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NOTES

DRAWING THE LINE IN REGULATORY TAKINGS LAW: HOW A BENEFITS FRACTION SUPPORTS THE FEE SIMPLE APPROACH TO THE DENOMINATOR PROBLEM

Benjamin Allee*

Within earshot of Block Island Sound, along the imprecise shores of Westerly, Rhode Island's Winnipaug Pond, roughly twenty acres of wetlands and marshlands, undisturbed, ebb and flow with the ocean tide.¹ Small pools collect here at high tide, creating a sanctuary for fish and birds.² At low tide the marsh buffers against flooding, and it collects and filters meandering runoff.³ As wetlands, these twenty acres exemplify "the Nation's most biologically active areas."⁴ Enacting the Clean Water Act, Congress underscored its mission to preserve areas like that lining Rhode Island's seashore, when it declared "that the systemic destruction of the Nation's wetlands is causing serious, permanent ecological damage .... The unregulated destruction of these areas is a matter which needs to be corrected."⁵

* I would like to thank Professor William Treanor for his thoughtful guidance throughout all the stages of this paper, and Doug Hendrickson for helping me to see lines all over the earth that I never saw before.

1. See Palazzolo v. State ex rel. Tavares, 746 A.2d 707, 710 (R.I. 2000), rev'd sub nom. Palazzolo v. Rhode Island, 121 S. Ct. 2448 (2001). The certiorari-worthy issue in Palazzolo was whether a property owner who acquired title after a regulation was in place could prevail on a takings claim based on that regulation. See infra notes 103-09 and accompanying text. Reasonable expectations notwithstanding, the case also presents the denominator issue in simple, precise terms. The Supreme Court declined to address the denominator issue, however, as Palazzolo did not properly present it. See Palazzolo, 121 S. Ct. at 2464; infra note 163.

2. Palazzolo, 746 A.2d at 710.

3. Id.


5. Brace, 48 Fed. Cl. at 279. In Palazzolo, Rhode Island state law, not the Clean Water Act, controlled the permit procedures for wetlands conservation. The state and federal legislation serve the same goal, however, of preserving coastal wetlands. See Palazzolo, 746 A.2d at 710-11.
In 1978, Anthony Palazzolo obtained title to the roughly twenty-acre parcel bordering Winnipaug Pond. In 1983 and 1985, Palazzolo submitted development proposals to Rhode Island’s Coastal Resources Management Council (“CRMC”). The first plan proposed filling the entire marsh. The second, eleven acres of the marsh. The CRMC denied both proposals, finding that each threatened too adverse an impact on the existing wetlands and Winnipaug Pond. Palazzolo filed suit in Rhode Island Superior Court, alleging that the CRMC had taken his property under the Fifth Amendment.

Palazzolo claimed $3,150,000 in damages resulting from the denial of his development permits, based on an appraiser’s calculation of the value of a 74-lot residential subdivision plan for the property. At trial, the CRMC established that $200,000 in development value remained in the upland portion of the property.

The economic loss to Palazzolo’s parcel can be viewed in either of two ways. Wetlands comprise eighteen of the parcel’s twenty acres. The CRMC rendered those wetland acres valueless, and preserved the value in the two-acre, upland portion of the parcel. On the one hand, Palazzolo has suffered a 90% loss in value; eighteen of his twenty acres no longer retain economic benefit because of the CRMC. On the other hand, Palazzolo has suffered a 100% loss in value; disregarding the upland portion, all eighteen of his wetlands acres have suffered a total loss in value. Simply, either Palazzolo has lost some of the value of all of his property—18/20—or all of the value of some of his property—18/18.

6. As the sole shareholder of the previous owner, Shore Gardens, Inc., Palazzolo had been involved with the property since 1959. See Palazzolo, 121 S. Ct. at 2455-56.

7. Palazzolo, 746 A.2d at 710 n.1 (“The exact size of the entire parcel has not been specified by the parties.”).

8. See Palazzolo, 121 S. Ct. at 2456. The 1983 application proposed constructing a wooden bulkhead, and the 1985 application proposed a private beach club. Id.

9. Id.

10. Id.

11. Id.

12. Id.

13. Id. at 2464.


15. Monetarily, Palazzolo’s loss is 94%—$3,150,000/3,350,000—when the property remains undivided. The use of acreage for determining value, however, simplifies the equation without sacrificing any necessary considerations.

