted; it will endure fire; and it will resist breaking. Even when cut and detached from its roots, wood remains green for some time. Eventually cut wood dries out and begins to rot. The bark covering a piece of wood often hides whether the wood is in fact living or dead. Scratch below the twig's surface and its color will indicate the difference between the brittle, detached sticks, and the green wood.

For almost a century, a chasm has been developing between the popular conception of property as things and the theorists' abstract notion of property as only consisting of rights and duties. This chasm has developed despite the increasing awareness of the need for human stewardship of the environment and the development of the science of ecology. The nature of ownership in terms of property involves the rights and duties which the owners possess incidental to the status of title. Modern authorities take the position that a sophisticated perspective sees property as a right, rather than a thing. This is evident

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¹ See C.B. Macpherson, The Meaning of Property, in Property: Mainstream and Critical Positions 3 (C.B. Macpherson ed., 1978). See generally Stephen Munzer, A Theory of Property (1990).

when society distinguishes property from mere possession. Nec possessio et proprietas mis ceri debent—possession and ownership should not be confused. So soon as any one has said You have got what belongs to me, the germs of these two notions have appeared and can be opposed to each other.

"What distinguishes property from mere momentary possession is that property is a claim that will be enforced by society or the state, by custom or convention or law." The finder of a thing can have momentary possession, as can the thief.

"Property" is more than just the physical thing—the land, the bricks, the mortar—it is also the sum of all the rights and powers incident to ownership of the physical thing. It is the tangible and the intangible. Property is composed of constituent elements and of these elements the right to use the physical thing to the exclusion of others is the most essential and beneficial. Without this right all other elements would be of little value 6

Real property refers to ownership of rights in the land or soil, and an estate is the possessory interest in real property. As land or soil, real property is a part of the natural world, part of the biosphere we call Earth, and part of smaller functional units which we call ecosystems. There is a connection between pieces of that land, as all are interconnected. The land may be perceptibly limited to its surface, (as well as some finite below-ground areas, and some airspace, as in the case of buildings) but the soils, runoff, and ground water below, and the airspace above, as well as the flora and fauna which occupy surface, air, and below-ground, are the vectors of the interconnection.

² See Macpherson, supra note 1, at 3. For an interesting twist on possession and ownership, see United States v. Casterline, 103 F.3d 76 (9th Cir. 1996).

 $^{^{8}}$ Dig. 41.2.52.pr. (Venuleius) (533 CE) in Epitome of Roman Law 48 (Charles P. Sherman ed., 1937).

⁴2 Frederick Pollock & Frederic William Maitland, The History of English Law Before the Time of Edward I 3 (1911) [hereinafter Pollock & Maitland]. "[A]s soon as there is any law worthy of the name, right and possession must emerge and be contrasted." *Id.*⁵ *Id.*

⁶ Dickman v. Commissioner of Internal Revenue, 465 U.S. 330, 336 (1984) (quoting Passailaigue v. United States, 224 F. Supp. 682, 686 (M.D. Ga. 1963)).

⁷ In distinguishing land as real property from the movables upon it, Immanuel Kant (1724–1804) noted, ""[r]eal' property refers to land or soil. . . . An 'estate' is a description of the ownership interest in the real property. Land (understood as all habitable ground) is to be regarded as the *substance* with respect to whatever is movable upon it, whereas the existence of the latter is to be regarded only as *inherence*." IMMANUEL KANT, THE METAPHYSICS OF MORALS 83 (Mary Gregor trans., 1991).

⁸ "The word land includes not only the soil, but every thing attached to it, whether attached by course of nature, as trees, herbage and water, or by the hand of man, as buildings and fences." Mott v. Palmer, 1 N.Y. 564, 572-73 (1848) (Bronson, J., concurring).

This Article is concerned only with real property, and neither with the fixtures appurtenant thereto nor with personal property. This distinction is necessary to further the thesis that real property warrants distinctive treatment based upon its unique character.

An estate-in-land is often identified by its limiting factors in terms of the claims of others to title. The estate that will be referred to herein is the estate that carries with it the ultimate legal title. In Roman law the condition might be described as *dominium*; in terms of modern U.S. law that estate might be referred to as "fee simple." It is understood that conditions and limitations do exist with lesser interests in real property; indeed, conservation easements exist for the very purpose of imposing environmental ethics upon privately held land. These lesser estates will, *a fortiori*, be subject to a subset of the rights and obligations found to be incidental to the ownership of the estate that carries with it the ultimate legal title in real property.

The issue of "how far private ownership should stretch and to what extent it should be modified in the public interest" cannot be understood without an "adequate analysis of the concept of ownership." Although slower in evolving than other bodies of law, the laws of real property ownership are neither static or well settled. That very fact attests to their fluidity—their evolutionary nature, which is the very nature of common law. If "It is our boast that the law is a progressive science; that it expands and develops as civilization advances, and adapts itself to the moral and ethical standards of successive

⁹ "[T]he largest estate known to the law: it denotes . . . the greatest possible aggregate of rights, powers, privileges, and immunities which a person may have in land." C. MOYNIHAN, INTRODUCTION TO THE LAW OF REAL PROPERTY 29 (1988).

¹⁰ This is distinguished from sovereignty or "imperium, the rule over all individuals by the prince." Morris R. Cohen, *Property and Sovereignty*, 13 CORNELL L.Q. 8, 8–9 (1927). "But early Teutonic Law, the law of the Anglo-Saxons, Franks, Visigoths, Lombards and other tribes, makes no such distinction; and the state long continued to be the prince's estate so that even in the 18th century the Prince of Hesse could sell his subjects as soldiers to the King of England." *Id.* at 9.

^{11 &}quot;Tenant in fee simple is he which hath lands or tenements to hold to him and his heires for ever. As it is called in Latin, feodum simplex, for feodum is the same that inheritance is, and simplex is as much as to say, lawfull or pure." SIR EDWARD COKE, INSTITUTES OF THE LAWS OF ENGLAND 1 (1832). Synonyms for this include "fee" and "fee simple absolute."

¹² A.M. Honoré, *Ownership*, in Oxford Essays in Jurisprudence: A Collaborative Work 107, 108 (A.G. Guest ed., 1961).

¹³ Id.

 $^{^{14}}$ See 2 Richard R. Powell & Patrick J. Rohan, Powell on Real Property ¶ 190(1) (1977) [hereinafter Powell].

¹⁵ See Emil De Laveleye, Primitive Property 6 (G.R.L. Marriott trans., 1878).

¹⁶ See generally I WILLIAM BLACKSTONE, COMMENTARIES § 2 (Oceana 1966) (1859).

generations of men."¹⁷ Nevertheless, the popular perception of real property ownership, especially with regard to real estate transactions and the rights appurtenant thereto, is of a well-settled body of law. This perception may very well be the result of the relatively short period of time during which individuals own real property. In the evolutionary sense, the ownership and use of a particular property during the course of an individual's lifetime may indicate stability of rights and responsibilities, whereas a long-term view demonstrates the fluidity more eloquently. That is why it is necessary to trace the development of ownership of real property to its origins. The concept of ownership contains elements that are variable both in definition and in range.¹⁸ "The changes are related to changes in the purposes which society or the dominant classes in society expect the institution of property to serve."¹⁹

Taking a wider historical focus, it becomes apparent that the laws regarding ownership have evolved dramatically and with clearly identifiable causes and motivations.²⁰ Even a narrow focus on the history of American property law since the ratification of the Constitution reveals meaningful changes in both the theory and practice regarding real property ownership.

The possessory estate has certain characteristics, which include:

the rules regulating relationships with neighbors as to lateral and subjacent support, as to nuisances, and as to the adjustments of conflicting claims to the available resources of nature, such as stream water, percolating water, surface water, oil and minerals. . . . The owner of such an estate is always a member of a community and, as such, is forced to conform to a formulated and established social pattern for the welfare of the group.²¹

[S]uch an owner must expect to find the absoluteness of his property rights curtailed by the organs of society, for the promotion of the best interests of others for whom these organs also operate as protective agencies. The necessity for such curtailments is

¹⁷ H.H. Rumble, *Limitations on the Use of Property*, 5 VIRGINIA L. REV. 297, 301 (1918). "No question can be settled by a general appeal to the common law. That a given rule prevailed 'at common law' does not necessarily mean that the same rule is law today even in the absence of legislation on the subject. One needs to know to what period the inquiry related. The common law was not and is not a fixed body of rules. It was not and is not the law of the Medes and Persians which altereth not." *Id.*

¹⁸ See Lawrence C. Becker, The Moral Basis of Property Rights, 22 Nomos 187, 190 (1980).

¹⁹ Macpherson, supra note 1, at 1.

²⁰ See Morton J. Horwitz, The Transformation of American Law 1780–1860 (1977) [hereinafter Horwitz, 1780–1860]; Morton J. Horwitz, The Transformation of American Law 1870–1960 (1992) [hereinafter Horwitz, 1870–1960].

²¹ 2 POWELL, *supra* note 14, ¶ 190(1).

greater in a modern industrialized and urbanized society than it was in the relatively simple American society of fifty, 100, or 200 years ago. The current balance between individualism and dominance of the social interest depends not only upon political and social ideologies, but also upon the *physical and social facts* of the time and place under discussion.²²

The "physical" facts of a particular situation regard the real property itself: the land or the earth that is the subject of the estate. The land or earth is not merely a conceptual theory but a physical reality. As such, it is part of the greater system of biotic units that science has identified using the term ecosystems. "An ecosystem is basically an energy-processing and nutrient-regenerating system whose components have evolved over a long period of time." These ecosystems are earth's "life-support systems." ²⁴

The ecosystem is recognized as one basic unit of the *situs* of our existence. The recognition of the systemic nature of the ecosystem inexorably links the land or earth that is the subject of one estate to the land or earth that is the subject of another. This linking occurs both spatially and temporally. The nature of the system can link distant estates as well as adjacent ones. These principles, though not settled, are defined through the science of ecology. The "social" facts are based on a combination of societal needs and wants, and the development of ethos. These social facts may be based on what Locke calls "natural consent," which people are led to "by a certain natural instinct without the intervention of some compact"²⁵

There is also an evolution of the morals and conduct of society that is accomplished on the basis of knowledge and experience.²⁶ This is exemplified by the evolution of references to such terms as "wilderness," which have come full-circle: from Old Testament²⁷ references to the place where the Israelites sought out the "glory of the Lord,"²⁸ to

²² See 5A Powell, supra note 14, ¶ 745 (emphasis added).

²³ ROBERT LEO SMITH, ECOLOGY AND FIELD BIOLOGY 29 (1990).

²⁴ Eugene P. Odum, Ecology and Our Endangered Life-Support Systems 13 (1989).

²⁵ JOHN LOCKE, ESSAYS ON THE LAW OF NATURE 165 (W. von Leyden ed., 1954) [hereinafter LOCKE]. One basis for this natural instinct is "[c]oncerning morals or action, that is, the conformity to be found in the moral conduct of men and in the practice of social life." *Id.* at 166.

²⁶ Id. at 179. Locke states that "truly, knowledge precedes general consent, for otherwise the same thing would at the same time be cause and effect, and the consent of all would give rise to the consent of all, a thing which is plainly absurd." Id.

²⁷ See generally Jeanne Kay, Concepts of Nature in the Hebrew Bible, 10 Envt'l Ethics 309 (1988). "The Hebrew Bible does not even have an equivalent for the generalized English word wilderness." Id. at 312 (emphasis added).

²⁸ Exodus 16:10 (King James). "And it came to pass, as Aaron spake unto the whole congre-

a place of the devil,²⁹ and "earthy realm of the powers of evil,"³⁰ then as the new frontier to be "conquered,"³¹ and finally as a refuge, "that same raw stuff is something to be loved and cherished, because it gives definition and meaning to his life."³² It is arguable that the "physical" facts (as evidenced by the findings of the science of ecology) and the "social" facts (environmental ethics) of the time and place now mandate alteration of the characteristics of the possessory estate to encompass the ideals of stewardship.³³ Stewardship involves a responsibility to the land and an obligation to future generations to preserve the life-support systems that perpetuate life.

The first section of this Article will attempt to analyze the law of property and its underlying conceptual base by an historical review of its evolution.³⁴ The historical review, limited to the development of contemporary concepts in American property law, will discuss and contrast the development of real property ownership law in connection with the physical and social developments which parallel it, and include the effect of emerging philosophical notions and scientific developments that fostered that development. The purpose of that review is to determine if there is any place within the law of real property for stewardship of land.

gation of the children of Israel, that they looked toward the wilderness, and, behold, the glory of the LORD appeared in the cloud." *Id*.

²⁹ Matthew 4:1 (King James). "Then was Jesus led up of the spirit into the wilderness to be tempted of the devil." Id.

³⁰ RODERICK NASH, WILDERNESS AND THE AMERICAN MIND 17 (1967).

³¹ 2 James Kent, Commentaries on American Law 387–88 (1836). "The original English emigrants came to this country with no slight confidence... in their right to possess, subdue and cultivate the American wilderness, as being, by the law of nature and the gift of Providence, open and common to the first occupants in the character of cultivators of the earth." *Id*.

³² ALDO LEOPOLD, SAND COUNTY ALMANAC 264-65 (1966).

³⁸ Powell lists the historical changes that have evolved in the possessory interest in real property. 5A POWELL, *supra* note 14, ¶ 746.

³⁴ Harvard Law Professor Robert C. Clark noted a seven-step method "for the construction and validation of a full, formal study and explanation of a line of legal evolution." Robert C. Clark, *The Interdisciplinary Study of Legal Evolution*, 90 YALE L.J. 1238, 1256 (1981). The seven steps are:

^{1.} Define the trend;

^{2.} Identify starting points;

^{3.} Identify principles of development, the "motor of change;"

^{4.} Identify relevant conditions of development;

^{5.} Put the explanation together;

^{6.} Consider contrary facts and arguments;

^{7.} Do thought experiments on the explanatory factors, and when feasible, test the results against the evidence.

Id. at 1256-59. This Article will attempt to address each of these seven steps.

The second section is devoted to environmental ethics, and is focused on the adoption of those values into contemporary American culture. The third section discusses the tools that the science of ecology affords us in making our societal values into public policy and into law. The fourth section develops the theory of "green wood" and its place in property and environmental law.

A. The Development of American Property Law

The evolution of American property law has been a dynamic process,³⁵ driven from without by pressures that congealed to foster the growth of a nation.³⁶ "Perhaps the extension of the property doctrine may be best explained by a tendency of the post-revolutionary generation to equate the protection of property with the preservation of liberty."³⁷ It is noteworthy that neither the Articles of Confederation nor the U.S. Constitution altered the English system of tenures that were adopted by the Colonies; in fact in the Treaty of 1794, British subjects then holding lands in the United States were allowed to continue to hold them "according to the nature and tenure of their respective estates and titles therein."³⁸ Nevertheless, in New York, for example, it wasn't until 1830 that the legislature abolished "tenure" and declared all lands to be "allodial."³⁹ "The post revolutionary

³⁵ See generally Horwitz 1780-1860, supra note 20; Horwitz 1870-1960, supra note 20.

³⁶ A serious debate is ongoing concerning how and to what extent changes in real property law have come about. In examining property law by focusing on water law, Alan Watson writes: "In the common law, prescription was needed at some times for the acquisition of water rights, notably, perhaps, in England of *Luttrel's Case* [76 Eng. Rep. 1065, 4 Coke 86a (K.B. 1600)] and in the United States after 1818. At other times and for other judges or writers, priority of use was sufficient for the acquisition of the right. In that light it is very difficult to claim that particular economic circumstances dictated the nature of the legal rules." Alan Watson, *The Transformation of American Property Law: A Comparative Law Approach*, 24 GA. L. Rev. 163, 217 (1990). Watson looks elsewhere for the *cause* of the changes.

For a sound explanation of the causes of change in any branch of the law at any time in America (or elsewhere), it is necessary to consider both the antecedents of the law and any other legal system which may have been influential, and also to examine (for patterns of similarity or difference in change) the same branch of the law in other legal systems which were subject to different economic, social and political conditions.

Id. (footnote omitted). See also Kent, supra note 31, at 441-48.

³⁷ WILLIAM E. NELSON, AMERICANIZATION OF THE COMMON LAW: THE IMPACT OF LEGAL CHANGE ON MASSACHUSETTS SOCIETY, 1760–1830 126 (1975).

³⁸ Orr v. Hodgson, 17 U.S. 453, 463 (1819).

³⁹ Robert L. Fowler, *The Modern Law of Real Property in New York*, 1 Colum. L. Rev. 165, 167 (1901). I Rev. Stat. (N.Y.), Part II, Chap. I, § 3 (1836) (repealed), reads as follows: "All lands within this state are declared to be allodial, so that subject only to the liability to escheat, the entire and absolute property is vested in the owners, according to the nature of their respective

rules allocating property did not result in increased individual liberty; they merely identified the individuals who would enjoy it."⁴⁰ Chancellor James Kent (1763–1847), the American Blackstone, wrote:

In England, the right of alienation of land was long checked by the oppressive restraints of the feudal system, and the doctrine of entailments. All those embarrassments have been effectively removed in this country; and the right to acquire, to hold, to enjoy, to alien, to devise and to transmit property by inheritance . . . is enjoyed in the fullness and perfection of the absolute right. Every individual has as much freedom in the acquisition, use, and disposition of his property, as is consistent with good order, and the reciprocal rights of others.⁴¹

According to Kent, the extension of this was that government in America could not regulate private property "by sumptuary laws,⁴² or any other visionary schemes of frugality and equality."⁴³ Kent recognized the government's right to regulate for other purposes: "So, it is lawful to raze houses to the ground to prevent the spreading of a conflagration."⁴⁴ "Property, like liberty, has been taught that some of its most cherished immunities are not absolute, but relative."⁴⁵ The property owner was protected by nuisance law that was based upon priority of use.

A post revolutionary plaintiff could thus recover damages for a nuisance if a defendant built a stable, a blacksmith shop, or a factory that emitted noxious smells next to an existing dwelling house or town, if he polluted the water on or adjacent to the

estates; and all feudal tenures, or very description, with all their incidents, are abolished." The term "allodial" is from "allodium," defined as "[1] and held absolutely in one's own right, and not of any lord or superior." BLACK'S LAW DICTIONARY 76 (6th ed. 1990) [hereinafter BLACK'S]. The "alod" was "in some sense a bundle of rights and property" FREDERIC SEEBOHM, TRIBAL CUSTOM IN ANGLO-SAXON LAW 153 (1911).

⁴⁰ See Seebohm, supra note 39, at 153.

⁴¹ Kent, supra note 31, at 327-28.

⁴² "Laws made for the purpose of restraining luxury or extravagance" Black's, *supra* note 39, at 1436.

⁴³ Kent, *supra* note 31, at 329.

⁴⁴ Id. at 338-39. See also Russell v. Mayor & City of New York, 2 Denio (N.Y.) 461 (1845). The best elementary writers lay down the principle, and adjudication upon adjudication have for centuries sustained, sanctioned and upheld it, that in a case of actual necessity, to prevent the spreading of a fire, the ravages of a pestilence, or any other great public calamity, the private property of any individuals may be lawfully destroyed for the relief, protection or safety of the many without subjecting the actors to personal responsibility for the damages which the owners has sustained.
Id. at 474.

⁴⁵ Benjamin N. Cardozo, The Paradoxes of Legal Science 131 (1928).

plaintiff's existing estate, causing the water to emit noxious smells, pollute the plaintiff's well, or be otherwise unfit for continued use; if by constructing a drain or a necessary house, by failing to make due repair to this property, or by placing gravel on his land he caused noxious water to flow onto plaintiff's land; if he obstructed the plaintiff's ancient drain, as a result the water flowed back onto plaintiff's land; or if he drained a nearby pond, causing the plaintiff's immemorial well to dry up.⁴⁶

With regard to vacant land or "commons," American law followed in the British tradition. "According to the theory of the British constitution, all vacant lands⁴⁷ are vested in the crown. . . . [T]his principle was as fully recognised in America as in the island of Great Britain."

In this country we have adopted the same principle, and applied it to our republican governments; and it is a settled and fundamental doctrine with us, that all valid individual title to land within the United States, is derived from the grant of our own local governments, or from that of the United States, or from the Crown, or royal-chartered governments established here prior to the revolution.⁴⁹

Where the American Revolution (1776–1781) precipitously removed the king from the property-ownership formula, there occurred a vacuum, and into that vacuum we have siphoned, based on the Fifth Amendment,⁵⁰ the burgeoning concept of property rights.⁵¹ Nulle terre sans seigneur—there is no land without a lord.⁵² The king was no longer the protector of nature.⁵³

⁴⁶ Nelson, *supra* note 37, at 121 (footnotes omitted).

⁴⁷ "So far as respected the authority of the crown, no distinction was taken between vacant lands and lands occupied by the Indians." Johnson v. M'Intosh, 21 U.S. 543, 596 (1823).

⁴⁸ Id. at 595.

⁴⁹ Kent, *supra* note 31, at 377-78.

⁵⁰ U.S. CONST. amend. V.

No person shall be held to answer for a capital, or otherwise infamous crime, unless on a presentation or indictment of a Grand Jury, except in cases arising in the land or naval forces, or in the Militia, when in actual service in time of War or public danger; nor shall any person be subject for the same offence to be twice put in jeopardy of life or limb; nor shall be compelled in any criminal case to be a witness against himself, nor be deprived of life, liberty, or property, without due process of law; nor shall private property be taken for public use, without just compensation.

Id. (emphasis added).

⁵¹ D.R. Denman, Origins of Ownership 79 (1958).

⁵² Id. at 80.

⁵³ It is noted that in 1273, King Edward I (1272–1307) issued a decree prohibiting burning of "sea-coal" in order to protect the health of his subjects. RICHARD BURNETT-HALL, ENVIRON-

"The revolutionary government by resolutions simply transferred the 'seigniory' and the 'quit rents' of the Crown to the political abstraction called the State." The common law forced the adoption of the phantom king in U.S. law acting in the public interest. The State, as quasi-sovereign and representative of the interest of the public, has a standing in court to protect the atmosphere, the water and the forests within its territory, irrespective of the assent or dissent of the private owners of the land most immediately concerned. This is also related in the doctrine of *parens patriae*.

The concept of parens patriae is derived from the English constitutional system. As the system developed from its feudal beginnings, the King retained certain duties and powers, which were referred to as the "royal prerogative." These powers and duties were said to be exercised by the King in his capacity as "father of the country." . . . In the United States, the "royal prerogative" and the "parens patriae" function of the King passed to the States.⁵⁷

The common law in the United States developed the legal concept of a state public trust, which was engendered in the Supreme Court's 1896 decision in *Geer v. Connecticut.*⁵⁸ That role was later filled to

MENTAL LAW 1 (1995); SUSAN WOLF & ANNA WHITE, ENVIRONMENTAL LAW 3 (1995); see generally Rosalind Malcolm, A Guidebook to Environmental Law (1994). In 1609, King James I outlawed the burning of heaths and moors due to the effect of the fires on fowl and game, and the general fouling of the air. "Forasmuch as thereby happeneth yerelie a greate distruccion of the Broode of Wildfoule and Mooregame, and by the Multitude of grosse Vapours and Cloudes arrising from those greate Fyers, the Aire is soe distempered and such unseasonable and unnatural Stormes are ingendred" 7 Jac. I. c. 17 (1609) in IV Statutes of the Realm 1172 (Hein ed. 1993).

⁵⁴ Fowler, supra note 39, at 167.

⁵⁵ See generally Jan S. Stevens, The Public Trust: A Sovereign's Ancient Prerogative Becomes the People's Environmental Right, 14 U.C. DAVIS L. REV. 195, 195–201 (1980).

 $^{^{56}}$ Hudson County Water Co. v. McCarter, 209 U.S. 349, 354 (1908) (citing Georgia v. Tennessee Copper Co., 206 U.S. 230, 238 (1907), and Kansas v. Colorado, 185 U.S. 125, 141–42 (1902)).

⁵⁷ Hawaii v. Standard Oil Co. of Cal., 405 U.S. 251, 257 (1972) (citations and footnotes omitted). The nature of the parens patriae suit has been greatly expanded in the United States beyond that which existed in England. This expansion was first evidenced in Louisiana v. Texas, 176 U.S. 1 (1900), a case in which the State of Louisiana brought suit to enjoin officials of the State of Texas from so administering the Texas quarantine regulations as to prevent Louisiana merchants from sending goods into Texas. This Court recognized that Louisiana was attempting to sue, not because of any particular injury to a business of the State, but as parens patriae for all her citizens. While the Court found that parens patriae could not properly be invoked in that case, the propriety and utility of parens patriae suits were clearly recognized.

Id. at 257-58.

⁵⁸ Geer v. Connecticut, 161 U.S. 519 (1896). The issue was whether the state had the power

some degree by the federal government in Kleppe v. New Mexico⁵⁹ and Hughes v. Oklahoma.⁶⁰

The traditional principles of the public trust doctrine are: (1) all tidelands and lands under navigable water were owned by the original thirteen states at the time of the American Revolution. as successors in sovereignty to the English Crown, and each subsequent state was endowed with similar ownership rights at the time of its admission into the Union; (2) the states own these lands subject to a "public trust" for the benefit of all their citizens with respect to certain rights of usage, particularly uses relating to maritime commerce, navigation, and fishing; and (3) all lawful grants of such lands by a state to private owners have been made subject to that trust and to the state's obligation to protect the public interest from any use that would substantially impair the trust. Moreover, any such conveyed lands must be used by their private owner so as to promote the public interest and so as not to interfere unduly with the public's several rights under the public trust doctrine.⁶¹

to regulate the killing of game within its borders. See id. at 522. Under the state public trust doctrine, a state has the exclusive right of regulating wildlife within its jurisdiction. See id. at 522–23; see also Georgia v. Tennessee Copper Co., 206 U.S. 230, 237 (1907). Justice Oliver Wendell Holmes wrote:

This is a suit by a State for an injury to it in its capacity of quasi-sovereign. In that capacity the State has an interest independent of and behind the titles of its citizens, in all the earth and air within its domain. It has the last word as to whether its mountains shall be stripped of their forests and its inhabitants shall breathe pure air. It might have to pay individuals before it could utter that word, but with it remains the final power.