The former calculation reflects the customary, time-tested calculation of loss measured against the fee simple. "Conceptual severance" describes the latter calculation, which is the process of weighing lost value against a parcel smaller than the fee simple. Several "concepts," in theory, can "sever" a fee simple. "Functional severance" divides a property according to use. "Temporal severance" divides property according to time. "Vertical severance" according to a property's profile, "from the center of the earth to the top of the sky." Because the Supreme Court has confronted, with varying results, each of these concepts, this Note focuses on horizontal severance, on which the Court's stance is predominantly uncertain. "Horizontal severance" entails segmenting a fee simple into smaller parcels. Horizontal lines, essentially lines on a map, divide a whole parcel. The resulting, adjacent parcels align side-by-side, unlike, for example, vertically severed parcels which stack up on top of each other. For example, loosely speaking, America is horizontally severed into forty-eight contiguous states.

Deciding which calculation—18/18 or 18/20—to use is known as the denominator problem. Beginning with the economic impact caused by a regulation, courts can represent the takings analysis with a fraction. The numerator is the economic harm to a particular parcel caused by a government regulation. The denominator is the total unregulated economic value of the relevant parcel against which the economic harm is compared. The economic impact of a government regulation is the takings fraction's quotient. Whereas the numerator in the takings fraction primarily prompts factual disputes about actual harm done by a government regulation, the denominator additionally presents a pivotal legal issue about the scope of the entire takings inquiry, on which many takings cases turn.

17. See Margaret Jane Radin, The Liberal Conception of Property: Cross Currents in the Jurisprudence of Takings, 88 Colum. L. Rev. 1667, 1676 (1988) (authoring the term "conceptual severance").


20. See infra Part I.B.

21. See infra text accompanying note 160.

22. See Michelman, Property, supra note 16, at 1190-93 (setting out the denominator problem); see also Frank Michelman, Takings, 1987, 88 Colum. L. Rev. 1600, 1601 (1988) [hereinafter Michelman, Takings] (suggesting the term "entitlement chopping"); Radin, supra note 17, at 1676.


The "pivotal" nature of the denominator problem owes in chief to *Lucas v. South Carolina Coastal Council.*26 There, the Court established that whenever a regulation diminishes all the economic benefit of property a total taking has occurred, and a property owner must be compensated.27 If, however a tiny amount of value remains in the property, then an owner will not automatically prevail under *Lucas,*28 but will be subject to a less favorable balancing test, as set forth in *Penn Central Transportation Co. v. New York City.*29 Because of *Lucas,* regulatory takings plaintiffs own a keen incentive to fix their claims as a total taking. For example, the difference between 18/20 and 18/18 is not merely 10%. Rather, it is the difference between a claimant's automatic success under *Lucas,* versus, at best, uncertain odds under *Penn Central.* For Palazzolo, the fractional gap likely represents a difference of more than three million dollars.

The resolution of the denominator problem promises a far-reaching impact on regulatory takings jurisprudence. In *Pennsylvania Coal Co. v. Mahon,* Justice Holmes announced that when a regulation goes "too far" in diminishing property value, then the regulation has effected a compensable taking.30 The "too far" test calls for a measurement of diminution in value of a claimant's property.31 Yet often the same economic loss can be represented as a small fraction, or as a total deprivation, depending on the chosen method of measurement. Even when the parties do not dispute the actual economic harm caused by a regulation, different methods of measurement project such varying appearances of overall economic impact that the result of Holmes' "too far" test relies entirely upon the method chosen.