Tennessee Copper Co., 206 U.S. at 237. See generally Hudson County Water Co. v. McCarter, 209 U.S. 349 (1908). The "State Ownership Doctrine" was later repudiated in Kleppe v. New Mexico, 426 U.S. 529, 535–47 (1976), and overruled in Hughes v. Oklahoma, 441 U.S. 322, 325–39 (1979). It is well noted that the Hughes Court limited the general rule in that case to "make ample allowance for preserving, in ways not inconsistent with the Commerce Clause, the legitimate state concerns for conservation and protection of wild animals " Hughes, 441 U.S. at 335–36. Quoting from its decision in H.P. Hood & Sons v. Du Mond, 336 U.S. 525, 537 (1949), the Court made clear that "States may promote this legitimate purpose only in ways consistent with the basic principle that our economic unit is the Nation" H.P. Hood & Sons, Inc., 336 U.S. at 338–39.

⁵⁹ Kleppe, 426 U.S. at 535–47 (recognizing a wider ecological basis for wildlife protection and repudiating "State Public Trust" doctrine, under Property Clause of the Constitution).

⁶⁰ Hughes, 441 U.S. at 326–35 (overruling Geer, based on Commerce Clause and noting that Geer was decided "relatively early in the evolutionary process" of rules to accommodate state and federal interests).

⁶¹ JACK H. ARCHER ET AL., THE PUBLIC TRUST DOCTRINE AND MANAGEMENT OF AMERICA'S COASTS 3-4 (1994) (footnote omitted). See, e.g., Illinois v. Illinois Cent. R.R. Co., 184 U.S. 77, 94 (1902). "The title to submerged lands resting in the State, are held in trust in aid of navigation. Courts have at all times been diligent to protect and enforce rights of navigation, in aiding and protecting whatever may tend to build up and encourage commerce upon the seas." See id. See

Much of the change that occurred in the law of real property during the nineteenth century was the result of choices that were made between conflicting uses of private property. Legal historian Morton J. Horwitz points to a three-stage process relating the development of U.S. property law on conflicting uses.⁶² He identifies the first stage, one in which the "right to prevent others from using their property in an injurious manner, regardless of the social utility of a particular course of conduct," is the definition of land ownership.⁶³ "By the 1760s, however, the rules allocating central control over scarce resources to the first user appear to have impeded economic growth and efficiency."⁶⁴

The second stage, Horwitz postulates, was the result of the "anti-competitive results" of the failure of property law to recognize the social utility of a course of conduct.⁶⁵ This stage manifested itself in the courts' balancing of "reciprocal rights and duties."⁶⁶ After the Civil War, to nurture the burgeoning Industrial Revolution, the balancing of the social utility of a course of conduct with the rights of adjacent property owners drastically tilted toward the third stage, which granted a landowner "an absolute right to engage in any conduct on one's property regardless of its economic value."⁶⁷

The changes that continued into the latter part of the nineteenth century were less practical and more theoretical in nature. The concept of property as "things," also referred to as the "physicalist" concept, dominated the definitions of property and were bolstered by Blackstone's imprimatur. Nevertheless, in each definition, there was an implicit recognition of the importance of the rights to the property and some notion that the thing and the rights were theoretically divisible. The concept is apparent from an 1856 New York Court of Appeals case, Wynehamer v. People, which successfully challenged a state law enacted to "prevent intemperance" as violative of the state constitution's prohibition against taking property. The court in defining property wrote:

generally James L. Huffman, A Fish out of Water: The Public Trust Doctrine in a Constitutional Democracy, 19 Envt'l L. 527 (1989).

⁶² See Horwitz, 1780-1860, supra note 20, at 101-02.

⁶³ See id. at 102 (emphasis added).

⁶⁴ Nelson, supra note 37, at 53.

⁶⁵ See Horowitz 1780-1860, supra note 20, at 102.

⁶⁶ Id.

⁶⁷ Id. Watson argues that "[t]he notion of property in land just did not correspond to Horwitz' description of absolute dominion." Watson, supra note 36, at 188.

⁶⁸ Wynehamer v. People, 13 N.Y. 378 (1856).

material objects, therefore are property in the true sense, because they are impressed by the laws and usages of society with certain qualities, among which are, fundamentally, the right of the occupant or owner to use and enjoy them exclusively, and his absolute power to sell and dispose of them; and as property consists in the artificial impression of these qualities upon material things, so, whatever removes the impression destroys the notion of property, although the things themselves may remain physically untouched.⁶⁹

Despite these changes in theory, limitations on certain uses remained. In the landmark case of *Mugler v. Kansas*, the Supreme Court made the hold statement that:

[t]he principle, that no person shall be deprived of life, liberty, or property, without due process of law, was embodied, in substance, in the constitutions of nearly all, if not all, of the States at the time of the adoption of the Fourteenth Amendment; and it has never been regarded as incompatible with the principle, equally vital, because essential to the peace and safety of society, that all property in this country is held under the implied obligation that the owner's use of it shall not be injurious to the community.⁷⁰

In *Mugler*, the Court equates the obligation that property not be used in an injurious manner with the principle of due process of law.⁷¹ This case held that a noxious use, the operation of a brewery, could be prohibited by law, and the owner whose use was restricted was entitled to no compensation.⁷² This case raises the question of what constitutes a "noxious" use.⁷³ In 1887, the use of property as a brewery in the state of Kansas was considered a noxious use; today, with the predominance of brew-pubs, such a use is accepted if not favored.⁷⁴ When it was first patented in 1939, dichlorodiphenyltrichloroethane was considered a modern miracle.⁷⁵ Only 23 years later this noxious chemical, nicknamed DDT, was vilified in the book *Silent Spring*, ⁷⁶ and later banned for use in the U.S.⁷⁷ These examples, and many more

⁶⁹ Id. at 396.

⁷⁰ Mugler v. Kansas, 123 U.S. 623, 665 (1887).

⁷¹ See id. at 657.

⁷² See id. at 669-71.

⁷³ See id.

⁷⁴ See Sarah Wiese, Things Are Brewin' in Lawrence, TOPEKA CAPITAL J., Mar. 15, 1996, at C1. In fact the little town of Lawrence, Kansas, boasts three brew-pubs! See id.

⁷⁵ Medical Research: Hearings Before U.S. Senate Subcomm. on Wartime Health and Educ., 78th Cong. 2178 (Dec. 14, 1944) (testimony of Brig. Gen. James S. Simmons, Chief, Preventative Med. Serv., Office of the Surgeon Gen., U.S. Army).

⁷⁶ See generally RACHEL CARSON, SILENT SPRING (1962).

⁷⁷ Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) 7 U.S.C. §§ 136-136y (1972).

equally poignant, demonstrate the evolutionary (and sometimes revolutionary) movement in our society between what is tolerable and what is intolerable. The importance of this to the discussion herein is in the understanding that societal values do evolve, and the laws must follow. In the case of real property, environmental values have taken hold, and must become the basis for changes in the law.

Changes in the law of property have also reflected a clear paradigm shift from the treatment of property as rights unrelated to the thing. A paradigm shift of this magnitude must be put in perspective with other shifts of comparable weight. The shift that bears significant similarity and relatedness to the thesis herein is the movement from the Lochner v. New York Court's ruling on labor laws⁷⁸ to its conceptual reversal in West Coast Hotel v. Parrish. 79 Both the Lochner Court and the West Coast Hotel Court applied essentially the same law to the factual situations presented, but reached conclusions that were inapposite.80 Citing Mugler, the Lochner Court noted that "[b]oth property and liberty are held on such reasonable conditions as may be imposed by the governing power of the State in the exercise of those powers, and with such conditions the Fourteenth Amendment was not designed to interfere."81 West Coast Hotel similarly contains the statement that "[l]iberty under the Constitution is thus necessarily subject to the restraints of due process, and regulation which is reasonable in relation to its subjects and is adopted in the interests of the community is due process."82

The *Lochner* case dealt with a New York statute that limited the hours that employees were allowed to work in a bakery to sixty per week or ten per day.⁸³ The Court found that this law was unconstitutional, holding that "[t]here was no reasonable ground for interfering with the liberty of person or the right of free contract, by determining the hours of labor, in the occupation of a baker."⁸⁴ The *Lochner* Court first reconciled a perverse dichotomy⁸⁵ with the case of *Petit v. Min-*

⁷⁸ Lochner v. New York, 198 U.S. 45, 64 (1908). For an excellent treatment of *Lochner* and its implications for contemporary constitutional jurisprudence, see Cass R. Sunstein, *Lochner's Legacy*, 87 Colum. L. Rev. 873, 880 (1987). See generally Paul Kens, Judicial Power and Reform Politics: The Anatomy of Lochner v. New York (1990); Molly S. McUsic, *The Ghost of Lochner: Modern Takings Doctrine and Its Impact on Economic Legislation*, 76 B.U. L. Rev. 605 (1996).

⁷⁹ West Coast Hotel v. Parrish, 300 U.S. 379, 398-400 (1937).

⁸⁰ See generally Sunstein, supra note 78.

⁸¹ Lochner, 198 U.S. at 53.

⁸² West Coast Hotel, 300 U.S. at 391.

⁸³ Lochner, 198 U.S. at 52.

⁸⁴ Id. at 57.

⁸⁵ See Lochner, 198 U.S. at 74-76 (Holmes, J., dissenting).

nesota, holding that the legislature had the right to declare that, as a matter of law, keeping barber shops open on Sunday was not a work of necessity or charity as a proper exercise of the police power relating to the observance of Sunday. The absurdity of the Court's conclusion that Sunday observance was a legitimate exercise of police power, but a labor law regulating the amount of hours a bakery worker could labor in the hot oppressive atmosphere of the bakery was not, is enlightening. It is clear that the swaying factor in these two cases were the values that were drawn from society at the time. The Supreme Court drew a line that it felt was warranted. "The central problem of the Lochner Court had to do with its conceptions of neutrality and inaction and its choice of appropriate baseline." "87"

One view of *Lochner* is that *West Coast Hotel* merely redraws the baseline, and doesn't overrule the *Lochner* logic. Indeed, both Courts' remarks concerning liberty and its limitations are basically interchangeable. *West Coast Hotel* considered a Washington State minimum wage law for women, which it upheld.⁸⁸ "The community is not bound to provide what is in effect a subsidy for unconscionable employers. The community may direct its law-making power to correct the abuse which springs from their selfish disregard of the public interest." ⁸⁹

The Lochner case was decided in 1905, and the West Coast Hotel case in 1937.90 The West Coast Hotel Court took judicial notice of the Depression and "the unparalleled demands for relief which arose during the recent period of depression and still continue to an alarming extent despite the degree of economic recovery which has been

I think that the word liberty in the Fourteenth Amendment is perverted when it is held to prevent the natural outcome of a dominant opinion, unless it can be said that a rational and fair man necessarily would admit that the statute proposed would infringe fundamental principles as they have been understood by the traditions of our people and our law.

Id. at 76.

⁸⁶ See Petit v. Minnesota, 177 U.S. 164, 168 (1900).

We have uniformly recognized state laws relating to the observance of Sunday as enacted in the legitimate exercise of the police power of the State. The subject was fully considered in Hennington v. Georgia, 163 U.S. 299, and it is unnecessary to go over the ground again. It was there said: "The legislature having, as will not be disputed, power to enact laws to promote the order and to secure the comfort, happiness and health of the people, it was within its discretion to fix the day when all labor, within the limits of the State, works of necessity and charity excepted, should cease."

⁸⁷ Sunstein, supra note 78, at 883.

⁸⁸ See West Coast Hotel Co. v. Parrish, 300 U.S. 379, 399-400 (1937).

⁸⁹ *Id*.

⁹⁰ See id.

achieved."⁹¹ It is this allusion by the Court that alerts the reader to a judicial activism that distinguishes *West Coast Hotel* from *Lochner* and is representative of a paradigm change. In one sense the need for activism not only motivated the later Court to move the baseline, it also minimized neutrality.⁹²

What does the nature of the *Lochner* paradigm shift say for the overall evolution of real property law? The shift heightens the sense of the role of societal values, and vindicates those who advocate moving the baseline to accommodate ecology and environmental ethics. The environmental revolution parallels the Depression in terms of the focus of purpose that has occurred. The Depression focused the mechanisms of law on recovery. The environmental revolution has already focused the mechanisms of law on regulatory methods, which would have been unthinkable during the Depression, and even more so during the *Lochner* era.

In defining the limits of what would become known as "property rights" Justice Oliver Wendell Holmes wrote:

All rights tend to declare themselves absolute to their logical extreme. Yet all in fact are limited by the neighborhood of principles of policy which are other than those on which the particular right is founded, and which become strong enough to hold their own when a certain point is reached. The limits set to property by other public interests present themselves as a branch of what is called the police power of the State. The boundary at which the conflicting interests balance cannot be determined by any general formula in advance, but points in the line, or helping to establish it, are fixed by decisions that this or that concrete case falls on the nearer or farther side. For instance, the police power may limit the height of buildings, in a city, without compensation. To that extent it cuts down what otherwise would be the rights of property. But if it should attempt to limit the height so far as to make an ordinary building lot wholly useless, the rights of property would prevail over the other public interest, and the police power would fail. To set such a limit would need compensation and the power of eminent domain.94

This statement recognizes the inherent limitation to property rights. Holmes also wrote that "[i]t sometimes is difficult to fix boundary stones between the private right of property and the police power when, as in the case at bar, we know of few decisions that are very

⁹¹ Id. at 399.

⁹² See Sunstein, supra note 78, at 917.

⁹³ One would like to add social justice, but this would be reaching.

⁹⁴ Hudson County Water Co. v. McCarter, 209 U.S. 349, 355 (1908).

much in point."⁹⁵ In fixing boundaries to property rights it is not always a clash of property rights versus regulation, but a balance of property rights, as Holmes noted: "It constantly is necessary to reconcile and to adjust different constitutional principles, each of which would be entitled to possession of the disputed ground but for the presence of the others, as we already have said that it is necessary to reconcile and to adjust different principles of the common law."⁹⁶

1. From Things to Rights

Under the physicalist concept the law of property was based on a taxonomy of things, with the nature of each thing determining its treatment at law. 97

The physicalist definitions of property—such as "the highest right a man can have in any thing"; or the exclusive right of possessing, enjoying and disposing of a thing began to evolve into one which differentiated between the object and the rights.

In 1893, the Missouri Supreme Court described property as "the exclusive right of any person to freely use, enjoy, and dispose of any determinate object." The court explained, "sometimes the term is applied to the thing itself, as to a horse or a tract of land; these things, however, though the *subjects* of property are, when coupled with possession, but the *indicia*, the visible manifestations of invisible rights, "the evidence of things not seen." ¹⁰¹

During the late nineteenth century some courts were torn between the concept of property as rights or as things. *Rigney v. Chicago*, ¹⁰² an 1882 takings case before the Supreme Court of Illinois, reflected this dichotomy.

Property in its appropriate sense, means that dominion or indefinite right of user and disposition which one may lawfully exercise over particular things or subjects, and generally to the exclusion of all others, and doubtless this is substantially the sense in which the word is used in the constitution; yet the term

⁹⁵ Id. at 355.

⁹⁶ Id. at 357.

⁹⁷ Kenneth J. Vandevelde, The New Property of the Nineteenth Century: The Development of the Modern Concept of Property, 29 BUFF. L. Rev. 325, 331 (1980).

⁹⁸ Jackson v. Housel, 17 Johns, 281, 283 (N.Y. 1820).

⁹⁹ McKeon v. Bisbee, 9 Cal. 137, 142 (1858).

¹⁰⁰ St. Louis v. Hill, 116 Mo. 527, 533 (1893).

¹⁰¹ Id.

¹⁰² Rigney v. Chicago, 102 Ill. 64 (1882).

is often used to indicate the res or subject of the property rather than the property itself.¹⁰³

The subsequent evolution of the meaning of property under U.S. property law probably had more to do with the philosophical constructs that stimulated debate on the nature of property around the turn of the century. The development of abstract theories can be identified with the expansion of the ownership of interests in corporations. "[I]t is clear that in dealing with the modern corporation we are not dealing with the old type of private property." The expanding need for the development in capital that was backed by securities necessitated a more abstract view of property.

As the varieties of commercial and intangible property grew during the nineteenth century, land slowly receded as the model for property conceptions. As the most significant forms of new property were incorporeal, judges were pressed to redefine the nature of interference with property rights more abstractly, not as an invasion of some physical boundary but as any action that reduced the market value of property.¹⁰⁵

This manifested itself in the move from a "physicalist" view of property to the "abstract" view of legal writers such as Professor Wesley N. Hohfeld (1878–1918). ¹⁰⁶ "Blackstone had made clear that property could exist only in relation to some thing. Hohfeld rejected even this minimal association with tangible objects, arguing that property could exist whether or not there was any tangible thing to serve as the object of the rights." ¹⁰⁷

The theory behind the view of property as a bundle of rights, however, is not of such recent origin, and can be said to derive from the term *universitas juris* or *universitas iurus* (and *universitas facti*), which are "non-Roman terms [that were] coined in the literature to distinguish a group of things which though physically separated are

¹⁰³ Id. at 77.

¹⁰⁴ ADOLF A. BERLE & GARDINER C. MEANS, THE MODERN CORPORATION AND PRIVATE PROPERTY 347 (1932). "In place of actual physical properties over which the owner could exercise direction and for which he was responsible, the owner now holds a piece of paper." *Id.* at 66.

¹⁰⁵ HORWITZ, 1870-1960, supra note 20, at 146-47.

¹⁰⁶ Id. at 145-67.

¹⁰⁷ Vandevelde, *supra* note 97, at 360 (citation omitted). The "green wood" metaphor should not be seen as a return to the "physicalist" construct of ownership; however, it does recognize the innate importance of the "thing" when that "thing" is real property. The failure of the abstract theorists to consider the importance of the "thing" can only be seen as a reflection of their failure to incorporate the ecological principles which have taken shape only recently.

treated as a whole."¹⁰⁸ English jurist John Austin (1790–1859) develops this theory in his lecture (*circa* 1828–1832):

§ 997. 1. A status is a set or collection of various rights or duties, or of various capacities or incapacities to take or incur rights or duties. 2. The rights or duties which are its constituent elements, are legal effects or consequences of one investitive fact, of one title or mode of acquisition, or, in the usual language of the Roman lawyer, of one *causa* or antecedent.

§ 998. Now it certainly is true, that a status is a set or collection of various rights or duties. And that the rights or duties which are its constituent elements, are legal effects or consequences, mediately or immediately, of one and the same title or investitive fact or event.... But though these two properties belong to every status, they will not distinguish status or conditions from those rights and duties which are matter for the law of things.

§ 999. For, first, these properties belong to each of the aggregates which are styled by modern civilians *universitatis juris*; that is to say, complex sets or collections of rights and duties

§ 1000. And secondly, the two properties, which, in Bentham's opinion, characterize a status or condition, are not even peculiar to those aggregates of rights and duties which are styled by modern civilians universitas juris. They are found in most or many of those numerous rights and duties, which, as contradistinguished to universities of rights and duties, are deemed particular or singular. Take, for example, the right of dominion or property in a specifically determined thing; as a horse, a slave, a garment, a house, a field, or what not. It is manifest that the right, though deemed singular, is truly a collection or aggregate of rights which an adequate description would occupy a bulky volume. It consists, for example, of the right of exclusive user [sic] or possession; the right of disposing or alienating totally or partially: of rights of vindication, and other rights of action, in the event of a disturbance of any of those primary rights; and each of these rights, which combine to form the right of dominion, may itself be resolved into other rights which are less complex 109

That this changeover was gradual is evidenced by an 1882 article in *The North American Review*, ¹¹⁰ which expressed frustration that the concepts that were germinated by Austin had not taken hold.

There is nothing more difficult than to effect any change in a legal conception once firmly imbedded in a system of jurisprudence,

¹⁰⁸ Adolf Berger, Encyclopedic Dictionary of Roman Law 751 (1953).

¹⁰⁹ John Austin, Lectures on Jurisprudence: Or the Philosophy of Positive Law 154–57 (Robert Campbell ed., 1875) (emphasis added).

¹¹⁰ See generally A.G. Sedgwick, Constitutional Protection of Property Rights, 135 N. Am. Rev. 253 (1882).

particularly such a one as ours, in which general principles are developed out of adjudicated cases, while each case is, in theory, supposed to be founded upon and governed by another precisely similar; in which, in fact, there is, in theory, supposed to be no change at all. It is not surprising, therefore that we should find the conception of "property" prevailing till a very recent period in the United States, to be still the same which the word suggested to lawyers of the last century, which Blackstone elaborated in his "Commentaries," and which historically may be traced to the archaic customs which answered the purpose of law in the forests of Germany.¹¹¹

While theorists like Austin had begun to conceptualize property as a set of rights, the conception of property as things was a durable notion.

The slow metamorphosis of the common law resulted in a duality in the meaning of property, a duality that in some sense continues to exist today.¹¹² The U.S. Supreme Court in *Hamilton v. Rathbone*¹¹³ noted that the "word 'property'... includes every right and interest which a person has in lands and chattels, and is broad enough to include everything which one person can own and transfer to another."¹¹⁴ In 1909 the duality was patent from a definition in a legal encyclopedia: "property includes whatever things may be the subject of ownership, and all rights, titles and interests therein."¹¹⁵

2. History of the Bundle Metaphors

The "bundle of rights" metaphor is generally attributed either to Supreme Court Justice Benjamin N. Cardozo (1870–1938)¹¹⁶ or Professor Hohfeld,¹¹⁷ although it is questionable that either actually first

¹¹¹ Id. at 257-58. Sedgwick noted that "[t]he word 'property' we find used in Blackstone to express these two entirely distinct ideas: first, the thing owned, and secondly, the entire aggregate of rights and obligations with relation to it imposed by the law upon the owner." Id.

¹¹² The dualistic approach today, however, is divided between the popular view of property, which still regards it as the "thing," and the "sophisticated" view, which regards it wholly as rights.

¹¹⁸ Hamilton v. Rathbone, 175 U.S. 414 (1899).

¹¹⁴ Id. at 421.

^{115 32} CYCLOPEDIA OF LAW AND PROCEDURE 651 (William Mack ed., 1909).

¹¹⁶ "In the late 1920s, Justice Cardozo first promulgated the notion that property ownership is analogous to ownership of a bundle of sticks." Michelle Andrea Wenzel, Comment, *The Model Surface Use and Mineral Development Accommodation Act: Easy Easements for Mining Interests*, 42 Am. U. L. Rev. 607, 609 n.4 (1993). See also Thomas Ross, Metaphor and Paradox, 23 GA. L. Rev. 1053, 1055–63 (1989).

¹¹⁷ "In its conventional formulation, the bundle of rights thesis is a combination of Wesley Hohfeld's analysis of rights and A.M. Honoré's description of the incidents of ownership." J.E. Penner, *The "Bundle of Rights" Picture of Property*, 43 UCLA L. Rev. 711, 712 (1996).

coined that phrase, used it as a legal metaphor,¹¹⁸ or applied it to property.¹¹⁹ The first use of this term appears in the 1888 *Treatise on the Law of Eminent Domain in the United States* by John Lewis (1842–1921).¹²⁰ "The dullest individual among the *people* knows and understands that his property in anything is a bundle of rights."¹²¹

Nevertheless, both Hohfeld¹²² and Cardozo¹²³ had great influence on its ultimate application as the dominant paradigm¹²⁴ for the meaning of property.¹²⁵ "The most important consequence of Hohfeld's system of classification was that it carried through the radical implications of

¹¹⁸ The metaphor of "bundle of rights" was used in the 1888 case of *Compton v. Railway Co.*, 45 Ohio St. 592, 616 (1888) as follows: "The term [*universitas juris*] expresses the legal conception of a university or bundle of rights and liabilities, belonging to one person and constituting, as it were, his legal personality" This concept was echoed in the 1896 New York case of *Upington v. Corrigan*, 151 N.Y. 143, 150 (1896) (citing Nicoll v. New York & Erie R.R. Co., 12 N.Y. 121 (1854)).

¹¹⁹ One of the earliest references to the "bundle of rights" purely as a property metaphor was in the brief for the defendant-in-error (Alfred B. Benedict and Jerome D. Creed, on the brief) in the case of *Cincinnati Volksblatt Co. v. Hoffmeister*, 62 Ohio St. 189, 194–95 (1900): "All property is rights. Blackstone, Vol. I, p. 138. Property, then, is a right; and a shareholder's property right in a corporation is his bundle of rights, including the right to inspect its books. It cannot be successfully denied that the sum total of the shareholder's rights make up his stock, his property in the corporation."

¹²⁰ John Lewis, A Treatise on the Law of Eminent Domain in the United States 57 (1888). The Supreme Court of Missouri refers to Lewis as "[a]n eminent text-writer in his recognized and widely quoted treatise on the subject of Eminent Domain." Morgan v. Willman, 318 Mo. 151, 164 (1927). There is no doubt that Lewis' treatise was influential; it was cited as early as 1889 by counsel before the Court of Appeals of New York in Mayor, Aldermen & Commonalty of New York v. Carleton, 113 N.Y. 284, 286 (1889); and by the U.S. Supreme Court in 1897 in the case of Chicago, Burlington & Quincy R.R. Co. v. Chicago, 166 U.S. 226, 245 (1897); as well as in hundreds of cases since. However, there is no indication in case law that Lewis' "bundle of rights" metaphor was relied upon. The appearance of the metaphor in Lewis seems to highlight how the competing theories of property were advancing in the late nineteenth century; as the physicalist approach waned, the bundle theory took hold.

¹²¹ Lewis, supra note 120, at 57 (emphasis added).

^{122 &}quot;Suppose, for example, that A is fee-simple owner of Blackacre. His 'legal interest' or 'property' relating to the tangible object that we call land consists of a complex aggregate of rights (or claims), privileges, powers, and immunities." Wesley Newcomb Hohffeld, Fundamental Legal Conceptions as Applied in Judicial Reasoning and Other Legal Essays 96 (Walter Wheeler Cook ed., 1923). "Some say that an owner has a bundle of rights against various people. Yale's great legal analyst, Professor Wesley N. Hohfeld, refined this notion further by describing ownership as an aggregate of rights, powers, privileges, and immunities, and minutely defining and analyzing each of these." A. James Casner & W. Barton Leach, Cases and Text on Property 72 n.1 (1969) (noting that "Hohfeld's gift of expression was not felicitous, but his ideas were restated with great effect by Professor Corbin in Legal Analysis and Terminology, 29 Yale L.J. 163 (1919)).

¹²³ See generally Nashville, Chattanooga & St. Louis Ry. Co. v. Wallace, 288 U.S. 249 (1933).

¹²⁴ See Penner, supra note 117, at 713.

¹²⁵ The Supreme Court identified "incidents" of ownership in *Bromley v. McCaughn*, 280 U.S. 124, 137 (1929).

a de-physicalized system of property. Property consisted of abstract legal relations, not physical things, Hohfeld showed."¹²⁶

In Nashville, Chattanooga and St. Louis Railway v. Wallace, the Supreme Court held that "[t]he power to tax property, the sum of all the rights and powers incident to ownership, necessarily includes the power to tax its constituent elements." Soon thereafter in Henneford v. Silas Mason, 128 the opinion by Justice Benjamin Cardozo contains an early reference to the sticks ("faggots") in the bundle:

Things acquired or transported in interstate commerce may be subjected to a property tax, non-discriminatory in its operation, when they have become part of the common mass of property within the state of destination. This is so, indeed, though they are still in the original packages. For like reasons they may be subjected, when once they are at rest, to a non-discriminatory tax upon use or enjoyment. The privilege of use is only one attribute, among many, of the bundle of privileges that make up property or ownership. A state is at liberty, if it pleases, to tax them all collectively, or to separate the faggots and lay the charge distributively. 129

In Steward Machine v. Davis,¹³⁰ Justice Cardozo, writing for the Court, pointed out that "[i]ndeed, ownership itself, as we had occasion to point out the other day, is only a bundle of rights and privileges invested with a single name. Henneford v. Silas Mason, 300 U.S. 577."¹³¹ The metaphor "bundle of sticks" is apparently derived from the Aesop's fable of the same name. ¹³² As such, the bundle of sticks

¹²⁶ Horwitz, 1870–1960, *supra* note 20, at 156, *citing* Vandevelde, *supra* note 97, at 359–62.

¹²⁷ Nashville, Chattanooga & St. Louis Ry., 288 U.S. at 267-68.

¹²⁸ Henneford v. Silas Mason Co., 300 U.S. 577 (1936).

¹²⁹ Id. at 582 (citations omitted).

¹⁸⁰ Steward Machine Co. v. Davis, 301 U.S. 548 (1937).

¹³¹ Id. at 581.

¹³² The phrase "bundle of sticks" is most often attributed to Aesop's fable: "The Father and His Sons" (also called "The Bundle of Sticks"):

A father had a family of sons who were perpetually quarreling among themselves. When he failed to heal their disputes by his exhortations, he determined to give them a practical illustration of the evils of disunion; and for this purpose he one day told them to bring him a bundle of sticks. When they had done so, he placed the faggot into the hands of each of them in succession, and ordered them to break it in pieces. They tried with all their strength, and were not able to do it. He next opened the faggot, took the sticks separately, one by one, and again put them into his sons' hands, upon which they broke them easily. He then addressed them in these words: "My sons, if you are of one mind, and unite to assist each other, you will be as this faggot, uninjured by all the attempts of your enemies; but if you are divided among yourselves, you will be broken as easily as these sticks."

AESOP, FABLES (George Fyler Townsend ed., 1993). The Rev. George Fyler Townsend did a literal translation of 300 of Aesop's Fables circa 1870 and 350 in 1882. The fable "The Father

metaphor was first applied to evidentiary matters involving proof by circumstantial evidence. Cardozo seemingly ties the two together in his 1928 book *The Paradoxes of Legal Science*: The bundle of power and privileges to which we give the name ownership is not constant through the ages. The faggots must be put together and rebound from time to time. However, the legal metaphor of bundle of faggots antedates Cardozo's reference by almost 75 years. In the case of *United States v. Cole*, the court wrote "[w]e might not be able, and certainly cannot be required to break this entire bundle of faggots, which government has tied so industriously together.

While property law in the U.S. may have wavered between the varying philosophical constructs,¹³⁷ it seems clear that the prevalent concept is based on the abstraction of rights and duties, which has grown in favor by the Supreme Court since the 1930s.¹³⁸ It is neces-

and His Sons" appears in the 1882 edition. It is interesting to note that the appearance of the "bundle of sticks" metaphor first appears in cases shortly thereafter. See generally Aesop, Three Hundred Aesop's Fables, Literal Translation by George Fyler Townsend (1882); Aesop, Three Hundred and Fifty Aesop's Fables, Literally Translated from the Greek by Rev. George Fyler Townsend (1882). For a history of this fable, see Aesop, The Fables of Aesop, Selected, Told Anew and Their History Traced (Joseph Jacobs ed., 1894) (similar apologues are told of Ghengis Khan and of a king of Scythia) (citations omitted).

An interesting aside on the use of the term "bundle of sticks" is its Latin translation, fascis, which is defined as "a bundle (esp. of sticks, etc.), faggot" in Oxford Latin Dictionary 677 (P.G.W. Glare ed., 1982); and "bundle of sticks with an ax projecting," in D.P. SIMPSON, CASSELL'S New Latin Dictionary 241 (1959). The word fascis is also the root of the word Fascist, and the symbol of the Fascists in Italy was a bundle of sticks with an ax protruding, which was taken from an ancient Roman symbol of legal authority.

138 See generally In re Disbarment v. Catron, 8 N.M. 253, 320 (1895) (Laughlin, J., dissenting) (that circumstantial evidence "taken together, is sufficient, is well illustrated by the old fable that a bundle of sticks is stronger than any single stick"); Estate of Sheehan, 139 Pa. 168, 181 (1891) (circumstantial evidence "bound together like the familiar bundle of sticks"); Montgomery Web Co. v. Dienelt, 133 Pa. 585, 595 (1890) (cumulative force of circumstantial proof as "bundle of twigs"); Cox v. Commonwealth, 125 Pa. 94, 103 (1889) (circumstantial evidence in a criminal case as "bundle of sticks").

[i]n that connection it should be borne in mind that in addition to the right of peaceable possession of his property the owner has quite a number of other rights and privileges which he should be able to exercise without limitation or restraint, including in the air above and the earth beneath. They are sometimes referred to as a "bundle of rights"

¹⁸⁴ CARDOZO, supra note 45, at 129.

¹³⁵ United States v. Cole, 25 F. Cas. 493 (Cir. Ct. D. Ohio 1853).

¹³⁶ Id. at 510.

¹³⁷ See generally Bromley v. McCaughn, 280 U.S. 124 (1929).

¹³⁸ Recently, the Supreme Court noted that "[t]he difference to petitioner, of course, is the loss of her ability to exclude others. As we have noted, this right to exclude others is 'one of the most essential sticks in the bundle of rights that are commonly characterized as property." Dolan v. City of Tigard, 512 U.S. 374, 393 (1994). State courts have adopted the metaphor: The Supreme Court of Utah wrote:

sary to examine contemporary concepts in property law to understand the implications of those rights and duties.

III. CONTEMPORARY CONCEPTS IN PROPERTY LAW

There are four basic concepts that must be analyzed to understand how ecology and environmental ethics fit into the current state of property law: (1) the basis of property; (2) the meaning of property; (3) the incidents of property ownership; and (4) the nature and extent of the estate—the title. Since this analysis does not entail a justification of property, the basis of property is not discussed herein. The meaning of property is of importance since the green wood thesis directly affects the purely abstract definition that resulted from Hohfeld's analysis. The incidents of ownership are closely tied to the meaning of property, and have become the favored construct of property under the law. The meaning and extent of title is a point of departure, from which the lesser estates can be factored into the meaning of property, and the appropriate incidents of property can be applied.

and compared to a bundle of sticks, each of which may be violated, removed, or dealt with separately.

Provo City Corp. v. Knudsen, 558 P.2d 1332, 1334 (Utah 1977).

The Supreme Court of Florida wrote that "[a]s in many other areas of property law, the law recognizes various degrees of legal rights and interests in the same property and does not demand that one person hold the entire 'bundle of sticks." Coastal Petroleum Co. v. American Cyanamid Co., 492 So. 2d 339, 348 (Fla. 1986).

In Wisconsin, the Wisconsin Court of Appeals wrote:

[[]o]wnership is often referred to in legal philosophy as a bundle of sticks or rights and one or more of the sticks may be separated from the bundle and the bundle will still be considered ownership. What combination of rights less than the whole bundle will constitute ownership is a question which must be determined in each case in the context of the purpose of the determination. In this case for exemption one needs more than the title stick to constitute ownership.

De Byle's, Inc. v. City of Rhinelander, No. 87-0784, 1988 WL 36778, at *2 (Wis. Ct. App. Feb. 9, 1988) (citation omitted).

The Supreme Court of Oregon wrote:

[[]b]ecause the ownership of real property is divisible in so many ways, a real property owner often is described as holding a "bundle of sticks." The portion of the "bundle of sticks" retained by the vendor in a land sale contract includes two large sticks: (1) the right to receive contract payments, and (2) the legal title in the property securing the purchaser's obligation to make the contract payments, with the "concomitant possibility of resuming general ownership of the land upon default."

Bedortha v. Sunridge Land Co., Inc., 822 P.2d 694, 696 (Or. 1991) (citing Lacy, Behind and Beyond the 1975 Legislation on Creditors of Vendors, 55 Or. L. Rev. 227, 231 (1976) (footnote omitted)).

 $^{^{139}}$ For a thorough philosophical analysis of the justification of property rights, see Becker, supra note 18, at 190.

A. The Meaning of Property

It may suggest also that, in many cases, the existence of a well specified and generally accepted definition of property is far more important than just what the definition is.

—Milton Friedman (1962)¹⁴⁰

The prevalent metaphor describing the abstract theory of ownership is that of the bundle of rights. Proponents apply the bundle theory to all property rights, with no distinction for tangibility or movability. In essence, the "bundle of rights" divides ownership into its component pieces, with implicitly varying importance, and with only an unstated degree of severability. These component pieces are denominated "incidents," but their extent and definition remains subject to interpretation. That ability to be interpreted serves the thesis herein well. The extent and definition of the "incidents" are subject to the machinations of society.

Substantively the metaphor has troubled critics,¹⁴² and semantically the concept is lacking in that there are not only rights¹⁴³ incident to ownership, but responsibilities.¹⁴⁴ Blackstone's enumeration of the right of property can be used to identify the incidents, which include "free use, enjoyment and disposal" as well as "control or diminution by the laws of the land."¹⁴⁵ The "bundle" contains more than just rights;¹⁴⁶ even by Blackstone's interpretation, it is more appropriately referred to as a "bundle of sticks."¹⁴⁷

Yet Blackstone and his liberal counterparts viewed property as things. This provided a theoretical underpinning for the abolition of feudalism.¹⁴⁸ According to Thomas C. Grey, in his essay "The Disinte-

¹⁴⁰ MILTON FRIEDMAN, CAPITALISM AND FREEDOM 27 (1962).

¹⁴¹ Thomas Ross, Metaphor and Paradox, 23 GA. L. REV. 1053, 1055-63 (1989).

¹⁴² See Carol M. Rose, Property and Persuasion 280 (1994). "Useful as it is, the bundle has several problems....[I]t suggests that the component entitlements in the bundle are more or less alike....[and] the bundle also metaphorically suggests the sticks' separability." *Id*.

¹⁴⁸ Examples of this concept are delineated as (1) the right to exclude; (2) the right to appropriate the stream of rents; and (3) the right to sell or transfer. *See generally Gary D. Libecap*, Contracting for Property Rights (1989).

 $^{^{144}\,}See\,generally$ Honoré, supra note 12.

¹⁴⁵ Blackstone, supra note 16, at 138.

¹⁴⁶ "By the term Property Right (*ius reali*) should be understood not only a right to a thing (*ius in re*) but also the *sum* of all the principles having to do with things being mine or yours." KANT, *supra* note 7, at 82 (emphasis added).

 $^{^{147}}$ See Cohen, supra note 10, at 21. "To be really effective, therefore the right of property must be supported by restrictions or positive duties on the part of owners, enforced by the state as much as the right to exclude others which is the essence of property." Id.

¹⁴⁸ Thomas C. Grey, The Disintegration of Property, 22 Nomos 69, 74 (1980).

gration of Property," there were three reasons that simple ownership, the ownership of things, dominated liberal thought: (1) "this conception mirrored economic reality"—the items of property during this time period were really things, not intangibles; (2) ideologically, liberalism was an attack on feudalism, "[t]o the rising bourgeoisie, property conceived as a web of relations among persons meant the system of lord, vassal, and serf from which they were struggling to free themselves;" and (3) the "ownership of things by individuals fitted the principal justifications for treating property as a natural right." 149

As we have seen, the concept of property has of late divorced itself from the thing, to an abstraction that is built on Hohfeld's fundamental legal reasoning.

What, then, of the idea that property rights must be rights in things? Perhaps we no longer need a notion of ownership, but surely property rights are a distinct category from other legal rights, in that they pertain to things. But this suggestion cannot withstand analysis either; *most* property in a modern capitalist economy is intangible. . . . Property rights cannot any longer be characterized as "rights of ownership" or as "rights in things" by specialists in property.¹⁵⁰

Grey poses this quandary, which leads him to the conclusion that the concept of property is vacuous and has in effect disintegrated.

We have gone, then, in less than two centuries, from a world in which property was a central idea mirroring a clearly understood institution, to one in which it is no longer a coherent or crucial category in our conceptual scheme. The concept of property and the institution of property have disintegrated.¹⁵¹

J.E. Penner goes even further in his criticism of the metaphor:

The claim I wish to make here is that this "dominant paradigm" is really no explanatory model at all, but represents the absence of one. "Property is a bundle of rights" is little more than a slogan. The use of the word "slogan" is not intended to be merely polemical. By "slogan" I mean an expression that conjures up an image,

 $^{^{149}}$ Id. Grey adds that "Jefferson contrasted the free allodial system of land titles in America with the servile English system of feudal tenure." Id.

¹⁵⁰ Id. at 70–71 (emphasis added). Grey "contends that the 'disintegration' of property ultimately means that property ceases to be an important category in legal and political theory." MUNZER, supra note 1, at 31. In disproving Grey's claim that "[b]ecause of disintegration, property today is not identical with the ownership of material things" Munzer states, "[m]oreover, thinking of property as the ownership of material things is central to property even today. Land and houses are premier examples." Id. at 34.

¹⁵¹ Grey, *supra* note 148, at 74.

but which does not represent a clear thesis or set of propositions. 152

Despite its critics, the bundle of sticks metaphor is so prevalent that its history and justification are often overlooked. The bundle of sticks is the result of the abstraction of property. It moved the definition of property from the things with which it had once connected. The development of the abstraction of property roughly parallels the development of the theory of regulatory takings. This is no accident; regulatory takings need an abstract basis to be justifiable.

¹⁵² Penner, *supra* note 117, at 714.

¹⁵³ "While it is possible to cite similar accounts, a few citations cannot prove the important point—that my presentation does in fact conform to the conventional thinking on the subject." BRUCE A. ACKERMAN, PRIVATE PROPERTY AND THE CONSTITUTION 201 (1977).

¹⁵⁴ In Pumpelly v. Green Bay Co., 80 U.S. 166, 177-78 (1871), compensation was necessary to landowner for physical taking of property by invasion of water, earth, and sand due to construction of a state-authorized dam. This case established the "physical occupation" rule. See id. at 178. In Mugler v. Kansas, 123 U.S. 623, 667 (1887), the Court stated that persons are limited in their "rights" of ownership of real property. In Mugler, a brewery owner was not compensated based on a state law prohibiting him from manufacturing or selling alcohol. Id. The Court found that Mugler suffered no invasion of his land. Id. at 669. The case introduced the "harmful" or "noxious use" concept. In Hadacheck v. Sebastian, 239 U.S. 394, 405 (1915), a city ordinance restricting brick-making within certain areas in a city was found not to be a taking. In Pennsylvania Coal Co. v. Mahon, 260 U.S. 393, 416 (1922), a statute making it unlawful for coal companies to cause the collapse or subsidence of property was found to constitute a taking. This case was the first time that a regulation was struck down. This case is also known for what it did not answer: how far was too far in terms of economic diminution and how is nuisance reconciled with economic diminution. In Miller v. Schoene, 276 U.S. 272, 280 (1928), the Court ruled that red cedar trees on private property could be destroyed to prevent transmission of plant disease. Pennsylvania Cent. Transp. Co. v. New York City, 438 U.S. 104, 130 (1978), considered New York City's landmark statute, in a case involving a proposed office tower to be located atop New York's Grand Central Station. The court applied a three-prong test: (1) was there a physical invasion, see id.;(2) is the restriction reasonably related to the policy, see id. at 136; and (3) has the owner been denied the possibility of earning a reasonable return, see id. at 137. The court ruled there was no taking. See id. at 138. In First English Evangelical Lutheran Church of Glendale v. Los Angeles, 482 U.S. 304, 318 (1987), the Court ruled that the remedy for over-regulation can include an injunction and damage awards. Temporary takings must also be compensated. See id. In Keystone Bituminous Coal Ass'n v. DeBenedictis, 480 U.S. 470, 473-74 (1987), the Court upheld a statute almost identical to the one considered in the Pennsylvania Coal case, and held that protection of the surface land was a valid public purpose. In Nollan v. California Coastal Comm'n, 483 U.S. 825, 828 (1987), a condition appended to a building permit required the Nollans to provide an easement for beach access. The Court ruled that the "condition substituted for the prohibition" failed to further the end which the state of California advanced as the justification for the prohibition. See id. at 837. The court wrote that "unless the permit condition serves the same governmental purpose as the development ban, the building restriction is not a valid regulation of land use but 'an out-and-out plan of extortion." Id. In Lucas v. South Carolina Coastal Council, 505 U.S. 1003, 1027 (1992), the Court held that "[w]here the State seeks to sustain regulation that deprives land of all economically beneficial use, we think it may resist compensation only if the logically antecedent inquiry into the nature of the owner's estate shows that the proscribed use interests were not part of his

The metaphor itself is also somewhat mixed-up. As derived from Aesop, the moral of the fable is "strength in unity," in that it represents metaphorically the strength in unity afforded by the coming together of sticks to constitute a bundle. Therefore, in building up the bundle with various rights there is the appearance of a whole greater than the sum of the parts; nevertheless, in the meaning of property there is recognition of the importance of even small vestiges of rights which existed in spite of the division of the bundle. The notion of the bundle as a metaphor based on Aesop's fable should accordingly be discarded.

The bundle concept is valuable for its notion of divisibility and accumulation of diverse and varying "sticks" that can amount to ownership. There seems to be no fixed formulation for when these incidents rise to the level that some people term ownership. This is perhaps the strong point of the metaphor, rather than a weakness, in that it makes such an inquiry fact-sensitive, and thus subject to the changes society has mandated. This point has been a source of confusion for courts that have tried to use the bundle as a basis for reasoning in various property cases.

What then is the meaning of property? The weight of the sources seems to lie on the side of the abstract bundle of rights theory, which holds that all property is rights, and things are irrelevant. This impacts the thesis herein in two ways: (1) green wood is an effort to remove some of the abstraction from the theory, at least as it regards real property; and (2) within the bundle, the thing is relevant to the green wood stick. This is undoubtedly a subtle distinction, but is not wholly one of semantics. The first impact has to do with the meaning of property; the second refers merely to its incidents. By making this distinction, there is no need to alter the meaning of property, but rather to add to that bundle of sticks for real property a stick that can be identified with the thing. 155 Working within the definition re-

title to begin with." It is this "nature of the owner's estate" to which Justice Scalia refers in the *Lucas* case that is arguably subject to the amount of environmental ethic which society has infused into real property law. In *Dolan v. City of Tigard*, 512 U.S. 374, 377 (1994), the Court considered the appending of a requirement for the building of a bike path and greenway as a condition for a development permit along the floodplain of an adjacent creek. The Court held that an "essential nexus" between legitimate state interest and the permit condition is necessary, and the government must demonstrate the existence of "rough proportionality" between the harm and the burden on the plaintiff. *Id.* at 386, 397–98.

¹⁵⁵ Courts have misconstrued the bundle to be a fixed set of rights, resistant to any alteration. An attempt to quantify the bundle is lampooned in the case of *Evans v. Hogue*, 296 Or. 745 (1984).

quires an understanding of the individual incidents of property, the very rights and duties themselves.

B. The Incidents of Property

Property has its duties as well as its rights.

—Benjamin Disraeli (1845)¹⁵⁶

A recent iteration of the incidents identifies as many as thirteen¹⁵⁷ (adding two to a list of eleven noted by A.M. Honoré).¹⁵⁸

- 1. The right to possess;
- 2. The right to use;
- 3. The right to manage;
- 4. The right to the income;
- 5. The right to consume or destroy;
- 6. The right to modify;
- 7. The right to alienate;
- 8. The right to transmit;
- 9. The right to security;
- 10. The absence of term;
- 11. The prohibition of harmful use;
- 12. Liability to execution;
- 13. Residuary rules. 159

We pause here to point out that the dissent by Justice Campbell arbitrarily has determined that a bundle of sticks is made up of ten. It also contends, without authority, that when Sampsons conveyed to Luckeys, Sampsons retained 9.5 of those sticks, a figure representing Sampsons' "whole title less the oral rights of possession," and Luckeys, even with rights of possession, gained only 0.5 of the sticks. We have found authority, albeit somewhat out of date and admittedly unshepardized, for a different division of sticks. That authority states: "Possession is eleven points of the law and they say there are but twelve." Ray, Proverbs (1678), quoted in McNamara, 2,000 Famous Legal Quotations 451 (1967). The dissent by Justice Campbell is wrong. Clearly, there are twelve sticks in a bundle; Luckeys had eleven and Sampsons had one.

Id. at 756 n.6.

 $^{^{156}\,}See$ John Bartlett, Bartlett's Familiar Quotations 434 (1968) (attributing quotation to Benjamin Disraeli and to Thomas Drummond).

¹⁵⁷ See Becker, supra note 18, at 190-91.

¹⁵⁸ The list expands one of Honoré's incidents, the "right to capital," into three: (5) the right to consume or destroy; (6) the right to modify; and (7) the right to alienate. See id. at 191 n.10.

¹⁵⁹ See id. at 190-91. The thesis of the author emphasizes both the growth of the "prohibition of harmful use" based on the science of ecology and the increased understanding of the results of actions on the land, and the addition of a stick, which the author has coined the "duty of environmental context." That duty is defined as one which mandates that the basic environmental context of land be preserved in accordance with environmental ethics.

The list is more an attempt at explanation than at codification of the incidents of property, and is clearly subject to substantial interpretation. One underlying issue, which is touched upon by Honoré, is whether all the incidents are essential in comprising the fullest possible estate. If such is the case, then what of limitation placed on a particular incident? Honoré first states that they are not essential: "But the listed incidents are not individually necessary, though they may be together sufficient, conditions for the person of inherence to be designated 'owner' of a particular thing in a given system." But, Honoré then retracts ever so slightly from that position by stating "[t]he interest of which the standard incidents have been depicted is usually described as the *greatest* interest in a thing recognized by the law and is contrasted with lesser interests...." This breeds innate confusion between the incidents of the full owner and those with lesser interests, to which Honoré offers no solution.

The right to (1) possess, or the right to exclusive physical control, includes the highly touted right to exclude, which has been noted as the most important right in the entire bundle. In Loretto v. Teleprompter Manhattan CATV, the Supreme Court wrote that "[p]roperty rights in a physical thing have been described as the rights to possess, use and dispose of it." The Loretto case held that the physical invasion of property by the passage of a cable television wire entitled the owner to compensation.

The right to (2) use, the right to (3) manage, and the right to (4) income are similar in that they describe the enjoyment of the property. The owner's right to use is mentioned in the case of $Babbitt\ v$. Youpee. The right to manage, a part of the right to use, is the

¹⁶⁰ Honoré, supra note 12, at 112.

¹⁶¹ Id. at 124 (emphasis in original).

¹⁶² See Kaiser Aetna v. United States, 444 U.S. 164, 179-80 (1979).

¹⁶³ Loretto v. Teleprompter Manhattan CATV Corp., 458 U.S. 419, 435 (1982) (quoting United States v. General Motors Corp., 444 U.S. 51, 65–66 (1979)).

¹⁶⁴ In framing the issues in the case, the Court stated:

This case presents the question whether a minor but permanent physical occupation of an owner's property authorized by government constitutes a "taking" of property for which just compensation is due under the Fifth and Fourteenth Amendments of the Constitution. New York law provides that a landlord must permit a cable television company to install its cable facilities upon his property. In this case, the cable installation occupied portions of appellant's roof and the side of her building. The New York Court of Appeals ruled that this appropriation does not amount to a taking. Because we conclude that such a physical occupation of property is a taking, we reverse. Loretto, 458 U.S. at 421 (citations omitted).

^{165 &}quot;The United States also contends that amended § 207 satisfies the Constitution's demand

incident that allows the owner the power to make decisions about the property. The right to income consists of the benefits derived from the property. In *Commissioner v. Estate of Church*, the Supreme Court noted the importance of the right to income, "the grantor's reservation of the trust income for his life—[was] one of the chief bundle-of-ownership interests"168

The right to capital, which Honoré mentions, contains the rights to (5) consume or destroy; to (6) modify; and to (7) alienate. The right to consume has been construed as the "right to 'use, enjoy, or occupy."¹⁶⁹ But it has also been held that the right to use and income can be separated from the right to consume. ¹⁷⁰ The right to destroy would seem to encompass complete consumption of the property, and would thereby be a logical extension of the right to consume and therefore the right to use. ¹⁷¹ The right to modify would seem to be a lesser included right in the right to use. ¹⁷² The right to alienate is the right to sell or otherwise dispose of the property. "The right to alienate is an important element of ownership." ¹⁷³ The right to alienate implies inter vivos transfer of the property, as opposed to (8) the right to transmit, which is associated with testamentary transfers. ¹⁷⁴ In Irving

because it does not diminish the owner's right to use or enjoy property during his lifetime, and does not affect the right to transfer property at death through non-probate means." Babbit v. Youpee, 117 S.Ct. 727, 733 (1997).