Once in place, the takings fraction enables the broader constitutional inquiry: whether "[g]overnment [is] forcing some people alone to bear public burdens which, in all fairness and justice, should be borne by the public as a whole."32 Initiated by Justice

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26. 505 U.S. 1003 (1992); see infra text accompanying notes 72-86.
27. *Lucas,* 505 U.S. at 1015-16.
28. *Id.* at 1019 n.8. But see infra note 86.
30. 260 U.S. 393, 415 (1922).
Black, this statement is known as the Armstrong principle, and has served as a focal point of regulatory takings law since 1960.\textsuperscript{33} In regulatory takings jurisprudence, unlike with traditional, physical takings, the mere character of the government action does not automatically determine whether government has unconstitutionally taken private property for public use without just compensation.\textsuperscript{34} Rather, fairness ultimately guides the constitutional scrutiny of regulatory actions.\textsuperscript{35}

Fairness in regulatory takings requires a balancing of competing interests. On the one hand, the individual has an interest in the use and enjoyment of his private property, or in the monetary equivalent when that use and enjoyment is taken. On the other hand, society has an interest in public improvement, and thus in the use of property as it impacts health, safety, and welfare. The Armstrong principle incorporates a balance of these interests.

The denominator problem is a legal precursor to the ultimate question of fairness embodied in the Armstrong principle. A sensible approach to the denominator problem must anticipate the subsequent fairness question, and must not hastily eliminate facts in the name of denominator analysis that are necessary to later answer the fairness question, before that question ever gets asked. The approach must preserve every consideration that is necessary to balance the interests of the individual with the interests of society. To preserve a fair balance, any resolution of the denominator problem must use a method of measurement that: (1) does not distinguish between takings claimants arbitrarily; and (2) limits the ability of claimants to unreasonably manipulate the denominator to gain compensation.\textsuperscript{36}

Those approaches that limit arbitrariness and plaintiff manipulation will not suffice, however, without adequately accounting for the benefits created by a regulation. This Note creates a "benefits fraction" to measure benefits created by government regulations.\textsuperscript{37} Unlike the takings fraction, which measures harm, the benefits fraction reflects the benefit to one parcel caused by the use of another parcel. Whereas a narrow takings focus, such as that inherent in each horizontal severance approach, gives the appearance that a regulation causes a disproportionate amount of harm to an individual, a broad focus gives the appearance that a regulation causes a disproportionate amount of benefit to the public. When government is permitted to

\textsuperscript{33} See Treanor, \textit{Armstrong}, supra note 32, at 1153, nn.15-22.

\textsuperscript{34} U.S. Const. amend. V ("[N]or shall private property be taken for public use, without just compensation."); cf. infra note 67 and accompanying text (outlining dispositive nature of the character of the government action regarding physical takings).

\textsuperscript{35} See William A. Fischel, The Economics of Zoning Laws 51, 151 (1985) [hereinafter Fischel, Zoning]; \textit{infra} Part III.C.

\textsuperscript{36} See \textit{infra} notes 167-36 and accompanying text.

\textsuperscript{37} See \textit{infra} Part III.B.
broaden the scope of the benefits fraction, the positive impact on society of a regulation always will appear far greater than the negative impact on the individual.

To illustrate the inverse relationship between the takings fraction and the benefits fraction, this Note introduces "numerator theory." When the scope of the takings denominator shrinks, the scope of the benefits numerator expands. Numerator theory proposes that by deviating from the fee simple, horizontal severance permits government to expand the scope of the benefits fraction.\(^{38}\) Revealing this flaw in horizontal severance, numerator theory emphasizes the necessity of fairly balancing the government's interest in regulating for the broadest public benefit. Only the fee simple approach offers a compromise between focusing too narrowly on the parcel harmed, and too broadly on the parcels benefited. Identifying this compromise, this Note advances that only the fee simple approach successfully preserves a fair inquiry into the constitutionality of society's effort to regulate land use.\(^{39}\)

Part I traces the Supreme Court's treatment of regulatory takings. First, it describes the two avenues available to takings claimants, \textit{per se} takings and, alternatively, the \textit{Penn Central} balancing test.\(^{40}\) Second, this part examines the Supreme Court's specific treatment of the denominator problem.\(^{41}\) The Court's stance has wavered since the seminal case of \textit{Pennsylvania Coal}. Part I assembles the Court's brushes with conceptual severance into two groups: cases in which the Court rejected conceptual severance; and cases in which the Court accepted conceptual severance. This part pays special attention to the variance between the Court's treatment of horizontal severance as opposed to other types of conceptual severance.