¹⁶⁶ See Wheeling Dollar Sav. & Trust Co. v. Yoke, 204 F.2d 410, 413 (4th Cir. 1953).

The crucial question is whether the settlor of the trusts retained so much of "the bundle of rights" that make up ownership of property as to justify the District Court in concluding that he continued to be the owner of the property... the right to sell the property at any price he might determine, the right to reinvest the proceeds in any property he might think desirable, the right to rent the property for terms of any duration, and the right to borrow money and secure the loan by mortgage of the property; in other words... the right to manage....

Id. at 412-13.

¹⁶⁷ See id. at 413.

¹⁶⁸ Commissioner v. Estate of Church, 335 U.S. 632, 641 (1949). See also Fidelity-Philadelphia Trust Co. v. Smith, 356 U.S. 274, 279 (1958).

¹⁶⁹ Phinney v. Kay, 275 F.2d 776, 779 (5th Cir. 1960).

¹⁷⁰ See Bell v. Harrison, 212 F.2d 253, 254 (7th Cir. 1954).

¹⁷¹ See United States v. Virginia Elec. & Power Co., 365 U.S. 624 (1960). "That compensation would not include the hydroelectric power value, but it would embrace [the Power Company's] property right to destroy the value of the lands for agricultural and forestry purposes." *Id.* at 634 (alteration in original).

¹⁷² Cases with respect to modification arise when that right is retained, usually with regard to a trust. *See* United States v. Gordon, 406 F.2d 332, 339 (5th Cir. 1969); Commissioner v. Chase Manhattan Bank, 259 F.2d 231, 235 (5th Cir. 1958).

 $^{^{173}}$ United States v. Hawkins County, No. 85-5533, 1987 WL 36584, at *2 (6th Cir. Jan. 8, 1997) (unpublished disposition).

¹⁷⁴ Becker, *supra* note 18, at 191.

Trust v. Day, the Supreme Court refers to the right to transmit the property of a testator, but holds that "[n]othing in the Federal Constitution forbids the legislature of a state to limit, condition, or even abolish the power of testamentary disposition over property within its jurisdiction." Honoré calls the right to transmit an incident rather than a right, since it does not necessarily depend on the holder's choice. This is also related to (10) the absence of term, which implies that the rights will last beyond the owner's death.

Becker defines the right to (9) security as "immunity from expropriation,"177 but Honoré notes that "a general right to security, availing against others, is consistent with the existence of a power to expropriate or divest in the state or public authorities."178 Honoré continues to claim that a general right to expropriate is inconsistent with the "institution of ownership" even when compensation is paid. 179 The incident (12) liability to execution is related to the right of security, and is a part of property for the purpose of allowing the "growth of credit"180 and the institution of secured transactions to flourish. When one examines the incidents that have been instituted for the purpose of fostering societal progress, the liability to execution is perhaps the most blatant attempt at a severe limitation to property rights, calculated to achieve its goal. It is in this context that Honoré asks the rhetorical question, "[W]hether any other limitations [in addition to the liability to execution] on ownership imposed in the social interest should be regarded as among its standard incidents."181 Although Honoré fails to answer his own question, I will attempt to do so by justifying the green wood incident.

In a property ownership institution, which is based on either law or contract, it is manifest that authority, if democratically based, must arise from the consensus of the people, which takes the form of government.

The government of the Union, then (whatever may be the influence of this fact on the case), is, emphatically and truly, a government of the people. In form, and in substance, it emanates

¹⁷⁵ Irving Trust Co. v. Day, 314 U.S. 556, 562 (1942).

¹⁷⁶ See Honoré, supra note 12, at 121.

¹⁷⁷ Becker, *supra* note 18, at 191.

¹⁷⁸ Honoré, supra note 12, at 119.

¹⁷⁹ Id.

¹⁸⁰ Id. at 123.

¹⁸¹ Id.

from them. Its powers are granted by them, and are to be exercised directly on them, and for their benefit.¹⁸²

In this sense, the government is both the grantor of property rights and its guarantor. This arrangement has been subject to reciprocal rights and duties, such as taxation, that can be imposed on property. Taxation of property can be seen as a forfeiture of the property, and as such would be inapposite to Honoré's claim that a general power to expropriate is an anathema to property institutions. To conclude thus, he has created the fictive distinction between condemnation and taxation. As has been said, however, "the power to tax involves the power to destroy." We have institutionalized property taxes, and to ignore this *de facto* incident of property is more than an oversight—it is an intentional effort to systematically exclude societal obligations from nominal presence in the bundle. Becker concedes that elements such as taxation and condemnation could be limitations on certain incidents; he does not go so far as to designate them as such. 184 Honoré admits that a strong case could be made for the inclusion of either in

¹⁸² McCulloch v. Maryland, 17 U.S. 316, 405-06 (1819).

If any one proposition could command the universal assent of mankind, we might expect it would be this—that the government of the Union, though limited in its powers, is supreme within its sphere of action. This would seem to result, necessarily, from its nature. It is the government of all; its powers are delegated by all; it represents all, and acts for all. Though any one state may be willing to control its operations, no state is willing to allow others to control them. The nation, on those subjects on which it can act, must necessarily bind its component parts. But this question is not left to mere reason: the people have, in express terms, decided it, by saying, "this constitution, and the laws of the United States, which shall be made in pursuance thereof," "shall be the supreme law of the land," and by requiring that the members of the state legislatures, and the officers of the executive and judicial departments of the states, shall take the oath of fidelity to it. The government of the United States, then, though limited in its powers, is supreme; and its laws, when made in pursuance of the constitution, form the supreme law of the land, anything in the constitution or laws of any state to the contrary notwithstanding.

Id.

¹⁸³ Id. at 431.

That the power to tax involves the power to destroy; that the power to destroy may defeat and render useless the power to create; that there is a plain repugnance in conferring on one government a power to control the constitutional measures of another, which other, with respect to those very measures, is declared to be supreme over that which exerts the control, are propositions not to be denied. But all inconsistencies are to be reconciled by the magic of the word *confidence*. Taxation, it is said, does not necessarily and unavoidably destroy. To carry it to the excess of destruction would be an abuse, to presume which, would banish that confidence which is essential to all government.

Id. See also Atherton v. FDIC, 117 S. Ct. 666 (1997).

¹⁸⁴ See Becker, supra note 18, at 191.

the bundle, but balks at their enumeration, making the rather broad concession that "perhaps, a characteristic of ownership that the owner's claims are ultimately postponed to the claims of the public authority, even if only indirectly, in that the thing owned may, within defined limits, be taken from the owner in order to pay the expenses of running the state or to provide it with essential facilities." ¹⁸⁵

An examination of this statement reveals that Honoré does understand the necessity of governmental limitations on property rights, and that these limitations may be expressed in terms of the incidents of ownership. His reference to "essential facilities" would aptly cover the need of society to preserve the environmental context of land. The concept of environmental context is alluded to in the case of *Just v. Marinette County*, 186 in which the court states that a landowner "has no absolute and unlimited right to change the essential natural character of his land so as to use it for a purpose for which it was unsuited in its natural state and which injures the rights of others." The environmental context is the essential character of the land referred to in *Just*.

The basis for his acquiescence to the existence of this incident is the understanding that like taxation, governmental limitation of property rights is firmly grounded on the need to maintain the very authority that grants and guarantees the property rights in the first instance. Contrary to this assertion, Professor Richard A. Epstein would, with a certain degree of consistency, lump taxation and regulation together as actions by government which trigger compensation. "All regulations, all taxes, and all modifications of liability rules are takings of private property prima facie compensable by the state." In making this argument Epstein first focuses on government "pitted against isolated individuals who assert that their property has been taken," and relying on Locke claims that taxation, regulation, and modifications of liability "are amenable to the same form of analysis as garden variety takings of land; they cannot be kept in a watertight compartment separate from takings of private property." 190

¹⁸⁵ Honoré, supra note 12, at 124.

¹⁸⁶ Just v. Marinette County, 201 N.W.2d 761 (Wis. 1972).

¹⁸⁷ Id. at 768.

¹⁸⁸ RICHARD A. EPSTEIN, TAKINGS: PRIVATE PROPERTY AND THE POWER OF EMINENT DOMAIN 95 (1985).

¹⁸⁹ Id. at 93.

¹⁹⁰ Id.

Epstein's overwhelming reliance on Locke is both misplaced and erroneous. It is misplaced in that it assumes the dominance of the Lockean theories of property throughout American history. "During most of the nineteenth century, individualism was balanced with more community-oriented republican and commonwealth thinking; Locke's theory of property was dominant only during the *Lochner* era." The *Lochner* era represents what Professor Cass Sunstein notes was an era in which "the police power could not be used to help those unable to protect themselves in the marketplace." It is erroneous in that Locke himself acknowledges otherwise. Even Locke recognizes the necessity of taxation as a limitation on property rights. "It is true, governments cannot be supported without great charge, and it is fit everyone who enjoys his share of the protection should pay out of his estate his proportion of the maintenance of it." 198

The inclusion of taxation in this argument seems to be a fatal flaw in its logic; all but the anarchist value government to some degree, however small, and recognize the necessity to pay for its services, however few. That taxation is a taking inures to the fact that the government must be compensated at some point for its "givings." Moreover, the actions taken by government, whether taxation, regulation, or changes to common law liability rules, can be seen alternatively as the government acting as the amalgam of other private citizens, private property owners whose property rights the government is championing. This can be seen from Epstein's example of the filling of a wetland. "That wetlands are preserved only identifies a possible gain to the public; it does not eliminate the constitutional obligation."194 This observation demonstrates a fundamental misstatement of ecological reality as well as a slanted view of property. Filling a wetland affects the private property rights of every single landowner whose land, in proximity to that wetland, ultimately will be affected. The fact that the government is acting on behalf of those landowners, through the lawful mandates of their representative government, does not invoke a constitutional question. The potential

¹⁹¹ Myrl L. Duncan, Property as a Public Conversation, Not a Lockean Soliloquy: A Role for Intellectual and Legal History in Takings Analysis, 26 Envtl. L. 1095, 1159 (1996) (citing Lochner v. New York, 198 U.S. 45 (1905)).

 $^{^{192}}$ Sunstein, supra note 78, at 880. Sunstein notes, however, that this is an oversimplification. See id.

¹⁹³ 5 JOHN LOCKE, WORKS 421 (1823) (Aalen, Ger.: Scientia Verlag, 1963) [hereinafter 5 LOCKE, WORKS].

¹⁹⁴ Epstein, *supra* note 188, at 123.

wetland filler is the one who is contemplating a taking, not those affected thereby.

The (11) prohibition against harmful use is primarily based on nuisance principles that prohibit the use of one's property in harming another. The Supreme Court's heavy emphasis on the law of nuisance in the case of *Lucas v. South Carolina Coastal Council*, as a justification for a taking even when all value is eliminated from the subject property, gives credence to the importance of this incident. Important among these thirteen incidents, for purposes of this discussion, the prohibition against harmful use would seem to prevent action on one's property that would harm the ecosystem. The affirmative imposition of this duty can be used as a basis for the prohibition of activities that would otherwise have been legal. Because lawful uses could produce harmful results, the prohibition allows for the limitation of those uses. These conceivably could include the development of wetlands, and other uses which are based on ecological principles.

This duty imposed upon the owners would also seem on its face to directly contradict the aforementioned right to consume or destroy. This dichotomy can be explained by the divergent focus of the conflicting incidents. Harmful use connotes harm of others off the property; the right to consume or destroy is limited to the bounds of the property and represents the owners' right to diminish the value of their property, but without external effects. Can the right to consume or destroy be reconciled with the principles of ecology, which emphasize the relationship between the uses of one property and the effects on another? Although many scenarios can be constructed which afford the owner the ability to "consume or destroy" without external effects, the increased understanding of ecology must act to minimize the right to prevent the harmful effects of that consumption or destruction. The laws of subjacent and lateral support as well as nui-

¹⁹⁵ See Lucas v. South Carolina Coastal Council, 505 U.S. 1003, 1031–32 (1992).

¹⁹⁶ According to Penner, "[r]ather than being an incident of property, the 'prohibition of harmful use' merely indicates the existence of basic prohibitions against acting maliciously or carelessly to harm others." Penner, *supra* note 117, at 761. If this were the case, no mention of the prohibition would be necessary, as such act would be covered wholly by nuisance.

¹⁹⁷ See, e.g., In re Spring Valley Dev., 300 A.2d 736, 746 (Me. 1973).

It seems self-evident in these times of increased awareness of the relationship of the environment to human health and welfare that the state may act—if it acts properly—to conserve the quality of air, soil and water.

To do so the State may justifiably limit the use that some owners may make of their property. Our law has long recognized that a landowner holds his property subject to the limitation that he may not use it to the serious disadvantage of the public.

sance laws act to protect the interest of those who would exercise the right to destroy in derogation of their duty to avoid harmful use. 198

C. Ownership and the Incidents

There is no magic in the term "owner," because that concept ebbs and flows depending on the incidents owned and the degree of dominion available in a particular society. The owner under Roman law would merely hold a usufruct interest, perhaps greater than other citizens, but wholly subject to the sovereign. Ownership of soil in the provinces of the Roman Empire was "occupied by the title of usufruct." While literally the "right of enjoying a thing," the nature of usus fructus in Greek and Roman law is limited to the right to use, without the full ownership implied by dominium. "Usufruct is the right of using and taking the produce of another's property, without altering the substance, for it is a right over the substance, and, if this perish, the usufruct itself necessarily disappear also." A literal analogy might be drawn from a fruit tree, the fruits of which a usufruct is entitled to, but not the incidents of the tree itself.

A feudal interest might appear as ownership, with regard to the rest of the world, yet that interest would be subject to the duties and services that were appurtenant to the interest and due to the lord. Currently an owner might be subject to a mortgagee's interest, or the right of possession of a tenant. The term "owner" is therefore somewhat amorphous, and should be considered a relative measure of one's interest in property rather than an absolute.

The malleability of the incidents of property is a testament to the fact that ownership is a matter of degree. In his essay *The Moral Basis of Property Rights*, Lawrence Becker differentiates between the full-ownership concept with which Honoré begins his analysis and the term "property rights." This is a key distinction, which tends to dilute the importance of the bundle and focus on the sticks. Never-

¹⁹⁸ With regard to the interplay between rights and duties, see generally Wesley N. Hohfeld, Some Fundamental Legal Conceptions as Applied in Judicial Reasoning, 23 YALE L.J. 16 (1913). See also John Stuart Mill, Collected Works of John Stuart Mill 199 (John M. Robson ed., 1984).

¹⁹⁹ DE LAVELEYE, supra note 15, at 338.

²⁰⁰ HENRY CAMPBELL BLACK, BLACK'S LAW DICTIONARY 1384 (Joseph E. Nolon & M.J. Connolly eds., 5th ed. 1979) [hereinafter Black's 1979].

 $^{^{201}}$ Just. II \S 1 in 3 Gaius, The Institutes of Gaius and Justinian (T. Lambert Mears trans., 1882); see also Just. II $\S\S$ 2–4, in 4 Gaius, The Institutes of Gaius and Justinan (T. Lambert Mears trans., 1882).

²⁰² Becker, supra note 18, at 192.

theless, the current conception of property in the United States is consistent with Becker's view of the importance of the incidents and the minimal import of the bundle. According to Bruce A. Ackerman, "[f]or the legal Scientist, the cardinal sin is to discriminate among property bundles and declare that some contain the essential rights of property while others do not. . . . While the Scientist recognizes that some bundles contain more rights than others, all are equally property bundles."²⁰³

Case law bears out this conclusion. In Kaiser Aetna v. United States, the Court points to a particular stick, noting that petitioner still can enjoy other attributes of ownership, such as the right to exclude others, "one of the most essential sticks in the bundle of rights that are commonly characterized as property." In Keystone Bituminous Coal Association v. DeBenedictis, the Court determined that the "support estate" was "merely a part of the entire bundle of rights possessed by the owner." In Dolan v. City of Tigard, the court found that the right to exclude others is "one of the most essential sticks in the bundle of rights that are commonly characterized as property." 206

Becker expounds upon this by identifying the rights in the bundle and noting that they are the property rights that can stand alone.²⁰⁷ This creates a dichotomy between rights and duties, rendering the bundle itself meaningless. One can strip away some of the rights from the bundle, and one could strip away some of the duties, but with each right a correlative duty must remain. The nature of the bundle is that it contains the Hohfeldian incidents that Honoré and Becker have described.²⁰⁸ The only way to maintain the importance of the bundle is to emphasize the relativity of the rights and duties.

In identifying a correlative duty to the rights to use,²⁰⁹ manage, and modify, the idea of a duty of maintaining the environmental context

²⁰⁸ Ackerman, supra note 153, at 116.

²⁰⁴ Kaiser Aetna v. United States, 444 U.S. 164, 176 (1979).

²⁰⁵ Keystone Bituminous Coal Ass'n v. DeBenedictis, 480 U.S. 470, 501 (1987).

²⁰⁶ Dolan v. City of Tigard, 512 U.S. 374, 384 (1994).

²⁰⁷ Becker, supra note 18, at 192.

²⁰⁸ The incidents that Honoré and Becker have described reflect their enumeration of the rights and some of the correlative duties that Hohfeld's analysis could identify. It is arguable that for each right a correlative duty could be enumerated.

²⁰⁹ "[T]here are no laws *merely* creating *rights*. There are laws, it is true, which *merely* create duties But every law, really conferring a right, imposes expressly or tacitly a *relative* duty, or a duty correlating with the right." John Austin, The Province of Jurisprudence Determined, 33–34 (Wilfred E. Rumble ed., 1995) (emphasis added) [hereinafter Austin, Province].

might be appropriate, provided that the societal interest of such a duty is demonstrated.²¹⁰ Such a duty would require the assessment of the environmental impacts of the assertion of such rights, and have a substantive requirement to maintain the context that was determined to be appropriate under the fact-heavy circumstances. This stick of environmental context would be the one stick that would be firmly rooted in the property to which it was appended. In that sense, it would be closely tied to the thing, the actual plot of land, or the *res*.²¹¹

The bundle of sticks that has become emblematic of ownership has become theoretical to a fault, and that fault is the exclusion of the res, the thing, from analysis. ²¹² Because the very essence of real property is unique, and is governed by rules of nature that transcend the incidents of ownership, the failure of the bundle to be tied to the ground makes the unique nature of a parcel of land irrelevant to its disposition. This disconnection with reality has resulted in such misguided decisions as Lucas, ²¹³ that view land as fungible and interchangeable because the bundle of rights are transcendent. ²¹⁴

 $^{^{210}}$ This will be attempted infra, in the sections on Environmental Ethics, Ecology, and Green Wood.

 $^{^{211}}$ Honoré, supra note 12, at 128–34. Honoré doesn't relegate the discussion of "things" to blasphemy, as do some of his colleagues, as he writes:

[[]T]he force of the proposal is a protest against the habit of thinking of the ownership of a thing, particularly a material object, as if it consisted only in a relation between a person and a thing, and not at all in relations between the owner and other persons. Yet to speak always of owning rights rather than things would be doubly misleading. Ownership, as we have seen, is not just a bundle of rights, as it is no help towards understanding our society to speak as if it were. Secondly, the idiom which directly couples the owner with the thing owned is far from pointless; where the right to exclude others exists, there is indeed (legally) a very special relation between the holder of the right and the thing, and this is a rational way of marking it.

Id. at 134 (footnote omitted).

 $^{^{212}}$ But see Penner, supra note 117, at 733. "No one has ever produced a general description of the incidents of property which transcend a reliance, either explicitly or implicitly, on an underlying relation between the property owner and the "thing' he owns." Id.

²¹³ Lucas v. South Carolina Coastal Council, 505 U.S. 1003 (1992).

 $^{^{214}}$ See id. at 1029–31. The absence of these considerations in the context of a "takings" case is dramatized by the following description of the land considered by the Lucas Court:

The land at issue in Lucas is virtually a mirage. The property is immediately adjacent to the shore, with no natural barrier to separate the proposed construction sites from the ocean. Subject to the daily action of the tide and erosion from storms, the shifting sands of Lucas' beach are no more static than the waters that constantly transform them. Both of Lucas' lots were entirely under water as recently as 1963, and partially covered by ocean ponds as late as 1973. Further, due to competing forces of accretion and erosion, the shoreline has been forward of Lucas' seaward property line 50 percent of the time since 1949, and landward of the road behind Lucas' lots 15 to 20 percent of the time over that same period.

The idea of property—or, if you prefer, the sophisticated or legal conception of property—involves a constellation of Hohfeldian elements, correlatives, and opposites; a specification of standard incidents of ownership and other related but less powerful interests; and a catalog of "things" (tangible and intangible) that are subjects of these incidents.²¹⁵

The uniqueness of real property is justifiable, as was the uniqueness of persons who were held as slaves: property. Without consideration of the res there is no distinction between the slave and the rest of the farm implements. In the case of slavery there was a moral, as well as a legal, obligation to look to the res, and distinguish it (them) from mere property. While the need for a moral basis to justify the consideration of real property as a "thing" is less compelling than that with regard to human slavery, the moral basis is afforded by the environmental ethic. The physical distinction is afforded by the understanding of both the interconnected nature of land and its identification as a living ecosystem.216 If you consider the land as the res. the title only includes those incidents that are (1) physically feasible, and (2) societally permissible. Those incidents that are physically feasible are bounded and governed by the science of ecology. Those incidents that are societally permissible are restricted by the environmental ethics which that society has either implicitly or explicitly adopted. This interpretation is facilitated by the fact that the land has certain characteristics that are unique and intractable.

IV. Environmental Ethics

Recognition of the importance of the natural environment and its value, both innate and economic, is a trend that has blossomed since the early 1960s.²¹⁷ This recognition is perhaps partially the legacy of

Richard J. Lazarus, Putting the Correct "Spin" on Lucas, 45 STAN. L. REV. 1411, 1422 (1993) (citations omitted).

²¹⁵ MUNZER, *supra* note 1, at 23 (emphasis added).

²¹⁶ Unlike the abolition of slavery, which is recognition of the humanity and the rights of human beings, no claim is made herein for a recognition of the rights of nature. For such a claim see generally RODERICK NASH, THE RIGHTS OF NATURE (1989) [hereinafter NASH, NATURE]; CHRISTOPHER STONE, SHOULD TREES HAVE STANDING?—TOWARDS LEGAL RIGHTS FOR NATURAL OBJECTS (1974).

²¹⁷ This date is chosen arbitrarily from the year of publication of Rachel Carson's seminal book Silent Spring. Carson, supra note 76. Professor David Sive, the "Father of Environmental Law," links the birth of the contemporary environmental movement to three events: (1) the Storm King Mountain case, Scenic Hudson Preservation Conference v. Federal Power Commission, 354 F.2d 608 (2d Cir. 1965); (2) the publication of SILENT Spring; and (3) the Wilderness Act of 1964 (16 U.S.C. § 1131). Interview with Professor David R. Sive (May 6, 1997).

(1) a rich literary heritage²¹⁸ underscored by such prescient thinkers as Henry David Thoreau, Aldo Leopold, and Rachel Carson;²¹⁹ (2) the growth of the science of the natural environment—ecology;²²⁰ and (3) the horrifying legacy of two centuries of mindless exploitation of the natural environment.²²¹ To a large extent, this recognition was the impetus for environmental laws and regulation, which have been punctuated over the past thirty-five years by both tremendous successes²²² and abject failures.²²³ Behind these efforts is a developing body of moral principles that consider the natural environment and the role of humans within it. This body of moral principles is denominated "environmental ethics."

The concept of environmental ethics is evolving and has been molded by cultural, social, and scientific factors. The science of ecology has been the most significant factor in the development of environmental ethics over the course of the last century. "In scientific terms, ecologists explained the rather evident fact that humans are dependent on other species for energy and nutrition." This work is not intended as an effort to come up with a new definition of environmental ethics, but rather to identify the core values comprising environmental ethics, to demonstrate how those values have become ingrained into the fabric of our society, and thereby to illustrate how they can be infused into real property laws. Because values do become part of the common law it is necessary to elaborate those values.

²¹⁸ See Nash, Wilderness, supra note 30, at 44–66 ("Appreciation of wilderness began in the cities. The literary gentlemen wielding a pen, not the pioneer with his axe, made the first gestures of resistance against the strong currents of antipathy.").

²¹⁹ See generally Paul Brooks, Speaking for Nature (1980).

²²⁰ See Don E. Marietta, Jr., *The Interrelationship of Ecological Science and Environmental Ethics*, 1 Envtl. Ethics 195, 197 (1979) ("The basic concept behind an ecological ethic is that morally acceptable treatment of the environment is that which does not upset the integrity of the ecosystem as it is seen in a diversity of life forms existing in a dynamic and complex but stable interdependency.").

²²¹ But see generally Gregg Easterbrook, A Moment on the Earth (1995); Ronald Bailey, The True State of the Planet (1995); Ronald Bailey, Eco-scam: The False Prophets of Ecological Apocalypse (1993); Ben Bloch & Harold Lynch, Apocalypse Not (1993).

²²² See, e.g., Averting a Death Foretold, NEWSWEEK, Nov. 28, 1994, at 72 (author unattributed).

²²³ See generally Donald Stever, Experience and Lessons of Twenty-Five Years of Environmental Law: Where We Have Been and Where We Are Headed, 27 Loy. L.A. L. Rev. 1105 (1994).

²²⁴ Eric T. Freyfogle, Justice and the Earth: Images for Our Planetary Survival 10–11 (1993).

²²⁵ See generally J. Baird Callicott, Elements of the Environmental Ethic: Moral Considerability and the Biotic Community, 1 ENVIL. ETHICS 71 (1979).

Defining environmental ethics²²⁶ is difficult because it is a value, and is therefore implicitly subjective.²²⁷ It is only when the environmental ethic is taken from the science of ecology that a more objective definition can be fashioned. The heritage of the American Indian is an important precursor to a land ethic. "The people needed the land and each other too much to permit wanton accumulation and ecological impairment to the living source of nourishment."²²⁸ The American Indian on the North American continent was a vestige of the subsistence cultures from which the settlers had long since emerged. Their experience in the practical application of the land ethic has largely been ignored.²²⁹

History demonstrates a lack of regard for nature, some of which is attributable to the failure of "civilized" cultures to understand the patterns and processes of nature. Perhaps paradoxically, that understanding was fostered both by the "primitive" practice of subsistence cultures and the "modern" study of ecology. Religious beliefs have often affected the degree of stewardship that humans extended over their natural surroundings. Some American Indian beliefs²³⁰ in deities associated with the earth fostered the fledgling environmental ethic of the American Indians. Examples include the Sioux concept of the "Great Spirit and of the Earth Mother and the family-like relatedness of all creatures"²³¹ "American Indian cultures provided their members with an environmental ethical *ideal*."²³²

For some, beliefs in an omnipotent deity that exercises power over nature have limited the human responsibility for nature. These beliefs

²²⁶ The term "environmental ethics" is used interchangeably with the term "land ethics."

²²⁷ See generally Holmes Rolston III, Are Values in Nature Subjective or Objective?, 4 Envtl. Ethics 125 (1982).

 $^{^{228}}$ Frank Pommersheim, Braid of Feathers: American Indian Law and Contemporary Tribal Life 14 (1995).

²²⁹ See generally Luther Standing Bear, The Land of the Spotted Eagle (1933); John Niehardt, Black Elk Speaks (1932).

²³⁰ Obviously one cannot (and should not) generalize about the beliefs (actions, etc.) of any group.

²³¹ J. Baird Callicott, *Traditional American Indian and Western European Attitudes Toward Nature: An Overview*, 4 ENVTL. ETHICS 293, 302 (1982). Callicott characterizes this as "nearly a universal American Indian idea." *Id.* at 303.

²³² Id. (emphasis supplied). Callicott notes that there is a question regarding the motivation for American Indians which manifested itself in this ideal. In doing so he clearly lays out the issue of motivation in terms of competing philosophical camps.

Following [David] Hume [(1711–1776)], I am willing to label behavior toward nature "ethical" or "moral" which is motivated by esteem, respect, regard, kinship, affection, and sympathy; Kant, on the other hand, regarded all behavior motivated by "mere inclination" (i.e., sentiment or feeling), however unselfish, as lacking genuine moral

may have obscured the role of humans in stewardship and fostered complacency about the human environment. The advent of evolutionary theory, and importantly, the fitting of that theory within the context of widespread religious beliefs, allowing for its acceptance by religions and its juxtaposition with religion, has promoted the recognition of human intervention and human stewardship as the primary tools to maintain the environment.

Key to the movement toward an environmental ethic have been the writings (and deeds) of prescient thinkers, such as George Perkins Marsh (1801–1882),²³³ Ralph Waldo Emerson (1803–1882),²³⁴ John Burroughs (1837-1921),235 and John Muir (1838-1914),236 who adopted environmentally ethical views long before it fit within the popular metaphor following the widespread acceptance of Darwinism. The ecological wisdom that characterizes the writings of Henry David Thoreau (1817-1862) now stands as a beacon, although he and likeminded thinkers were largely ignored, if not scoffed at, by a world bent on industrial progress. Nonetheless, environmental ethics could not exist in the absence of a basic understanding of ecology, and ecology could not exist as a science without the acceptance of an evolutionary theory.²³⁷ In the case of Thoreau, it can be persuasively argued that he understood and accepted the evolutionary theories necessary to develop his understanding of ecology. This prescience, however, was extremely rare in the early nineteenth century, and therefore was absent in the early evolution of common law, as well as in the institution of constitutional law in the late eighteenth century in the newly formed United States of America.

One can only speculate what provisions would have been included in a U.S. Constitution drafted with principles of environmental ethics in mind. There are, however, clear indications of the role that regulations of real property played in the colonial period. During that period, property ownership concepts contained certain positive societal re-

worth. For Kant, to be counted as ethical an action must be inspired solely by unsentimental duty toward some abstract precept, some categorical imperative, issued by pure reason unsullied by any empirical content.

 $[\]emph{Id}.$ I openly embrace the Humean view with regard to the construction of an environmental ethic.

²³³ See generally George Perkins Marsh, Man and Nature (1864).

²³⁴ See generally Ralph Waldo Emerson, Nature/Ralph Waldo Emerson: A Facsimile of the First Edition (1985).

²³⁵ See generally John Burroughs, Ways of Nature (1905).

²³⁶ See generally John Muir, The Yosemite (1912).

²³⁷ See Freyfogle, supra note 225, at xvi.

sponsibilities, rather than an absolute right to do anything the owner wished to the property.²³⁸ "[P]eople could not use their property in a manner that was inconsistent with the community's ethical standards, or its economic needs."²³⁹ The nature of that stewardship was molded to reach societal goals,²⁴⁰ and to afford the community protection from external harm. There were town herds of cattle, and regulations requiring the maintenance of fences about fields and meadows.²⁴¹

Much of the modern study of environmental ethics is based on the writings of Aldo Leopold (1886–1948),²⁴² particularly on his essay "The Land Ethic."²⁴³ His ethic has been drawn from his bold statement that "[a] thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise."²⁴⁴ While simplistic in its message, this single statement has been the subject of dozens if not hundreds of scholarly articles,²⁴⁵ and is itself perhaps the *raison d'être* for the scholarly journal *Environmental Ethics*.²⁴⁶

Leopold's reference to the "integrity, stability, and beauty of the biotic community"²⁴⁷ is clearly a reference to "an ecosystem, and its capacity to withstand change or stress."²⁴⁸ Environmental ethics is

[c]ommunities intruded on the property of individuals in many ways.... One who had title to the land on which a road was built would, of course, receive damages for his resulting costs and inconveniences.... The building of a road, however, was the only restriction on the use of private property that resulted in compensation in the form of damages. Many other restrictions imposed on land for the public benefit were uncompensated.

Id.

²³⁸ See id. at 1281.

²³⁹ Nelson, supra note 37, at 52.

²⁴⁰ Prior to 1776:

 $^{^{241}}$ See Herbert L. Osgood, The American Colonies in the Seventeenth Century 433, 456 (1904).

²⁴² See generally Curt Meine, Aldo Leopold: His Life and Work (1988).

²⁴⁸ See LEOPOLD, supra note 32, at 237-64.

²⁴⁴ Id. at 262.

²⁴⁵ See generally Robert J. Goldstein, Research Guide: A Bibliographic Reference for Focused Legal Research on Real Property Ownership, Ecology and Environmental Ethics (on file with author).

²⁴⁶ While this is clearly not the stated purpose, the writings of Leopold are referenced in nearly every issue of the journal.

²⁴⁷ It is important to note that Leopold is referenced here for his influence on environmental ethics, not ecology. While he and his contemporaries referenced such notions as "stability" or the image of a climax stage in an ecosystem's growth, these concepts largely have been abandoned.

²⁴⁸ James D. Heffernan, *The Land Ethic: A Critical Appraisal*, 4 Envtl. Ethics 235, 237 (1982).

based on the understanding of the science of ecology, which identifies and quantifies the patterns and processes that operate in that system we call nature. Understanding of those processes as the means by which nature both maintains and regulates the existence of life on earth implies that maintenance of those patterns and processes should be seen as a basic ethic appurtenant to the maintenance of human life. Modern paradigms of ecology place emphasis on the flux of nature, rather than any notion of a steady state or climax, as in the case of a forest. Rachel Carson (1907–1964) was also instrumental in congealing the attitudes of society to focus on the destruction of ecosystems by pesticides, and thereby moved the activist population of the 1960s toward environmentalism.²⁴⁹ The works of Carson, Leopold, and Thoreau, and many others, did more than simply expose a threat to the environment—they provided the impetus for popular movements that have evolved into the modern environmental movement.

What is an environmental ethic? It is an understanding that in an ecosystem every action taken has consequences; those consequences may be adjudged as positive or negative values based on the needs of society; and that persons must act as stewards of their domain, whether that domain be their "owned" real property or some lesser interest, to prevent actions that cause negative consequences. The extent to which this (or any) environmental ethic has become assimilated into our core values is the key issue to be determined. There are limits to environmental ethics based upon sound ecological principles. The human animal is a part of the ecosystem, not merely an aloof observer.²⁵⁰ The human has the ethical right to be a participant in its environment, and that participation is limited only by the constraints that human society has placed upon itself and the component of that restraint which is the environmental ethic.

A. Environmental Ethics and Stewardship

Aldo Leopold wrote in his classic essay, "The Land Ethic," "[A] land ethic changes the role of *Homo sapiens* from conqueror of the land-community to plain member and citizen of it. It implies respect for his fellow-members, and respect for the community as such." From this land ethic, and based on Leopold's writings, the concept of steward-

²⁴⁹ See generally John Barker & Robert J. Goldstein, The DDT Paradigm and Electromagnetic Fields: Policy and Scientific Uncertainty, 17 J. PROD. & TOXICS LIAB, 285 (1995).

²⁵⁰ See generally Tom Colwell, The Ethics of Being Part of Nature, 9 ENVIL. ETHICS 99 (1987).

²⁵¹ LEOPOLD, supra note 32, at 240.

ship has been developed. "Obligations have no meaning without conscience, and the problem we face is the extension of the social conscience from people to land."252 The application of this social conscience to land is the essence of the distinction between ownership and stewardship. It is also the understanding that the presence of green wood in the bundle of sticks gives us the obligation that must be applied with conscience based on our understanding of the importance of land beyond that of the inanimate sticks in the bundle. Leopold pointed to the moral obligation of stewardship, noting with frustration that the "proof that conservation has not yet touched these [ethical] foundations of conduct lies in the fact that philosophy and religion have not yet heard of it."258 That yearning of Leopold's has been satisfied by the environmental movement, which has effected an "internal change in our intellectual emphasis, loyalties, affections, and convictions."254 Because of this precipitous progress, we are ready as a society to take the next logical step in a line that began with the earliest concepts of property, and that evolves still. The green wood in the bundle of sticks makes stewardship a legal responsibility in addition to a moral one.

B. A Shift in Society²⁵⁵ Toward Environmental Ethics²⁵⁶

The environmental movement and the history of environmentalism highlight the shift in society toward an environmental ethic.²⁵⁷ This is an important factor in recognizing the shift in the law. As Cardozo wrote, "One of the marks by which we recognize a social interest as

²⁵² Id. at 246.

 $^{^{253}}$ Id.

²⁵⁴ *Id*.

²⁵⁶ The pitfalls of using social materials in legal scholarship are well noted; that is why the social materials noted herein are limited to contemporary materials. *See* Robert W. Gordon, *Historicism in Legal Scholarship*, 90 YALE LJ. 1017, 1019 (1981).

Any use at all of these social materials, even pure doctrinal scholarship that restricts its scope to legal texts will expose the user to historical criticism. The critic will claim that the scholar has, in one way or another, seriously distorted reality by failing to take adequate account of the social and historical contingency of the materials.

Id. at 1020.

²⁵⁶ Reference is made to the "naturalistic fallacy" which philosophers might assert to diffuse the following argument. Being a lawyer rather than a trained philosopher, I will leave the defense of that dichotomy to those capable of defending it. See generally Holmes Rolston, III, Hume's Is/Ought Dichotomy and the Relation of Ecology to Leopold's Land Ethic, 4 Envil. Ethics 163 (1982).

²⁵⁷ See generally Philip Shabacoff, A Fierce Green Fire: The American Environmental Movement (1993).

worthy of protection is the spontaneity and persistence with which groups are established to conserve it."258

There can be little question of the growth of attention and concern toward environmental issues over the course of the twentieth century.²⁵⁹ The issue is whether the social interest in environmental ethics is weighty enough to justify a shift in the law of real property. One assessment that can be made is to review the political climate.²⁶⁰ This could be especially enlightening as a retrospective analysis of the 104th Congress and its failure to abrogate environmental statutes that it had pledged to roll back.²⁶¹ The effort resulted in the emergence of counter-revolutionaries in the environmental area and on the Republican side of the aisle.²⁶² One coalition of moderates, nominally led by Rep. Sherwood Boehlert, R-NY,²⁶³ thwarted attempts by the House leadership to eviscerate environmental laws.²⁶⁴ Another gauge of the political climate was the *New York Times* op-ed by Sen. John

²⁵⁸ CARDOZO, supra note 45, at 133.

²⁵⁹ See, e.g., Randy Lee Loftis, Centers of Attention; Outlook on Environment Debated as Nation Marks 26th Earth Day, Dallas Morning News, Apr. 22, 1996, at 15A.

Polls have confirmed repeatedly over the past few years that most people don't believe that the environment and the economy must always be at odds. A new Roper survey released last week reinforced that finding. The survey's authors also said they found many people pursuing a new type of American dream that seems to reflect the environmental vision that Mr. Lash [that "property, environment and fairness are not mutually inconsistent goals"] described.

Id.

²⁶⁰ See Walter R. Burkley, Special Project: Environmental Reform in an Era of Political Discontent: Introduction, 49 Vand. L. Rev. 677, 678 (1996). "While the existing environmental regulatory structure is certainly in need of reform, the reform must proceed from this broad consensus in favor of environmental protection." Id. at 688 (footnote omitted).

²⁶¹ See generally Newt Gingrich & Richard K. Armey, Contract With America: The Bold Plan by Rep. Newt Gingrich Rep. Dick Armey and the House Republicans to Change the Nation (Ed Gillespie & Bob Schellhas eds., 1994).

²⁶² "But some environmentalists are starting to say, with a hint of wonder in their voices, that they are close to success in making environmental programs what one lobbyist called a 'third rail,' political slang for issues like Social Security that are best not touched because they carry such voltage with voters." John H. Cushman, Jr., G.O.P. Backing Off Tough Stand over Environment, N.Y. TIMES, Jan. 26, 1996, at A1.

²⁶³ See Kevin Sack, A Moderate Republican Walks the Tightrope, N.Y. Times, Aug. 7, 1995, at R5.

 $^{^{264}}$ See Daniel P. Jones, GOP Faction Organizes for Environment, Hartford Courant, Sept. 11, 1996, at A1.

But times have changed, and the leadership of the Republican Party, to the dismay of many of its conservation-minded members, is increasingly seen as out of step with the desire of most Americans to safeguard the environment. . . . The discontent among environmentally minded Republicans began last year when GOP congressional leaders

McCain, R-AZ, entitled "Nature Is Not a Liberal Plot," which appeared after the 1996 elections, challenging the Republicans in the 105th Congress to set a more environmentally friendly course. ²⁶⁵ Another equally powerful gauge of the mindset of the American people regarding their environment is the degree of education on environmental issues, which prompted Congress to enact the Environmental Education Act of 1990. ²⁶⁶ These values have pervaded the schools, ²⁶⁷ and have proliferated in the media with cartoon and television heroes of the environment, ²⁶⁸ eco-friendly books, ²⁶⁹ and membership organi-

tried to scale back virtually all of the nation's environmental laws. That attempt was blocked in the more moderate Republican-controlled Senate and was criticized, even by some House GOP members, as an attack on legitimate environmental safeguards supported by a majority of Americans.

Id.

- ²⁶⁶ See National Environmental Education Act, 20 U.S.C. §§ 5501 et seq. (1994).
 - (a) Findings. The Congress finds that—
 - (1) Threats to human health and environmental quality are increasingly complex, involving a wide range of conventional and toxic contaminants in the air and water and on the land.
 - (2) There is growing evidence of international environmental problems, such as global warming, ocean pollution, and declines in species diversity, and that these problems pose serious threats to human health and the environment on a global scale.
 - (3) Environmental problems represent as significant a threat to the quality of life and the economic vitality of urban areas as they do the natural balance of rural areas.
 - (4) Effective response to complex environmental problems requires understanding of the natural and built environment, awareness of environmental problems and their origins (including those in urban areas), and the skills to solve these problems.
 - (5) Development of effective solutions to environmental problems and effective implementation of environmental programs requires a well educated and trained, professional work force.
- 20 U.S.C. § 5501(a)(1)-(5).

²⁶⁷ See Karen F. Schmidt, Green Education under Fire; Controversy over Environmental Teaching, 274 Sci. 1828, 1830 (1996). "But even as environmental education has gained legitimacy and popularity, it has come under increasing scrutiny." Id. But see Kate O'Beirne, Filling Young Heads: Eco-Brats Are Trained to Target Parents, LAS VEGAS REV. J., Feb. 23, 1997, at 1E (discussing the use of biased materials in environmental education for children).

²⁶⁸ See Cynthia Littleton, Cable Nicks Away at Kids Audience; Nickelodeon/Nick at Night Channel Wins Children's Television Audiences, 127 Broadcasting & Cable 51 (1997). "The long-running New Adventures of Captain Planet, Turner Program Services' environmentally aware cartoon, traditionally tops a 2 rating with kids 2–11." Id.

²⁶⁹ "The books range from recycling guides to how-to manuals for craft projects that reuse trash. Several are in Spanish. The fiction includes "The Berenstain Bears Don't Pollute (Anymore)' and Dr. Seuss' "The Lorax,' a tale about how shortsighted business concerns can destroy the environment." Kathleen Ingley, Kids, Check It Out: 'Green Shelf' Grows At Central Library, ARIZ. REPUBLIC/PHOENIX GAZETTE, Sept. 25, 1996, at 1.

 $^{^{265}}$ See John McCain, Nature Is Not a Liberal Plot, N.Y. Times, Nov. 22, 1996, at A31. "[O]ur nation's continued prosperity hinges on our ability to solve environmental problems and sustain the natural resources on which we all depend." Id.

zations.²⁷⁰ A third way is to examine the trends of laws passed and regulations enacted throughout the country; this should portray a legal trend toward these environmental values.

A review of these recent trends,²⁷¹ fortified by the recent history of the environmental movement, points to the clear acceptance of some level of environmental ethic, as a social interest worthy of protection. This is evident by more than just the spontaneity and persistence shown by groups interested in this issue; it is a major trend of the second half of the twentieth century, and can be likened in many ways to the Industrial Revolution. It is the time when humans began to understand the workings of the earth, and to take seriously their responsibility to preserve the health of the planet. This period will be looked back on as the "environmental revolution."²⁷²

C. Law and Environmentally Based Societal Policies

The identification of policies that are mandated by societal norms is the first step in the codification of those policies as law. The whole body of environmental laws that have been enacted over the course of the past forty years are a testament to that policy and to the willingness of society to exact economic costs for the sake of that policy. Examples of these laws are presented here in summary to demonstrate the movement of society toward the understanding that preservation and protection of our natural environment is a positive value, and a widespread one.

There is an increasing awareness of the environment among judges that is "reshaping traditional notions of property and the relative

²⁷⁰ See George Pettinico, Civic Participation and American Democracy; Civic Participation Alive and Well in Today's Environmental Groups, 7 The Pub. Persp. 27 (1996).

In fact, a closer examination of the green movement in the United States reveals a vibrant, grassroots culture involving countless individuals who are actively engaged in their communities. On almost a daily basis, a plethora of meetings, social gatherings, hikes, bike trips, clean-up projects, rallies, nature workshops and the like are held in communities across the nation by local chapters of national environmental organizations, as well as ad-hoc community groups.

Id. at 27.

²⁷¹ For millions of Americans, environmentalism is an active pursuit. In response to the question: "Do you think of yourself as an active environmentalist, or sympathetic to environmental concerns, but not active, or neutral, or generally unsympathetic to environmental concerns?," 5% responded "unsympathetic;" 11% (or 22,000,000 people) characterized themselves as "active environmentalists;" 54% were "sympathetic;" and 30% regarded themselves as "neutral." See Pettinico, supra note 270, at 27.

²⁷² See generally Jerry L. Anderson, The Environmental Revolution at Twenty-Five, 26 RUTGERS L.J. 395 (1995).

claims of private owners and society at large to the use and preservation of land."²⁷³ That policy is specifically enumerated as the basis for law in several cases. In *In re Christenson*, the Supreme Court of Minnesota cited Aldo Leopold.²⁷⁴

Over ten years ago this court cited the conservationist Aldo Leopold for his espousal of a "land ethic" which envisions a community of interdependent parts. "The land ethic simply enlarges the boundaries of the community to include soils, waters, plants, and animals, or collectively: the land." We reaffirm our statement there that the state's environmental legislation had given this land ethic the force of law, and imposed on the courts a duty to support the legislative goal of protecting our state's environmental resources.²⁷⁵

In County of Freeborn v. Bryson, the case referred to above, the Supreme Court of Minnesota had declared that, "A generation ago, the conservationist Aldo Leopold espoused a 'land ethic.'... In the Environmental Rights Act, our state legislature has given this land ethic the force of law. Our construction of the Act gives effect to this broad remedial purpose."²⁷⁶

In the case of *Department of Community Affairs v. Moorman*,²⁷⁷ the Supreme Court of Florida upheld a zoning restriction that regulated the use of fences on private property to protect the endangered Key Deer.²⁷⁸ The court noted that "we have repeatedly held that zoning restrictions must be upheld unless they bear no substantial relationship to legitimate societal policies."²⁷⁹ In defining those "legitimate societal policies," the court noted that "the unregulated erection of fencing in the affected area is contrary to Florida's overall policy of environmental stewardship."²⁸⁰

²⁷⁸ See Stephen L. Kass & Jean M. McCarroll, Four Opinions on 'Takings,' N.Y. L.J., Feb. 28, 1997, at 3.

²⁷⁴ In re Christenson, 417 N.W.2d 607, 607 (Minn. 1987). See also McLeod County Bd. of Comm'rs v. State Dep't. of Natural Resources, 549 N.W.2d 630, 633 (Minn. Ct. App. 1996). The court in *McLeod* reaffirmed the Minnesota court's reliance on the "land ethic." See id. "The court has reaffirmed that the state's environmental legislation had given this land ethic the force of law, and imposed on the courts a duty to support the legislative goal of protecting our state's environmental resources." Id. at 633.

²⁷⁵ In re Christenson, 417 N.W.2d at 615 (citations omitted).

²⁷⁶ County of Freeborn v. Bryson, 243 N.W.2d 316, 322 (Minn. 1976). The Minnesota Environmental Rights Act is located at Minn. Stat. § 116B (West, WESTLAW through 1997).

²⁷⁷ Department of Community Affairs v. Moorman, 664 So. 2d 930, 934 (Fla. 1995).

²⁷⁸ For further information on Florida's Key Deer, see Mireya Navarro, Striking a Balance Between Deer and Residents in the Florida Keys, N.Y. TIMES, Mar. 18, 1997, at A12.

²⁷⁹ Moorman, 664 So. 2d at 933.

²⁸⁰ Id.

Almost every state has some mechanism for the assessment of environmental impacts. There is a grassroots movement that has proposed an environmental amendment to the U.S. Constitution.²⁸¹ Some states, including Illinois,²⁸² Massachusetts,²⁸³ Michigan,²⁸⁴ Montana,²⁸⁵ and Virginia,²⁸⁶ have constitutional provisions that are aimed at protecting the environment.²⁸⁷

The Pennsylvania Constitution, Article 1, Section 27, provides:

The people have a right to clean air, pure water, and to the preservation of the natural, scenic, historical 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.²⁸⁸

It is noted, however, that the Supreme Court of Pennsylvania, in *Commonwealth v. National Gettysburg Battlefield Tower*, ²⁸⁹ held this constitutional provision aimed at protecting the environment unenforceable because it was not self-executing. ²⁹⁰ The court noted that "[a] Constitution is primarily a declaration of principles of the fundamental law." ²⁹¹ That declaration is adequate for the thesis herein that

 $^{^{281}}$ See Pace Virtual Environmental Law Library (visited Jan. 30, 1998) http://www.law.pace.edu/env/constitution.html. The proposed amendment reads: "The natural resources of the nation are the heritage of present and future generations. The right of each person to clean and healthful air and water, and to the protection of the other natural resources, shall not be infringed upon by any person." Id.

²⁸² See Ill. Const., art. XI, § 1.

²⁸³ See Mass. Const. amend. IL § 179.

²⁸⁴ See Mich. Const. of 1963, art. IV, § 52.

²⁸⁵ See Mont. Const. art. II, § 3; art. IX, § 1.

²⁸⁶ See Va. Const. art. XI, §§ 1-2.

 $^{^{287}\,}But\,see$ Proffitt v. Louisville & Jefferson County Metro. Sewer Dist., 850 S.W.2d 852, 854 (Kv. 1993).

Kentucky has no case law, regulation, statute or constitutional requirement which creates a duty upon a condemning authority to give consideration to the environmental impact of a proposed project beyond those requirements which are already in place pursuant to the numerous federal laws on the subject of the environment. Thus, there was no state requirement that MSD perform any environmental assessment of appellant's property.

Id.

²⁸⁸ Quoted in Concerned Residents of the Yough, Inc. v. Department of Envtl. Resources, 639 A.2d 1265, 1274–75 (Pa. Commw. Ct. 1994).

²⁸⁹ Commonwealth v. National Gettysburg Battlefield Tower, Inc., 311 A.2d 588 (Pa. 1973).

²⁹⁰ "To summarize, we believe that, the provisions of § 27 of Article 1 of the Constitution [of the state of Pennsylvania] merely state the general principle of law that the Commonwealth is trustee of Pennsylvania's public natural resources with power to protect the 'natural, scenic, historic, and esthetic values' of its environment." *Id.* at 594–95.

²⁹¹ Id. at 198.

refers to these laws exactly for the proposition that environmental ethics are now embodied in the fundamental law of the United States.