Part II surveys the approaches to horizontal severance used by courts or proposed by scholars. These approaches span a continuum based on their sensitivity to the polar interests of the public and the private individual. This part begins at the public-regarding end of the continuum, setting out the common ownership approach articulated by the New York Court of Appeals in \textit{Penn Central Transportation Co. v. New York City}.\(^{42}\) Part II proceeds through the fee simple approach,\(^{43}\) then to three alternative versions of horizontal severance: Justice Scalia's historically cognizable property rights approach;\(^{44}\) the subjective multifactor approach;\(^{45}\) and the economic substantiality

\begin{itemize}
  \item 38. \textit{See infra} Part III.B.
  \item 39. \textit{See infra} Part III.C.
  \item 40. \textit{See infra} Part I.A.
  \item 41. \textit{See infra} Part I.B.
  \item 42. 366 N.E.2d 1271 (N.Y. 1977), \textit{aff'd} 438 U.S. 104 (1978); \textit{see infra} Part II.A.
  \item 43. \textit{See infra} Part II.B.
  \item 44. \textit{See infra} Part II.C.
  \item 45. \textit{See infra} Part II.D.
\end{itemize}
Advancing that virtually every infringement on private property is a taking, the libertarian approach defines the continuum's opposite extreme. Each approach is explained and considered in light of two critical questions noted above: Does the approach permit takings claimants to manipulate the denominator without limit? Does the approach distinguish between takings claimants arbitrarily?

Part III criticizes the six approaches. Failing to navigate between the arbitrariness and manipulation criticisms, the common ownership and libertarian approaches are eliminated as extreme alternatives. This part next explains the benefits fraction, and applies the fraction to criticize the remaining approaches. Part III describes the relationship between a conceptually severed denominator in the takings fraction and a conceptually broadened numerator in the benefits fraction. A comparison of the fractions reveals that horizontal severance fails to balance the individual's conception of property with that of the public. Finally, this part examines the fee simple approach. The fee simple adequately responds to the benefits fraction, and facilitates the broader constitutional inquiry into whether an individual has been fairly burdened by a regulation that advances the public good.

I. SUPREME COURT TREATMENT OF REGULATORY TAKINGS

The Fifth Amendment's Takings Clause prevents government from taking private property for public use without just compensation. Traditional takings disputes involve physical seizure of property, and in enacting the Takings Clause, the Framers intended to protect landowners from physical seizures.

Regulatory actions that impact land use, however, do not fit the traditional takings prototype. Regulations enacted under the police power, to further public health, safety, and general welfare, often

46. See infra Part II.E.
47. See infra Part II.F.
48. See infra Part III.A.
49. See infra Part III.B.1.
50. See infra Parts III.B.2., III.B.3, III.B.4.
51. See infra Part III.C.
52. U.S. Const. amend. V.
54. See William Michael Treanor, The Original Understanding of the Takings Clause and the Political Process, 95 Colum. L. Rev. 782, 782 (1995) [hereinafter Treanor, Takings Clause] ("The original understanding of the Takings Clause ... was clear on two points. The clause required compensation when the federal government physically took private property, but not when government regulations limited the ways in which property could be used.").
adversely affect the rights of property owners. In 1922, the Supreme Court recognized a non-physical, regulatory taking in Pennsylvania Coal Co. v. Mahon. The Court, per Justice Holmes, found that when a state regulation effectively goes "too far" in diminishing property value "it will be recognized as a taking."

This part describes the regulatory takings jurisprudence that has developed in the wake of Pennsylvania Coal's famous decision. Section A travels the two roads paved by the Court for challenging government actions under the Takings Clause: (1) that the action automatically, per se, requires compensation; and (2) that a balance of factors fairly weighs in favor of compensation. The resolution of the denominator problem directly influences which of these two roads will be available to a takings claimant. Section B focuses on the Court's treatment of the denominator problem, which has changed both over time, and from one severing concept to the next.

A. Per Se Takings and the Penn Central Balancing Test

Property owners bringing takings claims seek compensation in one of two ways. When a government action effects a categorical, per se taking, government must reimburse the property owner for the value lost because of the action. The Supreme Court has established three categories of per se takings. First, when government permanently, physically invades private property, the invasion constitutes a per se taking. Building a highway across a landowner's property, for example, per se requires compensation. Second, a temporary taking per se requires compensation. As detailed below, the scope of the temporary takings category is limited to those instances where the claimant has already proved a compensable physical or regulatory taking. The per se part of the temporary takings category applies when the government action has ended. A takings claimant will prevail, per se, even when the action has ended. Third, when a private property owner suffers a total economic loss under a regulation, government must compensate that loss, per se. The only exception to this rule is that government need not pay a private individual when it regulates a common law nuisance. When a takings claim fits into any of the three per se categories, the claimant evades the arguments in favor of imposing the regulation without compensation. Per se

56. 260 U.S. 393 (1922).
57. Id. at 415.
58. See infra Part I.A.1.
60. See infra Part I.A.3.
takings do not include a fair balance of interests; compensation is automatically required.