In other states, courts have used constitutional provisions respecting the environment as the bases for their decisions. Florida courts, for instance, have held that environmental factors are appropriate matters for consideration by a condemning authority based on Article 2, Section 7, of the Florida Constitution, which provides in pertinent part: "It shall be the policy of the state to conserve and protect its natural resources and scenic beauty." The Louisiana Constitution, Article IX, Section 1 provides: "The natural resources of the state, including air and water, and the healthful, scenic, historic, and esthetic quality of the environment shall be protected, conserved, and replenished insofar as possible and consistent with the health, safety, and welfare of the people. The legislature shall enact laws to implement this policy." 293

The Rhode Island Constitution, Section 17 of Article I, provides:

The people . . . shall be secure in their rights to the use and enjoyment of the natural resources of the state with due regard for the preservation of their values; and it shall be the duty of the general assembly to provide for the conservation of the air, land, water, plant, animal, mineral and other natural resources of the state, and to adopt all means necessary and proper by law to protect the natural environment of the people of the state by providing adequate resource planning for the control and regulation of the use of the natural resources of the state and for the preservation, regeneration and restoration of the natural environment of the state.²⁹⁴

Statutory law has also experienced an influx of environmentally based provisions at the federal, state, and local levels.²⁹⁵ This influx is

²⁹² See Florida Power & Light Co. v. Berman, 429 So. 2d 79, 82 (Fla. Dist. Ct. App. 1983).

²⁸⁸ Quoted in Matter of American Waste & Pollution Control Co., 642 So. 2d 1258, 1262 (La. 1994). "This article continues the Public Trust Doctrine in environmental matters first recognized in the 1921 Constitution's Article VI, § 1 and imposes a duty of environmental protection on all state agencies and officials, establishes a standard of environmental protection, and mandates the legislature to enact laws to implement fully this policy." Id. See also Save Ourselves v. Louisiana Envtl. Contol Comm'n, 452 So. 2d 1152, 1156 (La. 1984); see also Charles S. McCowan, The Evolution of Environmental Law in Louisiana, 52 La. L. Rev. 907 (1992). This constitutional standard has been interpreted as a "rule of reasonableness" which "requires a balancing process in which environmental costs and benefits must be given full and careful consideration along with economic, social and other factors." Id.

²⁹⁴ Quoted in In re Narragansett Elec. Co., 544 A.2d 121, 127 n.3 (R.I. 1988).

²⁹⁵ In Columbus & Franklin County Metro. Park Dist. v. Shank, 600 N.E.2d 1042, 1057 n.17 (Ohio 1992), the court noted that "environmental statutes are to be liberally construed to effect their purposes."

exemplified by the National Environmental Policy Act of 1970 (NEPA).²⁹⁶ The statute requires that:

to the fullest extent possible ... all agencies of the Federal Government ... include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible officer on—(i) the environmental impact of the proposed action, (ii) any adverse environmental effects ... (iii) alternatives to the proposed action"²⁹⁷

NEPA, however, has been construed as a procedural statute that affords no opportunity for the courts to review the substance of an agency's decision.²⁹⁸

At least "[f]ourteen States and Puerto Rico have legislated that their agencies must use the federal government's environmental impact review procedures. . . . An additional 13 states use portions of NEPA's environmental impact assessment (EIA) techniques."²⁹⁹ At present, at least thirty-three states use some type of environmental impact assessment procedure.³⁰⁰ Other federal laws that exemplify the

²⁹⁶ See 42 U.S.C. §§ 4321-4370c (1994).

²⁹⁷ 42 U.S.C. § 4332.

²⁹⁸ See Strycker's Bay Neighborhood Council, Inc. v. Karlen, 444 U.S. 223, 223–28 (1980); see generally Vermont Yankee Nuclear Power v. N.R.D.C., 435 U.S. 519 (1978); Philip G. Weinberg, It's Time to Put NEPA Back on Course, 3 N.Y.U. ENVIL. L.J. 99 (1994).

²⁸⁹ Jennifer Woodward, Comment, Turning Down the Heat: What United States Laws Can Do to Help Ease Global Warming, 39 Am. U. L. Rev. 203, 219 (1989); Nicholas A. Robinson, SEQRA's Siblings: Precedents from Little NEPA's in the Sister States, 46 Alb. L. Rev. 1155 (1982).

³⁰⁰ States using NEPA procedures: California (California Environmental Quality Act (West 1986 & Supp. 1994), CAL. Pub. Res. Code §§ 21000-21178.1); Connecticut (Connecticut Environmental Protection Act of 1971 (1985 & Supp. 1994), Conn. Gen. Stat. §§ 22a-14—20); District of Columbia (D.C. Code Ann. §§ 6-981 -990 (Supp. 1994)); Florida (Florida Environmental Protection Act of 1971, Fla. Stat. Ann. § 403.412 (West) 1996); Georgia (Georgia Environmental Policy Act (1992 & Supp.), GA. CODE ANN. §§ 12-16-1-8); Hawaii (HAW. REV. STAT. §§ 343-1—8 Supp. (1985 & 1992)); Indiana (IND. CODE §§ 13-1-10-1-8 (1993)); Maryland (Maryland Environmental Policy Act 1989, Md. Code Ann., Nat. Res. §§ 1-301-305); Massachusetts (Massachusetts Environmental Policy Act, Mass. Gen. L. ch. 30, §§ 61–62H (1983 & Supp. 1994)); Michigan (Michigan Environmental Protection Act of 1970, MICH, COMP. LAWS Ann. §§ 691.1201-.1207 (West 1987 & Supp. 1994)); Minnesota (Minnesota Environmental Policy Act of 1973 (West 1987 & Supp. 1994), MINN. STAT. ANN. §§ 116D.01-.07); Montana (MONT. CODE Ann. §§ 75-1-101-3-324 (1993)); New York (New York State Environmental Quality Review Act, N.Y. Envtl. Conserv. Law §§ 8-0101-0117 (McKinney 1984 & Supp. 1994)); North Carolina (North Carolina Environmental Policy Act of 1971, N.C. GEN. STAT. §§ 113A-1-10 (1993)); Puerto Rico (Puerto Rico Public Policy Environmental Act, P.R. LAWS ANN. tit. 12, §§ 1121-1142 (1977 & Supp. 1991)); South Dakota (South Dakota Environmental Policy Act, S.D. Codified Laws Ann. §§ 34A-9-1-13 (1992 & Supp. 1994)); Virginia (VA. CODE ANN. §§ 10.1-1182-1192 (Michie 1993)); Washington (Washington State Environmental Policy Act of 1971, WASH. REV. CODE ANN. §§ 43.21C.010-.914 (West 1983 & Supp. 1994)); Wisconsin (Wisconsin

practice of environmental ethics include Alaska National Interest Lands Conservation Act³⁰¹ and the National Forest and Rangeland Renewable Resource Planning Act.³⁰² Other statutory enactments also incorporate the values of environmental ethics into the law; the Adirondack Park Agency Act³⁰³ and the New Jersey Pinelands Protection Act³⁰⁴ are examples of such laws. These acts and others like them attach principles of environmental ethics to distinct areas, such as New York State's Adirondack Park³⁰⁵ and New Jersey's unique Pine Barrens.³⁰⁶

On the local level, the Cape Cod Transfer Tax Referendum, which provides funding for conservation purposes through a real property transfer tax, stands out as one of several local laws aimed at incorporating environmental ethics into local planning.³⁰⁷ Much of the local

See also Jeffrey L. Carmichael, Note, The Indiana Environmental Policy Act: Casting a New Role for a Forgotten Statute, 70 Ind. L.J. 613 (1995); Frank P. Grad, Treatise on Environmental Law § 9.02(1)(a)(ii) (1981); see generally Robinson, supra note 299.

Environmental Policy Act, Wis. Stat. Ann. § 1.11 (West 1986 & Supp. 1993)). See generally Nicholas C. Yost NEPA Deskbook (1995).

States using portions of NEPA procedures: Arizona (ARIZ. REV. STAT. Tit. 49, (1988–1996 Michie)); Delaware (Delaware Coastal Zone Act, Del. Code Ann. Tit. 7, §§ 7001–7004 (1991 & Supp. 1992)); Kentucky (Ky. Rev. Stat. Ann. § 278.025 (Michie/Bobbs-Merrill 1989 & Supp. 1994)); Louisiana (La. Rev. Stat. Ann. § 30:2021 (West (1989)); Michigan (Michigan Environmental Protection Act of 1970 (West 1987 & Supp. 1994); Mich. Comp. Laws Ann. §§ 691.1201-.1207; Mich. Stat. Ann. Tit. 13A, Chap. 110B (Lawyers Co-op. 1993)); Mississippi (Mississippi Coastal Wetlands Protection Act, Miss. Code Ann. § 49–27–27 (1972 & Supp. 1994)); Nebraska (Nebraska Environmental Protection Act §§ 81–1501–1532 (1987 & Supp. 1993)); Nevada (Nev. Rev. Stat. §§ 321.640-.770 (1994)); New Jersey (New Jersey Coastal Area Facility Review Act, N.J. Stat. Ann. §§ 13:19–1—27 (West 1991 & Supp.1994)); Oregon (Or. Rev. Stat. § 519.979 (1993)); Pennsylvania (Pa. Cons. Stat. Ann. Tit. 53, § 1611 (1975)); Rhode Island (Rhode Island Environmental Rights Act, R.I. Gen. Laws § 10–20–8(b) (1985)); Texas (Texas Stat. & Codes, Texas Water Code § 31.015 (1997)); Utah (Utah Code Ann. Tit. 19 Environmental Quality Code (1953–1996 Michie)).

³⁰¹ See Alaska National Interest Lands Conservation Act, 16 U.S.C. § 3101 et seq. (1994).

³⁰² See Forest and Rangeland Renewable Resource Planning Act, 16 U.S.C. § 1601 et seq. (1994).

³⁰⁸ See Adirondack Park Agency Act, N.Y. Exec. Law §§ 801–20 (McKinney 1982). See generally Arthur V. Savage & Joseph Sierchio, The Adirondack Park Agency Act: A Regional Land Use Plan Confronts "The Taking Issue," 40 Alb. L. Rev. 447 (1976); Note, Preserving Scenic Areas: The Adirondack Land Use Program, 84 Yale L.J. 1705 (1975).

³⁰⁴ See N.J. Permanent Stat. Tit. 13 §§ 13:18A1 to 13:18A-29 (1979).

³⁰⁵ Nash, *supra* note 30, at 108-21; *see generally* Frank Graham, Jr., The Adirondack Park: A Political History (1978).

⁸⁰⁶ See generally John A. McPhee, The Pine Barrens (1968).

³⁰⁷ Governing Review of Developments of Regional Impact, Barnstable County, MA, Ordinance 90–12 (rev. Aug. 13, 1997). Under the Cape Code Commission Act, the Assembly of Delegates of Barnstable County adopted enabling regulations governing the commission's review of Developments of Regional Impact.

legislation is embodied in land use laws. These laws, which attempt to infuse environmental ethics, have not been developed in a vacuum, but rather are the result of the juxtaposition of law and science, with the laws tracking the developments in the science of ecology.

V. ECOLOGY

"An owner's liberty to use and manage the thing owned as he chooses is in mature systems of law, as in primitive systems, subject to the condition that uses harmful to other members of society are forbidden." The definition of what uses are "harmful" to others can be extrapolated from the science of ecology. When combined with the philosophical aspects of environmental ethics, the science of ecology becomes a potent impetus for the evolution of property rights. It is the combination of these two disciplines that thrusts the issue upon us, coupled with a growing understanding of the very real dangers that confront us globally from misuse of our environments.

The history of ecology, as described by Donald Worster, is a history of ideas.³⁰⁹

The Eighteenth Century—the Age of Reason, it is often called—still astonishes us with its fertility of imagination. So much of our modern world began then: in politics, the arts, our industrial apparatus, science, and philosophy. Not the least among its innovations was the science of ecology. More than two hundred years ago men were beginning to put together ecological concepts that we have not yet forgotten, such as the "plenitude of nature," food chains, and the notion of equilibrium.³¹⁰

Ecology can be viewed as the study of the human "life-support system."³¹¹ As Eugene P. Odum states:

Life-support environment is that part of the earth that provides the physiological necessities of life, namely, food and other energy, mineral nutrients, air, and water. We will use *life-support system* as the functional term for the environment, organisms, processes, and resources interacting to provide these physical necessities. By processes we mean operations such as food production, water recycling, waste assimilation, air purification, and so on. Some of

³⁰⁸ Honoré, supra note 12, at 123.

²⁰⁹ See generally Donald Worster, Nature's Economy: A History of Ecological Ideas (1977).

³¹⁰ Id. at 2.

³¹¹ See generally Eugene P. Odum, Ecology and our Endangered Life-Support Systems (1989).

these processes are organized and controlled by humans, but many are natural and driven by solar or other natural energies. *All life-supporting* processes involve the activities of organisms other than humans—plants, animals, and microbes.³¹²

Robert Leo Smith postulates a wider definition:

Ecology is the study of the structure and function of nature. Structure includes the distribution and abundance of organisms as influenced by the biotic and abiotic elements of the environment; and function includes how populations grow and interact, including competition, predation, parasitism, mutualisms, and transfers of nutrients and energy.³¹³

Though these definitions have by no means been discredited, there are newer paradigms being discussed and developed.

A new ecological paradigm has emerged that recognizes ecological systems to be open, regulated by events arising outside of their boundaries, lacking or prevented from attaining a stable point equilibrium, affected by natural disturbance, and incorporating humans and their effects. A new metaphor of the flux of nature symbolizes the new, or nonequilibrium, paradigm effectively.³¹⁴

Each of these definitions, as well as their forebears, references the patterns and processes of nature, and stresses their relationships. In each of the definitions the effect of human behavior is, at least, implicit. The evolution of the definition is a testament to the acceptance of the degree of human impact, and an acknowledgment of its everincreasing potency. It is unquestionable that human technology has developed to the point where we can destroy significant elements of our life-support system. It is that knowledge, coupled with the evergrowing body of knowledge that documents the effect of localized human actions on the life-support system, that mandates consideration of all of the consequences of human activity on the environment. The science of ecology, besides teaching the relationship between humans and their environment, also provides the research tool with which these impacts can be studied, analyzed, and evaluated. This understanding is the factor that militates for the infusion of the values of "environmental ethics" into real property law.

³¹² Id. at 13 (emphasis added).

⁸¹⁸ ROBERT LEO SMITH, ECOLOGY AND FIELD BIOLOGY 3 (4th ed. 1990).

³¹⁴ S.T.A. Pickett & Richard S. Ostfield, *The Shifting Paradigm in Ecology, in* A NEW CENTURY FOR NATURAL RESOURCES MANAGEMENT 275 (Richard L. Knight & Sarah F. Bates eds., 1995).

The science of ecology is an important factor in the definition of "harmful use," the prohibition of which is one generally accepted "stick" of real property ownership. In the "prohibition of harmful use," the ecological systems must be considered, and this could affect otherwise legal conduct on the property. As Aldo Leopold wrote:

[the] farmer who clears the woods off a 75 percent slope, turns his cows into the clearing, and dumps its rainfall, rocks, and soil into the community creek is still (if otherwise decent) a respected member of society. If he puts lime on his fields and plants his crops on contour, he is still entitled to all the privileges and emoluments of his Soil Conservation District.³¹⁵

Leopold is referring to behavior that is generally legal and often encouraged despite its potentially detrimental effects. It is generally accepted that the use of nutrient-rich fertilizers on suburban lawns contributes to the runoff that can cause eutrophication,³¹⁶ but very little effort has been made to control this problem. Similar types of runoff from agricultural uses threaten water supplies. Other examples include the use of buffer zones to apply a necessary level of protection to preserved land.³¹⁷

The creation of a stick which takes into account the environmental context of real property must also be based on solid ecological science. This is the green wood, the live stick firmly rooted in the earth from which it sprouted, and closely tied to the environment which nurtured its progression from seedling to maturity. These additions to real property law are essential in dealing with the decline in incremental improvements in pollution control, and the failure of current environmental laws to further the environmental ethic. The nature of nonpoint source pollution and the fact that its causes include otherwise legal activity is an important ecological problem that could be managed by the real property approach, while efforts to impose regulatory solutions have come up short.

³¹⁵ LEOPOLD, *supra* note 32, at 245-46.

³¹⁶ "A process of aging of lakes whereby aquatic plants are abundant and waters are deficient in oxygen. The process is usually accelerated by enrichment of waters with surface runoff containing nitrogen and phosphorus." Nyle C. Brady, The Nature and Properties of Soils 585 (1990).

³¹⁷ This is certainly not to be confused with an increase in the size of the protected area, but refers to planning for uses within the buffer that have less of an impact on the preserve.

A. The Nature of Land

What is it about land itself that makes it unique and mandates its distinction?³¹⁸ The answer justifies the difference in the treatment of the lots at issue in Lucas and a parking lot in Manhattan. These differences are based upon the natural state of affairs that inexorably govern the site. A wetland, for instance, has certain properties that transcend the ownership of an individual, despite the ancient misconceptions that made reclamation a legitimate public policy in the past. These very physical facts inhere in the title to the land because they are inextricably interwoven into the physical facts that inhere to a parcel of land. Actions to protect these lands, though nominally made in the name of ecology or environmental protection, afford very real physical benefits as their bases. While some may see wetland preservation as an end in and of itself, the ecologist views the wetland as an ecosystem that provides demonstrable tangible benefits. "Wetlands in their natural state are a source of substantial benefit for society."319 According to wetland researcher Curtis J. Richardson, these values include:

- 1. Flood control (conveyance), flood storage;
- 2. Sediment control (filter for waste);
- 3. Wastewater treatment system;
- 4. Nutrient removal from agricultural runoff and wastewater systems;
- 5. Recreation;
- 6. Open space;
- 7. Visual aesthetics and cultural benefits;
- 8. Hunting (fur bearers, beavers, muskrats);
- 9. Preservation of flora and fauna (endemic and refuge);
- 10. Timber production;
- 11. Shrub crops (cranberry and blueberry);
- 12. Medical uses (streptomycin);
- 13. Education and research;
- 14. Erosion control;
- 15. Food production (shrimp, fish, ducks);

³¹⁸ The belief that land is a unique type of property which mandates its unique treatment is anything but settled. See Fred P. Bosselman, Land as a Privileged Form of Property, in Takings: Land-Development Conditions and Regulatory Takings after Dolan and Lucas 29 (David L. Callies ed., 1996). "The social distinction that reinforced land's uniqueness in England two centuries ago seems anachronistic today." Id. at 42. "Whether one believes that the modern regulatory environment is too tight, too loose, or just right, it is difficult to devise logical arguments for applying one standard to land and another for other investments." Id. The scientific reasons for treatment of land as a unique type of property are posited herein.

³¹⁹ W. VanVuuren & P. Roy, Private and Social Returns from Wetland Preservation Versus Those from Wetland Conversion to Agriculture, 8 Ecol. Econ. 289 (1992).

- 16. Historical, cultural, and archaeological resources;
- 17. Threatened, rare, and endangered species habitat;
- 18. Water quality;
- 19. Water supply. 320

Though many of these values are ecological in nature, and hence are "not exclusive, transferable, or enforceable, the *ecological* or non-market values of wetlands are *not* priced or traded in the market."³²¹ However, a "contingent valuation method" has been shown to estimate wetlands benefits in lieu of market data.³²² A contingent market is a hypothetical market, into which a change will be made, and a survey is compiled based on that change and the question of what is the maximum amount of money one would pay for preservation of the resource.³²³

There is doubtless confusion that has arisen based on the reversal in wetlands policy that has been driven by scientific developments over the course of the past fifty years. During that time, wetlands, which were seen as breeding grounds for disease, have been exonerated and elevated to a position of high regard. In 1915, the Supreme Court in the case of *O'Neill v. Leamer*, noted:

In our opinion, it is too late in the day to contend that the irrigation of arid lands, the straightening and improvement of watercourses, the building of levees and the draining of swamp and overflowed lands for the improvement of the health and comfort of the community, and the reclamation of waste places and the promotion of agriculture, are not all and every of them subjects of general and public concern, the promotion and regulation of which are among the most important of governmental powers, duties and functions.³²⁴

In Florida Rock Industries v. United States, the Unites States Court of Appeals for the District of Columbia wrote:

[O]ne who remembers when wetlands were called swamps,³²⁵ when their draining or filling was deemed progress, and when their main environmental impact was in the production of noxious disease-bearing mosquitoes, and who has observed their present

³²⁰ See Curtis J. Richardson, Ecological Functions and Human Values in Wetlands: A Framework for Assessing Forestry Impacts, 14 Wetlands 1, 3 (1994).

³²¹ See id. at 1 (emphasis added).

 $^{^{322}}$ See John C. Whitehead, Measuring Willingness to Pay for Wetlands Preservation with the Contingent Valuation Method, 10 Wetlands 187 (1990).

³²³ See id. at 189.

³²⁴ O'Neill v. Leamer, 239 U.S. 244, 252 (1915).

³²⁵ Wetlands are still called swamps and marshes, mangroves, peatlands, etc. *See generally* WILLIAM J. MITSCH & JAMES G. GOSSELINK, WETLANDS (1993).

status, will not be astonished if some day a mosquito bred in a swamp bites someone and infects him with malaria, and the old beliefs revive 326

In Zealy v. City of Waukesha, the Supreme Court of Wisconsin wrote:

[S]wamps and wetlands were once considered wasteland, undesirable, and not picturesque. But as people became more sophisticated, an appreciation was acquired that swamps and wetlands serve a vital role in nature, are part of the balance of nature and are essential to the purity of the water in our lakes and streams. Swamps and wetlands are a necessary part of the ecological creation and now, even to the uninitiated, possess their own beauty in nature.³²⁷

In *Zealy*, the court dismissed a landowner's claim of a taking when his entire parcel was the subject of conservation zoning. Wetlands are yet another example of the evolution of what was once tolerable (filling of wetlands) to what is now intolerable.

While Zealy involved a zoning change made after the landowner came into title, the issue of landowners who purchase land with existing restrictions presents an interesting quandary. Why is the purchaser of land not responsible for taking account of the physical facts which regard his parcel? This has impact on the recent decisions of the New York Court of Appeals discussed infra, but transcends those cases to address the basic issue of the buyer's expectations. If a buyer purchased land with a wetland on it, how could that physical fact responsibly be ignored? Prior to the more recent understanding of the importance of wetland ecosystems, the common knowledge was that these wetlands were unhealthful, and owners were forced to fill them, a practice also known as reclamation. This amounted to a notice that the property indeed was impaired by a physical reality. Today, with the enactment of wetland protection laws, a fortiori, the buyer cannot claim ignorance of the physical fact, nor of the laws which pertain to this reality.

The basis for infusing ecology into real property law is that ecology is real property science. Ecology is the science that identifies the systems which run the earth, and that establishes scientifically plausible connections between the actions of real property owners/users

³²⁶ Florida Rock Indus. v. United States, 791 F.2d 893, 902 (D.C. Cir. 1986).

³²⁷ Zealy v. City of Waukesha, 548 N.W.2d 528, 534–35 (Wis. 1996) (quoting Just v. Marinette County, 201 N.W.2d 761, 766–67 (Wis. 1972)).

and the results of those actions on that real property and on other ecosystems.

VI. Green Wood in the Bundle of Sticks

We are a young people and have not learned by experience the consequence of cutting off the forest. One day they will be replanted, methinks, and nature reinstated to some extent.

—Henry David Thoreau³²⁸

To synthesize real property law, environmental ethics, and ecology, it is necessary to proffer the following hypothesis: The law of ownership, regarding real property, has evolved to a conceptual level that ignores the *res*, the property itself. Real property, land or earth, is sufficiently unique when viewed under the methodology of the ecologist to warrant consideration of its characteristics when aggregating the bundle of sticks. The consideration of these characteristics and the values appurtenant thereto cannot be made in a vacuum, but must be evaluated in light of the well-developed body of societal principles known as environmental ethics.

For the purpose of understanding and furthering this hypothesis, it is necessary to understand the nature and development of modern real property ownership law, especially with regard to its evolution, and its ability to follow societal mores through the mechanism of the common law. "Law defines a relation not always between fixed points, but often, indeed oftenest, between points of varying position. The act and situations to be regulated have a motion of their own. There is change whether we will it or not."³²⁹

Why real property law? The history of the contemporary environmental movement has shown a trend toward what have been termed command-and-control regulations. It is unquestionable that these have contributed to significant gains in environmental protection, though some would argue that these benefits have come at the cost of property rights. The need for a vehicle that infuses environmental ethics at an individual level is clear when the diminishing returns from regulation are examined. That is not to say that these regulations will be replaced or even curtailed by a real property law that considers ecology and environmental ethics. There is ample room for the real property law to effect changes in areas that are (or have been proven

⁸²⁸ Henry David Thoreau, Journal, in 3 The Works of Henry Thoreau 461-62 (1949).

³²⁹ CARDOZO, supra note 45, at 11.

to be) difficult for regulation to reach. These include the major issues such as the reach of the commerce clause to localized activities in light of the Supreme Court's decision in *United States v. Lopez*, which seems to require that the affected activity substantially affect interstate commerce.³³⁰

The evolution of real property law is well documented, and evidences the impact of social and physical facts in its history. It is well noted that "property has not been an absolute concept. Instead its definition has been conventional and has evolved as community consensus about individual-public balance has evolved. In the last twenty-five years, the conversation inevitably has encompassed the knowledge imparted by holistic, ecological science." 331

The study of ecology and its most basic tenets is crucial to present earth or land as a biotic component of our environment, rather than an inert, fungible thing. Ecology animates real property and allows us to understand its uniqueness. The understanding that the study of real property and ecology provides for us, in terms of land or earth, would be vacuous in the absence of some societal sense of value with which to use this understanding. The development of environmental ethics fills that void, and must be analyzed both on the theoretical level and on the practical level. Environmental ethics have become part of our societal ethos; it is just a question of identifying the degree of that infusion and applying it to our practices.³³²

³³⁰ See United States v. Lopez, 514 U.S. 549, 567 (1995) (holding that possession of a handgun in a local school zone did not substantially affect interstate commerce).

³³¹ Duncan, *supra* note 191, at 1159.