When a regulation does not effect a per se taking, the claimant must prevail on a balancing test, articulated in Penn Central Transportation Co. v. New York City, that instructs courts to weigh three factors: (1) "the economic impact of the regulation"; (2) the property owner's "investment-backed expectations"; and (3) "the character of the government action." These factors serve to weigh the interests of the individual against the interests of the public.

1. Physical Seizure

A permanent physical occupation of property is a taking. A public easement, for example, constitutes a compensable taking. Permanent physical occupations deprive a property owner of the essential rights to "possess, use and dispose" of property, and the Framers had precisely physical seizures in mind in drafting the Takings Clause. As physical seizures equal per se takings, neither the magnitude of the physical invasion, nor any considerations of fairness factors in the analysis. In such cases, the character of the government action acts not as a weight in the balance, but as the lone criterion.

63. See Penn Central, 438 U.S. at 123-24; infra Part III.C.
65. See, e.g., Nollan v. Cal. Coastal Comm'n, 483 U.S. 825, 831 (1987) (finding that the California Coastal Commission physically invaded plaintiff's property when it exacted a right of public access to plaintiff's beach). Citing Loretto, the Court declared that the "right to exclude others is one of the most essential sticks in the bundle of rights that are commonly characterized as property." Id. (internal quotations omitted). The Court further explained: "We think a 'permanent physical occupation' has occurred, for purposes of that rule, where individuals are given a permanent and continuous right to pass to and fro, so that the real property may continuously be traversed, even though no particular individual is permitted to station himself permanently upon the premises." Id. at 832; see also Tahoe-Sierra Preservation Council, Inc. v. Tahoe Reg'l Planning Agency, 216 F.3d 764, 775 n.14 (9th Cir. 2000), cert. granted, 121 S. Ct. 2589 (2001).
66. See Loretto, 458 U.S. at 435; Richard A. Epstein, Takings: Private Property and the Power of Eminent Domain 60, 304 (1985) [hereinafter Epstein, Takings] ("Possession, use . . . , and disposition form the outer limits of ownership . . . . They lie at the core of a comprehensive and coherent idea of ownership."). But see Radin, supra note 17, at 1667-70 (reminding that emphasis on possession, use and disposition—the "liberal triad"—reflects only the liberal conception of property). On the original understanding of takings as physical seizures, see Treanor, Takings Clause, supra note 54, at 782.
67. "[W]hen the physical intrusion reaches the extreme form of a permanent physical occupation . . . the character of the government action not only is an important factor in resolving whether the action works a taking but also is determinative." Loretto, 458 U.S. at 426 (internal quotations omitted).
2. Temporary Takings

A temporary taking that denies all use of property entitles a landowner to compensation.68 Once a court determines that a property owner has suffered a taking, "no subsequent action by the government can relieve it of the duty to provide compensation for the period during which the taking was effective."69 The thrust behind the temporary takings category is that temporary takings "are not different in kind from permanent takings."70 Temporary takings analysis does not address the initial question of whether a taking has occurred; merely, it provides that if a property owner would otherwise prevail on a takings claim, either under another per se rule or under the balancing test, then the property owner will not fail solely because the government action is not permanent.71 In other words, if a court determines that a property owner has suffered a taking, then even when the government has ceased its invasion, the temporary action per se requires compensation.

3. Total Takings

A regulation that denies "all economically beneficial or productive use of land" creates a per se compensable taking.72 This category of per se takings, in great part, raises the stakes in the denominator analysis, enough to spawn a great deal of literature, both critical and supportive.73

69. Id. at 321.
70. Id. at 318.
71. The temporary takings issue in First English thus presented a "remedial" issue. See First English, 482 U.S. at 311; Tahoe-Sierra Pres. Council, Inc. v. Tahoe Reg'l Planning Agency, 216 F.3d 764, 778 (9th Cir. 2000) ("Because the question presented to the Supreme Court [in First English] related only to the remedy available once a taking had been proven, the Court stated explicitly that it was not addressing whether the ordinance constituted a taking." (citation omitted)), cert. granted, 121 S. Ct. 2589 (2001); Linda Greenhouse, A Property-Rights Claim Meets Resistance, N.Y. Times, Jan. 8, 2002, at A16. For the contrary view that courts must first temporally sever property and second determine the regulation's (or moratorium's) impact on that slice in time, see Tahoe-Sierra Preservation Council, Inc. v. Tahoe Regional Planning Agency, 228 F.3d 998, 999-1003 (9th Cir. 2000) (Kozinski, J., dissenting from denial of petition for rehearing).
When South Carolina voted in 1988 to protect its coastline, the value of David Lucas's two beachfront lots dropped from $1,232,387.50 to $0. The Beachfront Management Act prevented Lucas from erecting any structures on his property, contrary to his intention to build single-family homes on the parcels. The Supreme Court, per Justice Scalia, ruled against South Carolina on the ground that Lucas suffered a categorical taking. Justice Scalia unwound a string of prior cases to sew the rule that denial of all economically viable use of a fee simple violates the Fifth Amendment.

The Court advanced three justifications for the Lucas rule. First, "from the landowner's point of view, [total economic loss is] the equivalent of a physical appropriation." Second, the government's ability to exercise the police power withstands the Lucas rule virtually unharmed, because occasions of total economic loss of a fee simple are "relatively rare." Third, the rule guards against instances where the government, in fact, aims not to promote health, safety, and welfare, but rather to dedicate private property for public service without paying for it.

When a takings plaintiff satisfies a Lucas claim, courts will not balance any other factors; the government simply will lose.

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74. See Lucas, 505 U.S. at 1007-09. The Court accepted that the coastal regulation took all the value of Lucas's land, but four justices expressed skepticism about such an unlikely outcome. See id. at 1034 (Kennedy, J., concurring) ("This [complete devaluation] is a curious finding, and I share the reservations . . . about a finding that a beachfront lot loses all value because of a development restriction."); id. at 1044 (Blackmun, J., dissenting) ("This finding [of complete devaluation] is almost certainly erroneous. Petitioner still can enjoy other attributes of ownership, such as the right to exclude others . . . "); id. at 1065 n.3 (Stevens, J., dissenting) ("[H]is land is far from 'valueless.'"); id. at 1076 (Souter, J., statement). William Fischel's closer look at Lucas's property later revealed, however, that even the minimal, residual value presumed by the four justices was not present. See William A. Fischel, Regulatory Takings: Law, Economics, and Politics 59-61 (1995) [hereinafter Fischel, Regulatory Takings]. David Lucas, thoroughly unlike any other takings claimant, lost everything. Id. at 60.

75. Lucas, 505 U.S. at 1007.

76. See id. at 1019.


78. See Lucas, 505 U.S. at 1017-18; see also id. at 1066-67 (Stevens, J., dissenting).

79. Lucas, 505 U.S. at 1017.

80. Id. at 1018.

81. Id.

82. See Palm Beach Isles Assocs. v. United States, 231 F.3d 1354, 1361 (Fed. Cir. 2000) (denial of petition for rehearing en banc) ("Lucas teaches that the economic impact factor alone may be determinative; in some circumstances, no balancing of factors is required."). But see Palm Beach Isles Assocs. v. United States, 231 F.3d 1365, 1367 (Gajarsa, J., dissenting from denial of petition for rehearing) ("Investment-backed expectations must be considered in all regulatory takings cases, even in those rare situations where the government has deprived a landowner of all economically
However, the Court carved out one exception to the rule. The government can affirmatively defend that its regulation merely prohibits a common law nuisance, grounded in the "background principles of the State's law of property." Justice Scalia articulated the exception as follows:

Where 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 title to begin with. This accords, we think, with our "takings" jurisprudence, which has traditionally been guided by the understandings of our citizens regarding the content of, and the State's power over, the "bundle of rights" that they acquire when they obtain title to property.