³³² There are extra-legal barriers to the implementation of a system based on environmental ethics. "Critics of a 'social ethic' see it as no less than 'communistic infiltration." 5A POWELL, supra note 14, ¶ 746. It is well noted that the distinction that A.M. Honoré makes between the nature of ownership in a "socialist" society and a more "liberal" society (one which recognizes full ownership), is a limitation in the "range of things that can be owned," rather than a distinction of the incidents of ownership of that property which can be owned. Honoré, supra note 12, at 110 (citation omitted). Popular opinion exists of "property rights" engrained into the U.S. Constitution. This is a difficult conception to dispel. The Constitution is a product of the times and thoughts of a group of landowning males, at the brink of an under-populated and virtually unexplored continent, who had been through a revolution, but importantly, had also been through a period of ineffective governance, which led to the need for a constitution, and a federal government. The Constitution was not the direct product of the revolution, but of the inability of the newly free colonies to thrive without union and some centralization. Nevertheless, "[n]ever did an instrument receive from a nation the respect, the reverence—I may say the idolatry almost—which the Constitution of the United States has received from the American people." L. Bradford Prince, E Pluribus Unum: The Articles of Confederation vs. the Constitution 44 (1867).

An estate in land is never absolute. It has been and remains subject to limitations, which, though supplemented by the laws of nuisance and trespass, are not solely their product. While these limitations are the product of the very common law that spawned the estates in property, their existence has evolved with cultural, philosophical, and scientific progress. Their existence is attested to by most commentators, and notably by the Supreme Court in *Lucas*.³³³ The vexing issue is the current definition of those limitations, the role that the science of ecology and the philosophy of environmental ethics have to play in those limitations, and the evolution of those limitations to coincide with the increase in knowledge of a global ecosystem.

As one looks back along the historic road traversed by the law of land in England and in America, one sees a change from the viewpoint that he who owns may do as he pleases with what he owns, to a position which hesitatingly embodies an ingredient of stewardship; which grudgingly, but steadily, broadens the recognized scope of social interest in the utilization of things.³³⁴

There is some recognition that the law of real property ownership will evolve further to accommodate environmental ethics in a stewardship setting.³³⁵ That recognition, however, is restricted to a regrettably few commentators who dare to challenge the popularly purported basic assumptions of both common law and constitutional law.

Like the social changes that eviscerated the *Lochner* decision, the evolution of real property ownership in America has brought the law of real property to the point where contemporary social ideals are part of its very fabric.³³⁶ The law of real property ownership has recognized the needs of the colonial period and its mandate for productive use of lands, and protection of the community from outside

³³³ See generally Lucas v. South Carolina Coastal Council, 505 U.S. 1003 (1992).

 $^{^{334}}$ 5A Powell, supra note 14, \P 746; see generally Horwitz, 1780–1860, supra note 20; Horwitz, 1870–1960, supra note 20.

³³⁵ See generally Carol M. Rose, Given-ness and Gift: Property and the Quest for Environmental Ethics, 24 Envil. L. 1 (1994) [hereinafter Rose, Given-ness].

Property thus includes a normative "deep structure" that may be of use in an environmental ethic. The norms that lurk in property go beyond the wondrous power of exclusion that so awed Blackstone in the case of individual property. They include as well the qualities of restraint and responsibility that characterize common or shared property.

Id. at 28 (footnote omitted).

^{386 &}quot;The interest of the community then is, what? the sum of the interests of the several members who compose it." J.H. Burns & H.L.A. Hart, An Introduction to the Principles OF Morals and Legislation/Jeremy Bentham 12 (1982). "A measure of government (which

attack. The manifest destiny was afforded its broad reach with modification to the nature of the estate in land and the allowance for broad expansion into the western part of the continent. The Industrial Revolution was accommodated by evolution of the nature of ownership, and so was the modern era. The changes that have been manifested by recent decades of ecological understanding and the growing environmental ethic, the environmental revolution, must be acknowledged and accepted into the metaphor of real property ownership.³³⁷ The law itself has been compared to a living organism that is capable of expanding and adapting to both the needs and spirit of a modern society.³³⁸

The common law is supposed to respond to public opinion and to reflect with more or less fidelity the moral and ethical sentiments of the people. It is, of course, too much to expect that law in the natural process of evolution should ever be fully abreast of public sentiment; but in all conscience it ought not to be several centuries behind the times.³³⁹

"The principles, then, serve as a reminder that a satisfactory examination of property must weave together the theoretical and the concrete, and help to solve real-world problems. A theory of property should not be an intellectual plaything but an instrument for reforming institutions of property." These changes can be construed as being both a function of common law nuisance and an element of the estate in real property. The sticks in the bundle of property rights are elemental in integrating these principles into law and include the prohibition of harmful use, 341 and a duty of environmental context. Inclusion of both of these sticks as inextricable parts of the bundle is

is but a particular kind of action, performed by a particular person or persons) may be said to be conformable to or dictated by the principle of utility, when in like manner the tendency which it has to augment the hapiness of the community is greater than any which it has to diminish it." *Id.* at 13.

³³⁷ In Prah v. Maretti, 321 N.W.2d 182, 189 (Wis. 1982), the court construed the policies which had once (during the Industrial Revolution) limited the right of a landowner to sunlight. These policies facilitated the construction of large plants and towering skyscrapers, leaving adjacent landowners in the shadows. See id. These were (1) the "right of landowners to do as they wished;" (2) the view of "sunlight as only aesthetic;" and (3) that "society had a significant interest in not restricting development." Id. The court noted the changed policies in ruling that "[t]hese three policies are no longer fully accepted or applicable. They reflect factual circumstances and social priorities that are now obsolete." Id.

⁸³⁸ See Rumble, supra note 17, at 303.

³³⁹ Id. at 315.

³⁴⁰ MUNZER, supra note 1, at 469.

³⁴¹ As reconciled with the "right to consume or destroy."

mandated by society's growing understanding of the science of ecology and the infusion of environmental ethics into our philosophy of law. The former needs only to be expanded upon to elaborate its role as the stick that integrates nuisance law into the estate, and further integrates ecological nuisance into the estate. The latter is a duty that has arisen based upon the societal movement³⁴² toward the acceptance of some degree of environmental ethics, and should also fit within the estate in land. Its justification is ethical in essence, and its scope is defined by ecological principles that govern the limitations on human disturbance of ecosystems, in accordance with the understanding fostered by the most current paradigm in ecology. The duty of environmental context is the stick that is the green wood in the bundle. It is the one stick that is dependent on the individual nature of the specific real property, and is therefore planted firmly in the ground.

The inclusion of this green wood into the bundle is evolutionary, not revolutionary. It will promote an understanding that existing rules and sources, which though implicit, are part of our value system and therefore the essence of our real property law, mandate environmental protection.³⁴³ It will not effect a moratorium on development, but perhaps stimulate a more substantive environmental impact assessment process, and greater adherence to a land use scheme that also must be prepared in accordance with that procedure.

The examination of the historical and philosophical bases for the current metaphor for property ownership reveals its strengths and frailties. As Professor Joseph Sax has suggested, the current model might be replaced with one based on the principle of usufructuary rights.³⁴⁴ While Professor Sax is correct in his analysis, the question

³⁴² "The book of life changes, and the values revealed to us today may be different from those that will be revealed to us tomorrow." CARDOZO, *supra* note 45, at 59.

³⁴³ In Lucas, the Court stated the following:

In light of our traditional resort to "existing rules or understandings that stem from an independent source such as state law" to define the range of interests that qualify for protection as "property" under the Fifth and Fourteenth Amendments. [citations omitted] This recognition that the Takings Clause does not require compensation when an owner is barred from putting land to a use that is proscribed by those "existing rules or understandings" is surely unexceptional. When, however, a regulation that declares "off-limits" all economically productive or beneficial uses of land goes beyond what the relevant background principles would dictate, compensation must be paid to sustain it.

Lucas v. South Carolina Coastal Council, 505 U.S. 1003, 1030 (1992) (footnote omitted).

³⁴⁴ Joseph L. Sax, Property Rights and the Economy of Nature: Understanding Lucas v. South Carolina Coastal Council, 45 STAN. L. REV. 1433, 1452 (1993) [hereinafter Sax, Property Rights].

of whether the paradigm of ownership had ever left the realm of usufruct, except in metaphor, is one that is based on the history of ownership, and cannot easily be dismissed. Within the usufructuary framework, a metaphor of property ownership could be accomplished which incorporates the science of ecology and the ethic inspired by Aldo Leopold. As Professor Sax states, "property can serve two masters: the community and the individual." In setting the parameters for green wood it is necessary to consider the realm of the usufruct, to promote equity, while recognizing the uniqueness of each parcel of land. However, since the concept of usufruct is so fundamentally alien to the American people, when placed as a restriction on their ownership of property, its likelihood for institutionalization is minimal.

The very metaphor that is used to describe property and its underlying connotation as rights rather than things, has limited our application of environmental values that society has accepted. While it is true that the concept of property is somewhat vacuous when thingoriented, it is also deficient when the definition is devoid of reference to it. The absence of this reference is particularly troubling with regard to real property. In an effort to raise the theory of property to a universal and highly intellectual principle, the res was forgotten. The bundle of sticks has no ties to the ground. In the absence of a theoretical connection to the real nature of real property, the treatment of it, without regard to any environmental implications is inevitable. The upshot is that the Supreme Court in $Lucas^{347}$ could treat the property as any other parcel of land, regardless of its location and circumstances.

Perhaps it is time for the common law to root the bundle of sticks for real property to the ground, and thereby ground the theoretical notion of property with the current reality of ecology and the societal values comprising environmental ethics. As Oliver Wendell Holmes has stated, "The life of the [common] law has not been logic: it has been experience."³⁴⁸

⁸⁴⁵ Id. at 1453.

³⁴⁶ The principle is known as the unified "quantum" theory of property.

³⁴⁷ Lucas, 505 U.S. at 1003.

⁸⁴⁸ OLIVER WENDELL HOLMES, THE COMMON LAW 5 (1881).

A. Green Wood Grows in New York

In the exercise of its legitimate police power, the government may regulate, but the state of the law after the decision of the Supreme Court in the case of *Lucas* would indicate that the pursuit of purely ecological goals is subject to compensation.³⁴⁹ In two areas the government's right to regulate without liability for compensation remains clear: (1) where the action prevented is a nuisance under the common law;³⁵⁰ and (2) where the "proscribed use interests were not part of his title to begin with [and less than a total taking]."³⁵¹ This, the Court terms, is the "logically antecedent inquiry into the nature of the owner's estate."³⁵²

According to Professor Joseph L. Sax, "[h]istorically, property definitions have continuously adjusted to reflect new economic and social structures, often to the disadvantage of existing owners." This history is well documented and has been the subject of numerous studies invoking the evolution of property law as justification of later developments in that body of law. The infusion of the environmental ethic discussed above into that law may be seen as the natural progression in the evolution of property law. Though stumbling blocks may exist, such as the majority opinion in *Lucas*, the science of ecology and the environmental ethic will affect the path of evolution of real property law. This is certainly the fate of real property law, which we will view in retrospect much as we now view the property law which evolved around and bolstered human slavery, that peculiar institution which was tolerated, and indeed encouraged by our system of laws. The science of laws.

³⁴⁹ Some commentators have questioned whether the import of the *Lucas* decision is a direct challenge to regulation based purely on ecological bases. "In general, *Lucas* addresses legislation imposed to maintain ecological services performed by land in its natural state." Sax, *Property Rights*, *supra* note 344, at 1439.

³⁵⁰ In Colorado Dep't. of Health v. The Mill, 887 P.2d 993, 997 (Colo. 1994), the Supreme Court of Colorado held that under the common law of the state, any land use that causes pollution is a nuisance.

³⁵¹ Lucas, 505 U.S. at 1027.

³⁵² Id.

³⁵³ Sax, Property Rights, supra note 344, at 1446.

³⁵⁴ See id.

³⁵⁵ "An adjustment may even be effected between economic and aesthetic values. The land-owner will not be compelled to forego every profitable use of his land, but in some jurisdictions it is at least an open question whether a restriction may not be placed upon the construction of unsightly signs." CARDOZO, *supra* note 45, at 58–59.

 $^{^{356}\,}See\,generally$ Kenneth M. Stampp, The Peculiar Institution: Slavery in the Ante-Bellum South (1956).

In a sense, the majority in *Lucas* was attempting to burn a bridge behind it to prevent a maelstrom of ecologically based environmental regulation from taking hold.³⁵⁷ It is the thesis of this Article that such regulation is the next step in the natural and omnipresent evolution of real property law.

Ironically, it is the *Lucas* case that challenges us to devise and develop an evolutionary trend in real property ownership law, which will add the consideration of purely ecological and environmentally ethical restrictions on the use of private property. The *Lucas* case presents itself as a speed bump on the road to the infusion of environmental ethics into our regulation of real property. As such, it challenges us to explore the avenues which it excepts from being defined as takings: nuisance³⁵⁹ and the nature of the estate owned.

The many statutes on the books, both state and federal, that provide for the use of eminent domain to impose servitudes on private scenic lands preventing developmental uses, or to acquire such lands altogether, suggest the practical equivalence in this setting of negative regulation and appropriation. See, e.g., 16 U.S.C. § 410ff-1(a) (authorizing acquisition of "lands, waters, or interests [within Channel Islands National Park] (including but not limited to scenic easements)"); § 460aa-2(a) (authorizing acquisition of "any lands, or lesser interests therein, including mineral interests and scenic easements" within Sawtooth National Recreation Area); §§ 3921–3923 (authorizing acquisition of wetlands); N. C. Gen. Stat. § 113A-38 (1990) (authorizing acquisition of, inter alia, "scenic easements" within the North Carolina natural and scenic rivers system); Tenn. Code Ann. §§ 11–15–101—11–15–108 (1987) (authorizing acquisition of "protective easements" and other rights in real property adjacent to State's historic, architectural, archaeological, or cultural resources).

Lucas v. South Carolina Coastal Council, 505 U.S. 1003, 1018-19 (1991).

³⁵⁸ In *Del Monte Dunes at Monterey v. City of Monterey*, 95 F.3d 1422, 1429 (9th Cir. 1996), the Court of Appeals for the Ninth Circuit evaluated the trial court's jury instruction, which contained the following:

Public bodies, such as the city, have the authority to take actions which substantially advance legitimate public interest and legitimate public interest can include protecting the environment, preserving open space agriculture, protecting the health and safety of its citizens, and regulating the quality of the community by looking at development. So one of your jobs as jurors is to decide if the city's decision here substantially advanced any such legitimate public purpose.

This case makes the determination of the validity of a regulation a question of fact! In essence, the jury's opinion is substituted for that of the legislature.

359 One commentator suggested the following:

The greatest long term importance of *Lucas v. South Carolina Coastal Council* may lie in the Supreme Court's adoption of the common law of nuisance as a criterion of regulatory legitimacy. By using this criterion, the judiciary will be required to substitute its own judgments of right and wrong for that of the legislature in the land use field.

John A. Humbach, "Taking" the Imperial Judiciary Seriously: Segmenting Property Interests and Judicial Revision of Legislative Judgments, 42 CATH. U. L. REV. 771, 815–16 (1993) (footnotes omitted).

³⁵⁷ The Court stated the following:

Nevertheless, to be more than an intellectual exercise, this thesis must delineate the parameters that will work within the *Lucas* restrictions, to allow for regulations solely based on ecological need to pass muster as a part of the bundle of rights that are affected by the natural evolution of ownership:

1. Green wood looks at real property as unique, and therefore of value 360 even when unusable. 361 This basic fact deflates the fiction in the Lucas case that the property considered therein had no value. No

The second situation in which we have found categorical treatment appropriate is where regulation denies all economically beneficial or productive use of land. As we have said on numerous occasions, the Fifth Amendment is violated when land-use regulation "does not substantially advance legitimate state interests or denies an owner economically viable use of his land." We have never set forth the justification for this rule. Perhaps it is simply, as Justice Brennan suggested, that total deprivation of beneficial use is, from the landowner's point of view, the equivalent of a physical appropriation.

See San Diego Gas & Elec. Co. v. San Diego, 450 U.S. 621, 652 (Brennan, J., dissenting). "For what is the land but the profits thereof?" 1 E. Coke, Institutes ch. 1, 1 (1st Am. ed. 1812). Surely, at least, in the extraordinary circumstance when no productive or economically beneficial use of land is permitted, it is less realistic to indulge our usual assumption that the legislature is simply "adjusting the benefits and burdens of economic life," Penn Cent. Transp. Co. v. New York City, 438 U.S. 104, 124 (1978), in a manner that secures an "average reciprocity of advantage" to everyone concerned. Pennsylvania Coal Co. v. Mahon, 260 U.S. 393, 415 (1922). And the functional basis for permitting the government, by regulation, to affect property values without compensation—that "government hardly could go on if to some extent values incident to property could not be diminished without paying for every such change in the general law," id. at 413—does not apply to the relatively rare situations where the government has deprived a landowner of all economically beneficial uses. Lucas, 505 U.S. at 1015–18 (citations omitted) (footnotes omitted). Justice Brennan takes the quote of Sir Edward Coke (1552–1634) somewhat out of context.

But if a man seised of lands in fee by his deed granteth to another the profit of those lands, to have and to hold to him and his heires, and maketh livery *secundum formam chartæ*, [according to the deed] the whole land itself doth passe; for what is the land but the profit thereof; for thereby vesture, herbage, trees, mines, and all whatsoever parcell of that land doth passe.

COKE, supra note 11, at 4b. This passage follows a declaration by Coke that:

[l]and is anciently called *Fleth*; but land builded is more worthy than other land, because it is for the habitation of man, and in that respect both the precedency to be determined in the first place in a *præcipe* as hereafter shall be said.... For as the heavens are the habitation of Almightie God, so the earth hath he appointed as the suburbs of heaven to be the habitation of man.

³⁶⁰ What is unquestionably of value under an environmental ethic and what is considered of value based on the constitution are obviously two different things. See generally Holmes Rolston, III, Valuing Wildlands, 7 Envil. Ethics 23 (1985); Holmes Rolston, III, Values in Nature, 3 Envil. Ethics 113 (1981); Whitehead, supra note 322.

 $^{^{361}}$ The Court in *Lucas*, 505 U.S. at 1015, actually justifies the "test" for a taking by citing a definition of land as only profits.

piece of land can be considered to be without value or substantially without value.³⁶²

- 2. Regulation based wholly on ecological principles is: (A) valid exercises of police power; and (B) by definition aimed at the relief of a public nuisance.³⁶³
- 3. Mandating the maintenance of environmental context does not alter the value of the real property as to invoke a taking.³⁶⁴

362 But see Del Monte Dunes, 95 F.3d at 1422. In this case, a jury in the trial court below construed the question of whether there was an economically viable use remaining in the subject property, a 190-unit residential development. "[W]e first turn to determining whether the existence of an economically viable use falls within the category of essentially factual questions, which may be submitted to a jury. We hold it does." Id. at 1428. The court found that "[t]he Supreme Court has suggested that where an owner is denied only some economically viable uses, a taking still may have occurred where government action has a sufficient economic impact and interferes with distinct investment-backed expectations." Id. at 1432. Interestingly, the court in Del Monte Dunes upheld the jury verdict of "no economically viable use" despite the fact that the owner had sold the property to the state of California for \$800,000 more than it had paid for the site. Id. The court then attempted to rationalize this glaring inconsistency by declaring that "it is not difficult to conceive of a circumstance in which there are no economically viable uses for a property, but the property owner can sell it to the government at a higher price than what he paid for it." Id. The court then abruptly declared that "[a]lthough the value of the subject property is relevant to the economically viable use inquiry, our focus is primarily on use, not value." Del Monte Dunes, 95 F.3d at 1443. They then offered a "test: . . . where, as Del Monte argued in this case, government action relegates permissible uses of property to those consistent with leaving the property in its natural state (e.g., nature preserve or public space), and no competitive market exists for the property without the possibility of development, a taking may have occurred. Jed Rubenfeld, Usings, 102 YALE L.J. 1077, 1157 (1993) (discussing analogy between condemned land and land required to be left in its natural state)." Id. (other citations omitted).

 863 Examples of activities that could be permissibly regulated, without being takings, are cited by the Lucas Court.

On this analysis, the owner of a lake bed, for example, would not be entitled to compensation when he is denied the requisite permit to engage in a landfilling operation that would have the effect of flooding others' land. Nor the corporate owner of a nuclear generating plant, when it is directed to remove all improvements from its land upon discovery that the plant sits astride an earthquake fault. Such regulatory action may well have the effect of eliminating the land's only economically productive use, but it does not proscribe a productive use that was previously permissible under relevant property and nuisance principles.

Lucas v. South Carolina Coastal Council, 505 U.S. 1003, 1029–30 (1991). It is difficult to distinguish the aforementioned fact patterns from the *Lucas* facts, but it is clear that the recognition of the value of green wood would mandate the equation of the ecologically based regulation with those cited.

³⁶⁴ Following the logic of the examples cited in *Lucas*, the owner of a wetland, like the owner of Justice Scalia's hypothetical "lake bed," would not be entitled to compensation when he is denied the requisite permit to engage in a landfilling operation that would have the effect of flooding others' land. This follows despite the fact that the flooding might be an indirect consequence of the landfill rather than a direct overflow of water from the site. The natural ability of the wetland to provide flood protection must be considered. Likewise, the landowner who discovers the endangered species on his property is analogous to the power plant owner who finds that her/his plant is located on a fault.

These attributes therefore can be built into the owner's estate, if incorporated therein under state law.

Three cases recently decided by the New York State Court of Appeals³⁶⁵ have construed the Lucas Court's criteria of "logically antecedent inquiry into the nature of the owner's estate."³⁶⁶ The case of $Kim\ v.\ City\ of\ New\ York^{367}$ has construed the nature of the owner's estate to be governed both by state common law and statutory law.

The corpus juris of this State comprises constitutional law, statutory law and common law. To the extent that each of these sources establishes binding rules of property law, each plays a role in defining the rights and restrictions contained in a property owner's title. Therefore, in identifying the background rules of State property law that inhere in an owner's title, a court should look to the law in force, whatever its source, when the owner acquired the property.³⁶⁸

The court's efforts to use the entire *corpus juris* of the state harkens back to Blackstone's broad definition of property, which he modifies with "save only by the laws of the land." ³⁶⁹

This case involved the use of a portion of plaintiff's property to provide lateral support for an adjacent roadway. The court held that the plaintiffs were on constructive notice when they acquired the property "that the property abutted a public road that was below the legal grade." In analyzing the issue of takings, the court wrote that "regardless of whether this case is characterized as a physical or regulatory taking, a question we do not reach, our analysis starts with a search into the bundle of rights and concomitant obligations contained in plaintiffs' title." The court then proceeded to occupy the role that the *Lucas* Court presumably intended by its reference to the "logically antecedent inquiry into the nature of the owner's estate." In their evaluation of the nature of the owner's estate under

³⁶⁵ Four cases were decided on that date regarding this issue: Kim v. City of New York, 681 N.E.2d 312 (N.Y. 1997); Gazza v. New York Dep't of Envtl. Conservation, 678 N.E.2d 1035 (N.Y. 1997); Anello v. Zoning Bd. of Appeals, 678 N.E.2d 870 (N.Y. 1997); Basile v. Town of Southampton, 678 N.E.2d 489 (N.Y. 1997). The *Basile* case is not considered herein.

³⁶⁶ Lucas, 505 U.S. at 1027.

³⁶⁷ Kim, 681 N.E.2d at 312.

³⁶⁸ Id. at 315-16 (citations omitted).

³⁶⁹ BLACKSTONE, supra note 16, at 138.

³⁷⁰ Kim, 681 N.E.2d at 313.

³⁷¹ Id. at 314-15.

³⁷² The court noted:

[[]I]t has been suggested that this "logically antecedent inquiry" into the owner's title should be limited to a review of those property and nuisance rules recognized at common law, and that statutory law should not factor into the analysis. . . . Some

state law, the New York court found that "the lateral-support obligation imposed on plaintiffs was a prevailing rule of the State's property law when they acquired their property and, accordingly, encumbered plaintiffs' title and the constituent bundle of rights."³⁷³ Therefore no taking had occurred.

Sax had predicted that the "logically antecedent inquiry into the nature of the owner's estate" language would lead to results that the Lucas Court did not anticipate.³⁷⁴

This characterization of property rights may very well lead in a direction the Lucas Court did not intend to go. Simply stated, the Lucas rule says that government's right to constrain the use of property without paying compensation is limited by what it withheld from owners at the outset. Government cannot change the rules of the game after the game has started. 375

The extent to which the court in *Kim* went to lay the groundwork to pass muster under *Lucas* indicates the realistic possibility of the application of green wood through the mechanism of state property laws.³⁷⁶ Nevertheless, this case is subject to at least one interpretation that weakens its inherent limitations argument. If these inherent limitations are viewed as simply limited because of the pre-existing regulation,³⁷⁷ the effect may be the shift of the burden of the regulation to the previous owner, who held title before the regulation was enacted. This might lower the purchase price, or prevent the sale entirely (which would distinguish it from the facts in *Kim*), enabling the aggrieved sellers to claim the taking. Any lowering of the market price, however, would not trigger compensation under the rule in *Lucas*.

confusion in this respect stems from the Supreme Court's emphasis on the nuisance doctrine in *Lucas* to illustrate the type of background restriction of State law that would inhere in a property owner's title (*see, e.g., Lucas,* 505 U.S. at 1029 (property owner's title contains the restrictions on use that "could have been achieved in the courts... under the State's law of private nuisance, or by the State under its complementary power to abate nuisances that affect the public generally")). However, we do not think that this aspect of the *Lucas* opinion should be read so narrowly.

Id. at 315 (selective citations omitted).

³⁷³ Id. at 319.

⁸⁷⁴ See generally Sax, Property Rights, supra note 344.

³⁷⁵ Joseph L. Sax, Rights that "Inhere in the Title Itself": The Impact of the Lucas Case on Western Waterlaw, 26 Loy. L.A. L. Rev. 943, 944 (1993).

³⁷⁶ See Kim, 681 N.E.2d at 314.

³⁷⁷ For this interpretation, see Kass & McCarroll, supra note 273, at 3.

The second case decided by the Court of Appeals was $Anello\ v$. $Zoning\ Board\ of\ Appeal$, in which the court used the reasoning developed in Kim to hold that since "petitioner acquired her property after the enactment of the steep-slope ordinance, its enforcement does not deprive her of a property interest." 878

The third case, Gazza v. New York Department of Environmental Conservation. 379 considers a state wetlands preservation program. The case involved property purchased by petitioner in a "residentially-zoned district of which 65% had been inventoried as tidal wetlands."380 Petitioner applied for setback variances under the applicable state regulations³⁸¹ to the New York State Department of Environmental Conservation (DEC), but the application was denied after an administrative hearing, based upon the failure of the petitioner to show that the variance would have no adverse impact on the wetlands. 382 Additionally, upon the adoption of the decision of the hearing officer, the DEC found that "the proposed construction of a sanitary system threatened both marine life and humans, that other contaminants threatened the area and that flooding problems would be increased."383 The New York State Appellate Division, Second Department, upheld the lower court's dismissal of petitioner's takings claim on the grounds that where "a landowner does not have a reasonable investment-backed expectation that he would be able to build a residence on his parcel, he cannot claim a regulatory taking when his application for a permit to allow the construction of a building is denied."384

The Court of Appeals cites as justification for the decision in *Gazza* reasoning that is clearly based on the state legislature's findings of a stewardship toward its ecologically vital tidal wetlands.³⁸⁵ In affirming the decision of the Appellate Division, the court noted that:

In 1973, the Legislature concluded that "tidal wetlands constitute one of the most vital and productive areas of our natural world,

³⁷⁸ See Anello v. Zoning Bd. of Appeal, 678 N.E.2d 870, 871 (N.Y. 1997) (citing *Kim*, 681 N.E.2d at 312).

³⁷⁹ See Gazza v. New York Dep't of Envtl. Conservation, 679 N.E.2d 1035, 1036 (N.Y. 1997).

³⁸⁰ See id.

³⁸¹ N.Y. COMP. CODES R. & REGS. tit. 6, § 661.6 (1995).

³⁸² See Gazza, 679 N.E.2d at 1036-37.

³⁸³ See id. at 1037.

³⁸⁴ See Gazza v. New York Dep't of Envtl. Conservation, 634 N.Y.S.2d 740, 740 (N.Y. App. Div. 1995).

³⁸⁵ See Gazza, 679 N.E.2d at 1038.

and that their protection and preservation are essential." (L. 1973, c 790, § 1). The Legislature also noted its concern that much of the State's tidal wetlands had already been irreparably destroyed or despoiled and the remaining wetlands were in imminent danger of the same fate. (id.). Pursuant to these findings, the Legislature enacted the Tidal Wetlands Act and struck a balance between ecological and economic consideration by preserving and protecting tidal wetlands while permitting reasonable economic use and development. . . .

To implement this policy, the Legislature directed the Commissioner of Environmental Conservation to inventory all tidal wetlands in the State of New York (ECL 25–0201). The Commissioner was also empowered to regulate the use of inventoried wetlands as well as the areas immediately adjacent thereto.³⁸⁶

This reasoning clearly is supportive of the thesis herein, and represents the *raison d'etre* for green wood, which is the enforceability of legislative mandates to protect the environment. It also empowers states to act in their best interests and thereby is an immutable part of states' rights.

In addressing the takings issue as addressed by *Lucas*, the court again referred to the "logically antecedent inquiry into the nature of the owner's estate."³⁸⁷ In this analysis the court ruled that "a promulgated regulation forms part of the title to property as a pre-existing rule of State law."³⁸⁸ The "petitioner's claim that the denial of his variance was a 'taking' must fail because he never owned an absolute right to build on his land without a variance."³⁸⁹

The New York State Court of Appeals has taken up the *Lucas* Court's challenge and has fashioned a state property law that includes

³⁸⁶ See id.

³⁸⁷ Id.

Our courts have long recognized that a property interest must exist before it may be "taken." . . . Neither may a taking claim be based upon property rights that have already been taken away from a landowner in favor of the public. For example, government may "assert a permanent easement that was a pre-existing limitation upon the landowner's title" (Lucas v. South Carolina Coastal Council, 505 U.S. at 1028–29). Similarly, regulatory limitations that "inhere in the title itself" will bind a purchaser (Id. at 1029). To paraphrase the Supreme Court's ruling, the purchase of a "bundle of rights" necessarily includes the acquisition of a bundle of limitations.

Id. at 1039 (selective citations omitted).

³⁸⁸ See id. at 1039.

³⁸⁹ Gazza, 679 N.E.2d at 1039. "Petitioner cannot base a taking claim upon an interest he never owned. The relevant property interests owned by the petitioner are defined by those state laws enacted and in effect at the time he took title and they are not dependent on the timing of state action pursuant to such law." *Id.* at 1040–41.

the state's environmental values,³⁹⁰ as evidenced by the body of its statutory and regulatory laws, into the bundle of rights. They have set the framework for the constitutionally permissible acceptance of green wood into the bundle of sticks. The use by New York of the body of its laws, its *corpus juris* as the basis for the *Lucas*-initiated "logically antecedent inquiry into the nature of the owner's estate," has a validity beyond the justifications given in *Kim*, and those specifically enumerated in *Lucas* for its justification. That basis is the historical evolution of property laws, which since Blackstone have been held to be subject to the laws of the land.

The Court of Appeals decisions almost totally undermine the *Lucas* case (although within the very parameters which Justice Scalia's opinion left unresolved). The Court of Appeals decision increases the scope of the police power to affect those property rights that were never part of the bundle of rights to begin with. While these decisions are not ecologically grounded, the recognition of environmental laws as the *corpus juris* of the state clears the way for the application of green wood.

VII. THE UPSHOT OF GREEN WOOD³⁹¹

Beyond the theoretical construct of a metaphor that applies the duties of ecological protection and environmental context to real property law, the question of how these principles will affect the interplay between real property owners and the environment is a valid one. There is no intention that green wood will evolve to stifle development. "The focus of environmental problems is *not*, as is sometimes suggested, the mere *fact* of change, which it is said environmental zealots cannot accommodate, but rather a rate of change so destabilizing as to provoke crises "392 There is, however, a design to afford society and developers with the mechanisms with which to base substantive decisions on environmentally sound assessment.

Politically, green wood is ironically the embodiment of both property rights³⁹³ and states' rights. As a part of the real property law, it

 $^{^{390}}$ The court noted that the wetlands regulations in question (NYECL \$ 25–0102) were implemented "to balance ecological and economic considerations." Gazza, 679 N.E.2d at 1038.

³⁹¹ See Leopold, supra note 32, at 235. The title of Leopold's group of essays—"The Land Ethic," "Wilderness," and "Conservation Esthetic"—is "The Upshot."

³⁹² Joseph L. Sax, Liberating the Public Trust Doctrine, 14 U.C. DAVIS L. REV. 185, 188 (1980).

³⁹³ It is unfortunate that "property rights" have been raised to an ideology that is based on a misunderstanding of the bundle of sticks, and a general denial of the correlation of rights and duties.

enforces the rights of property owners who might be aggrieved by the inappropriate behavior of others, and recognizes that such behavior even when otherwise lawful can amount to a violation of the property rights of others. This is very much a function of property rights, but it focuses those rights on those who are preserving the status quo rather than those who wish to change it by altering the environment. Even Locke states, "Man therefor in society having property, they have such right to the goods, which by law of the community are theirs, that nobody hath a right to take their substance of any part of it from them, without their own consent, without this they have no property at all." In a society there is a balance of property rights between owners of property; it is not merely a balance between property rights and regulation.

With the understanding of the environment that ecology provides, we know that the private use of land by one landowner affects the private use of land by another. In the past these balances were made with reference to such things as economics or priority in time; green wood mandates that the balancing be made based on environmental ethics. It is simply a choice of whose property rights will be enforced, and the decision will no longer be based solely on the economic balance between the parties (which in the past was motivated by the need to foster economic development), but will be based on the important societal interest of preserving the environment.

Green wood also transcends the bounds of nuisance law, which holds to its definition in prohibiting an invasion of another's interest that is unreasonable, in that it is dependent upon what is intolerable to society. Actions that were once tolerable, such as the filling of a wetland, are now deemed intolerable. This is manifested by legislation and regulation, for how else does society express its values? The green wood allows for the enforcement of these values, which are embodied in law. Much as the *Gazza* court justified its finding on the legislative intent to protect tidal wetlands, courts employing green wood will use the laws of the jurisdiction to evaluate the treatment given to a piece of real property. The law that must be upheld under green wood is primarily state and local laws, which reflect the public policy of the states and localities. This is an issue of states' rights. If New York declares through its legislature that preservation of tidal wetlands is a public policy priority of the state, then interference with

³⁹⁴ 5 Locke, Works, *supra* note 193, at 421.

that policy—questioning its police powers—is a direct affront to the federalist traditions. This is especially true when that state's highest court has declared the public policy of protecting tidal wetlands to be the common law of the state, and part of the title to property taken subsequent to the enactment thereof.

This is the first step in the recognition of green wood as part of the property formula. That step has been taken in New York, through Judge Carmen Beauchamp Ciparick's bold and innovative opinion, but has not yet caught on elsewhere. These types of decisions that inculcate the environmental values that most states have already legislated into the corpus juris of that state will precede the de facto recognition of green wood as a stick in the bundle of rights. This is necessary under the slow and deliberate evolutionary structure of the common law. The issue then is one of the necessity of green wood in light of both the acceptance of environmental values in the national corpus juris and the resultant avoidance of the takings doctrine. The need to infuse green wood into real property law is based on the fundamental importance of ecology and environmental ethics, which should not be abrogated by a legislative body. This presents an obvious dichotomy; on the one hand, it is noted that the infusion of these values is based upon the change in societal values which have prompted the environmental revolution; on the other hand, the case is being made for the continuation of these policies despite the possible movement from that policy in reaction to this infusion. How can these be reconciled?

The answer to the question and the remedy for the *Kim* line of reasoning is the acceptance of the principles of ecology and environmental ethics into common law. It is well recognized that profound changes in the law, such as that contemplated with green wood, are often slow in coming.³⁹⁵ For a change of this type to evolve, it is clear that it will have to work its way through the common law processes to gain acceptance. This will involve the presentation of evidence of the existence of a stick that gives a duty of environmental context, and the convincing of a court that the law allows for such a result. Perhaps this will be repeated in some, if not all, states before it achieves recognition on a national level. Legislative enactments to effect this change in real property law will be faced with scrutiny under the *Lucas* case, but it seems that if the enactments are based

 $^{^{396}}$ See S.F.C. Milsom, Historical Foundations of the Common Law 149–51 (2nd ed. 1981).

firmly on the green wood theory of real property, they will pass the Court's muster.

The New York Court of Appeals has taken a giant step toward the adoption of green wood by its ruling in the *Kim* case, which holds that the law of property in New York includes the full body of New York law, inclusive of the state constitution, statutes, and common law. This is borne out by the conclusion in that case, but is more importantly bolstered by the fact that New York has adopted many environmentally friendly laws over the course of the past thirty years, including wetlands protection and endangered species protection. If a real property owner in New York is subject to the constraints that these laws have placed against the land, then green wood may be a reality in that state. Even if these constraints are limited as against the purchasers who took title with constructive knowledge of these restrictions, that would be a major change in property law.

Several troubling issues remain with regard to the Kim decision. First is the issue of whether the rights of prior purchasers will be subject to a taking; such a problem could manifest itself by a challenge to the title given by the seller to the now restricted purchaser.³⁹⁶ This could result in claims against title companies who unwittingly insured titles despite the enactment of a statute. The unintended effect could be an upsurge in title litigation, which would ultimately result in an effect on subsequent transfers. The second problem might be a public backlash against this disquieting of title, which could induce a legislative remedy to specifically remove the statutory enactments from consideration as property law. This might have the concomitant negative effect of cementing the bundle of sticks with a legislative enactment directed at maintaining the status quo. However, there are examples of situations in which societal values have been placed above property rights. These include regulation of hazardous waste sites under CERCLA³⁹⁷ as well as such accepted notions as a warrant of habitability in a lease.

Additionally, though certiorari has been denied in the *Kim* case, a future appeal of a similar issue to the United States Supreme Court might encounter a bench that supports the position staked by dissenting New York State Court of Appeals Judge Smith. Judge Smith

³⁹⁶ As the dissent notes: "There is no evidence that the purchase price paid by the plaintiffs was based upon an awareness of the obligations and rights announced by the majority. Indeed, plaintiffs sued the sellers for fraud because they allegedly were unaware of such duties." Kim v. City of New York, 681 N.E.2d 312, 325 n.7 (N.Y. 1997) (dissenting opinion).

⁸⁹⁷ 42 U.S.C. §§ 9601-9675 (1994).

points to the *Loretto* case to bolster his position that the physical invasion in *Kim* constituted a taking.³⁹⁸ This physical invasion is a high hurdle based on the Supreme Court's jurisprudence in this area, in spite of the wide swath left by the *Lucas* Court regarding the "logically antecedent inquiry" into the owner's title.

Despite these problems, the Kim case provides a vehicle for the incorporation of societal values into real property law, much as the green wood concept would. The substantive difference is that a court would rule that the common law of property demonstrated that the bundle of sticks included a duty of environmental context, rather than pointing to the $corpus\ juris$ of the state as the Kim court did. While this distinction seems more semantic than substantive, it is the semantic precedence that the common law thrives on, and announces that we are only now recognizing what has unfolded in real property law through its natural evolution. It is also a semantic distinction that the Supreme Court in Lucas gives credence to. In this sense green wood is also calculated to avoid the issue of takings, especially prospectively, in the spirit of Kim, but without the added baggage of statutory environmental law that the Supreme Court holds to be suspect.

It is fair to inquire at this point how green wood in the common law of real property will function. Will it cause a rash of judge-made environmental laws,⁴⁰¹ or will the legislation be imposed more strictly? What will the effect of this be? Answering these questions requires the construction of hypothetical scenarios that mimic possible situations where the green wood in common law property can be enforced. It is useful to think of the enforcement of green wood as the en-forcement of environmental context, and in this sense the aggrieved party whose property rights are threatened is not the party who seeks to change the status quo, but the party who seeks to maintain it. Another analogy is helpful. Think of a cause of action based on environmental context as an analog of nuisance; an additional injury to property added to the list of six compiled by Blackstone.⁴⁰²

³⁹⁸ See Kim, 681 N.E.2d at 316.

³⁹⁹ See id. at 315.

⁴⁰⁰ Lucas v. South Carolina Coastal Council, 505 U.S. 1003, 1027 (1991).

⁴⁰¹ If anything, the thought of judicial legislation is comforting in the face of the "juror legislation" which was used to determine the validity of the land-use regulation in *Del Monte Dunes at Monterey v. City of Monterey*, 95 F.3d 1422, 1426–30 (9th Cir. 1996).

⁴⁰² See WILLIAM BLACKSTONE, JONES BLACKSTONE 1736 (William Cary Jones ed., 1915).

At least two basic scenarios which focus issues of environmental context could exist. The first is a private action between landowners to prevent an action that one landowner claims violates the environmental context of the land where the action is to take place. A factual situation that could spark this type of action could include proposals ranging from major changes, such as a change from residential to industrial use, to *de minimis* changes, such as the cutting (or even trimming) of a certain tree. Obviously, there have to be specific limitations to this action so that its use does not become (1) used for *de minimis* changes; (2) used as a sword to impose the will of neighbors upon the other rights of the landowner; and (3) an endless abyss of litigation.

These actions could be limited by the position that environmental context is a public rather than a wholly private value, and the use of environmental context as a private cause of action is limited as it must be shown to (1) be a public policy, i.e., the municipality has regulated the cutting of the trees in question; or (2) be a nuisance.⁴⁰³ The use of environmental context as a criterion could also add to basic nuisance

⁴⁰⁸ In many cases the rights of neighboring landowners could be protected adequately by resort to the law of nuisance. The Wisconsin Supreme Court in Prah v. Maretti, 321 N.W.2d 182, 192 (Wis. 1982), deals with a landowner's right to sunlight for a solar home. See generally J. Otto Grunow, Wisconsin Recognizes the Power of the Sun: Prah v. Maretti, and the Solar Access Act, 1983 Wis. L. Rev. 1263, 1272–89 (noting that an owner of land does not have an absolute or unlimited right to use the land in a way which injures the rights of others; the uses by one landowner must not unreasonably impair the uses or enjoyment of the other neighboring landowners). In Moloso v. State, 644 P.2d 205, 219 (Cal. 1982), the California Supreme Court held that "a landowner must act as a reasonable person in maintaining his property in a reasonably safe condition in view of all the circumstances, including the likelihood of injury to others" (emphasis added). This remedy is available for those who need to enforce the prohibition against harmful use. Under proper circumstances, nuisance, both public and private, might also be used to enforce the duty of environmental context.

However, the proper circumstances are often few and far between. There are severe limitations to the use of nuisance as a remedy for environmental threats. In the case of Leatherbury v. Gaylord Fuel Corp., 347 A.2d 826, 832 (Md. App. 1975) (quoting Adams v. Commissioners of Trappe, 204 Md. 165, 170 (1954)), the Maryland Court of Appeals noted that "[t]o constitute a nuisance per se, the activity sought to be enjoined must be a nuisance at all times and under any circumstances regardless of location or surroundings." This led the court to conclude that the possibility that the alleged nuisance (which was a stone quarry that had not yet begun operations) could be operated in a manner which would not constitute a nuisance, it could not be considered a nuisance per se. See id. "Thus, a court will not act, in anticipation of a threatened nuisance, to enjoin a legitimate activity unless the circumstances plainly show that the activity will be conducted as a nuisance." Id. Interestingly, the plaintiffs claimed that the enactment of the Maryland Environmental Policy Act acted to broaden the Maryland law of nuisance for environmental protection. See id. at 833. The court noted, however, that "[n]othing in the Act supports [their] view that either new or enlarged rights were intended to be created in an action to enjoin a prospective nuisance by a neighboring landowner, nor does the Act purport to enact

law. 404 The basic limitation, however, is that individuals do not determine what the environmental context is; that is a task for government—one that is based squarely on ecology and environmental ethics. The individual who would be aggrieved by the cutting down of a particular tree could apply to the municipality for an ordinance that makes the preservation of that tree a part of the environmental context of the municipality, but that would require proof of environmental context.

Private actions, because of the public policy aspects of green wood, must have this high threshold. Public actions, however, are the main area in which environmental context could be enforced. These public actions would be initiated by a permit request or by the legislative process. A permit to conduct an action which under an environmental impact assessment process indicated that the environmental context was to be changed would assess the change and mandate alternatives. In jurisdictions with assessment procedures in place this process would simply coincide with the current procedure. It would add the question of environmental context, but the answer to that question could be elicited by the date provided in most environmental impact statements. The second step, which is nothing more than a substantive use of the environmental impact assessment, would be mandated by operation of law, in this case the real property law that requires the maintenance of the environmental context.

new criteria for a trial court to use in determining whether a future activity will constitute a nuisance." Id. at 834.

⁴⁰⁴ Although the effect of green wood and environmental context on nuisance law is somewhat beyond the scope of this Article, it is well noted that this type of proposal, which euphemistically would put an attorney general in every backyard, would promote litigation and prompt the proliferation of "not in my backyard" suits. As such, strict limitation must accompany the right to sue, including the elimination of certain categories of damages that might promote unnecessary litigation.

The NIMBY (Not In My Backyard) phenomenon refers to instances of local, grassroots opposition to the construction of various unwanted facilities, such as prisons, megamalls and garbage dumps. Many commentators have labeled NIMBY movements as narrow, self-interested and shortsighted. Others have praised them as providing "an energetic check against the kinds of projects that many people now regard as absurd maldevelopment." Whether you love or despise these sorts of movements, it cannot be denied that they represent civic participation in its most dynamic form. Though focused in scope and temporary in duration, such NIMBY activity is exactly what Tocqueville had in mind when he stated over a century and a half ago that Americans had "carried to the highest perfection the art of pursuing in common the object of their common desires."

An example of a likely candidate for enforcement of environmental context is a plan by the Du Pont Company to mine titanium immediately adjacent to the Okefenokee National Wildlife Refuge in Georgia. This operation, which is proposed for privately held and leased land, is arguably a violation of the environmental context of the site. 405 Under the current state of the law, the company would apply for a permit under section 404 of the Clean Water Act, for the dredging and filling of wetlands. 406 "The company would have to get permits from the Army Corps of Engineers before dredging and filling the wetlands, and the Environmental Protection Agency can veto decisions by the Army Corps, although this power is rarely used."407 Environmental context could protect this area and prevent the mining operation, which "John Kasbohm, an ecologist at the refuge, said 'threatens the very character of the swamp." 408 An environmental impact assessment under NEPA would also probably be triggered, but that would not mandate substantive action. As the Supreme Court wrote in Robertson v. Methow Valley Citizens Council, 409 "Other statutes may impose substantive environmental obligations on federal agencies, but NEPA merely prohibits uninformed—rather than unwise—agency action."410 The element of environmental context violation disclosed by the environmental impact assessment. much like a violation of the Endangered Species Act⁴¹¹ revealed by an environmental impact assessment, would trigger substantive issues requiring mitigation, despite the character of the NEPA inquiry remaining procedural. Thus, no change is required within NEPA, and the environmental context is enforceable to the extent allowed by local adherence to the real property law that engenders it.

The assessment therefore triggers inquiry into whether the proposed action fits the environmental context of the site, which becomes a question of fact, and results in substantive effects. Several possibilities could result: (1) the action could be found to be within the envi-

⁴⁰⁵ See John H. Cushman, Jr., Official Attacks Plan for Mining Project, N.Y. TIMES, Apr. 4, 1997, at A14.

⁴⁰⁶ 33 U.S.C.A § 1314 (1987).

⁴⁰⁷ Cushman. *supra* note 405, at A14.

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⁴⁰⁹ Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 351 (1989).

⁴¹⁰ Id. (footnote omitted).

⁴¹¹ 16 U.S.C. § 1536(a)(2) (1994). "Each Federal Agency shall, in consultation with and with the assistance of the Secretary, insure that any action authorized, funded, or carried out by such agency (hereinafter in this section referred to as an 'agency action') is not likely to jeopardize the continued existence of any endangered species" Id.

ronmental context—the action may proceed; or (2) the action is not within the environmental context—the action may not proceed, or must comply with changes that fit it within the environmental context.

A similar situation exists near the new Joshua Tree National Park in California's Mojave Desert. The Chuckwalla Valley is a peninsula of unprotected land surrounded on three sides by the Park. This valley is the proposed site for a landfill that would receive as much as 20,000 tons of Southern California's trash daily. The Park has no jurisdiction outside its boundaries, and the use of this site violates nothing but the environmental context of the site.

The procedural change that could protect this site's environmental context is quite simple. Annexed to the environmental impact statement, and based on the real property law requirement of environmental context, is a single question: does this proposed action change the environmental context of the ecosystem? If so, no permit is issued, and the applicant can modify or drop its plans. Despite the significant consequences of such an action, the significance of mining around the boundaries of the Great Okefenokee Swamp, Joshua Tree National Park, or Yellowstone National Park, have arguably more significant consequences.

Environmental impact assessment statutes afford the opportunity to infuse both environmental ethics and ecological concerns into the planning and decisionmaking processes. They fall short of that goal because most are generally only procedural in nature, and carry little substantive imprimatur with which to actuate their stated goals. In the case of *Matter of King v. Saratoga City Board of Supervisors*, the New York Court of Appeals noted that in:

E.F.S. Ventures v. Foster (71 N.Y.2d 359, 364–75), involving construction of an oceanside resort without benefit of comprehensive environmental review, we observed that the State had made protection of the environment one of its foremost policy concerns, and thus "our statute, unlike many others, imposes substantive duties

⁴¹² See Verne G. Kopytoff, Mojave Park Supporters Fight Plans for Dump, N.Y. Times, Apr. 6, 1997, at A33.

⁴¹³ "The purpose of an environmental impact statement is to provide detailed information about the effect which a proposed action is likely to have on the environment, to list ways in which any adverse effects of the action might be minimized, and to suggest alternatives to the action." In the Matter of SDDS, Inc., 472 N.W.2d 502, 508 (S.D. 1991).

⁴¹⁴ Matter of King v. Saratoga City Bd. of Supervisors, 675 N.E.2d 1185, 1188 (N.Y. 1996).

on the agencies of government to protect the quality of the environment for the benefit of all the People of the State."415

These statutes, therefore, might provide one procedural vehicle for the implementation of the green wood stick principle. 416 It is well noted that green wood bends, rather than breaks, and is a metaphor for the flexibility of a substantive environmental assessment procedure based on environmental context. This would not require that a substantive element be injected into these statutes. The effect of green wood on NEPA and similar state impact assessment provision would be similar to the effect of a local law, which would be recognized during the assessment process, and which could be enforced by the courts even where the assessment was only procedural in nature. Green wood will not inject the substantive element into environmental assessment; it does, however, provide a more objective focus for an assessment, and could use the assessment process for its future implementation. This fundamental change requires the understanding that the issue is between competing property rights, not between regulation and property rights.

VIII. CONCLUSION

Describing any perceived change in the very essence of real property laws leads us to the philosophical principles on which our system of laws and our political being is grounded. When formulating a position, it would be wise to rethink the use of philosophies that were derived at a time and under such circumstances that necessarily excluded ideas that only today have come to light. Indeed, how would Locke have been affected by sharing the earth with five billion people, or the knowledge that the incessant burning of fossil fuel could affect the planet's climate?

The reality of the issues that confront us today must be considered in the body of property law, which has appropriately evolved in the past to face social issues through the vehicle of the common law. Current conditions warrant the acceptance of a definition of real property that takes the environment into full account. To paraphrase Aldo Leopold: To do otherwise would be both unethical and contrary to scientific fact. Green wood recognizes both modern scientific realities and societal decisions that have already been made. It ties these to the most basic concept of law—the idea of property.

⁴¹⁵ Id. (citations omitted).

⁴¹⁶ See Stephen L. Kass & Michael B. Gerrard, The EIS at 25, N.Y.L.J., Oct. 28, 1994, at 3.