Justice Scalia illustrated the exception at work, assuring that the government can prevent the owner of a lakebed from flooding the land of his neighbors, and the owner of a nuclear plant from operating atop a fault line, even when such action would deprive the owners, respectively, of all the economic value of their land.

*Lucas* increased the incentive for property owners to frame their harm as total economic loss. A landowner who suffers a 100% loss will succeed on a takings claim, provided that the operative regulation finds its source outside nuisance law. Another landowner who suffers a 95% loss in economically productive use, however, or a 99% loss, will not gain the benefit of the *per se* rule.

For example, consider Palazzolo, to whom I will refer in illustrations as "P." P owns twenty acres of land, eighteen of which are coastal wetlands. P plans to develop his property, but is denied a permit to fill in the wetlands acres. After *Lucas*, P realizes a gap between illustrating his loss as 18/20 versus 18/18. The difference between losing some economic value of all of the parcel and losing all economic value of some of the parcel is no longer just 10%. Instead, it is the difference between a court finding a categorical taking and a court subjecting P's claim to *Penn Central*'s ad hoc, all-encompassing balancing test.

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84. Id. at 1027 (footnote omitted).
85. Id. at 1029.
86. See id. at 1064-65 (Stevens, J., dissenting). *But see* Palazzolo v. Rhode Island, 121 S. Ct. 2448, 2464 (2001) ("[A] State may not evade the duty to compensate on the premise that the landowner is left with a token interest."). This dictum demonstrates the slipperiness of the *Lucas* slope; nowhere in *Lucas* did the Court indicate that less than a total taking would merit *per se* compensation.
87. See supra notes 1-16 and accompanying text.
88. These values are approximated to simplify the illustration. Cf. supra notes 6-7 and accompanying text.
4. The Balancing Test

A regulation that does not effect a categorical taking comes under the scrutiny of a three-part balancing test. Courts consider (1) "[t]he economic impact of the regulation on the claimant," (2) the property owner's reasonable "investment-backed expectations," and (3) "the character of the governmental action." The Court set out this three-factor analysis in *Penn Central*. There, the Court, per Justice Brennan, eschewed any "set formula" in takings jurisprudence. The Court called for "ad hoc, factual inquiries" into takings cases generally, and applied such an approach to the case at hand, as it closely compared New York City's interest in preserving its historic landmarks, with Penn Central's interest in realizing the development potential of the airspace above Grand Central Station.

*Penn Central* concerned New York City's Landmarks Preservation Law, and its economic effect on Grand Central Terminal. Having designated Grand Central Terminal a landmark, New York City's Landmarks Preservation Commission denied petitioner Penn Central's applications to build an office tower on top of the terminal. The Commission reasoned that "[l]andmarks cannot be divorced from their settings—particularly when the setting is a dramatic and integral part of the original concept." The denial did not destroy Penn Central's "air rights" above the terminal, however. Rather, the Commission permitted Penn Central to transfer those air rights to other property it held in the city. Dissatisfied with the trade, Penn Central brought a takings challenge for the lost airspace above Grand Central Station. The Court responded with the three-part balancing test, which Penn Central ultimately failed.

The first factor, the economic impact on the claimant, calls on the parties to calculate the economic value of the property when regulated versus the economic value when unregulated. While 100% devaluation mandates compensation under *Lucas*, smaller, yet still compelling losses often fail to sway the takings balance in claimants'

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90. *Id*. Justice Brennan stated that

[T]his Court, quite simply, has been unable to develop any "set formula" for determining when "justice and fairness" require that economic injuries caused by public action be compensated by the government, rather than remain disproportionately concentrated on a few persons. Indeed, we have frequently observed that whether a particular restriction will be rendered invalid by the government's failure to pay for any losses proximately caused by it depends largely "upon the particular circumstances [in that] case."

*Id*. (alteration in original) (citations omitted).
91. *Id*.
92. See *id*. at 108-09.
93. *Id*. at 117.
94. *Id*. at 118.
95. *Id*. at 114, 120, 137.
favor. The reason is that Penn Central's remaining factors often enable the government to overcome even a substantial diminution in value. The second factor, reasonable investment-backed expectations, focuses on the property itself, and the property owner's expectations for that property. When a regulation interferes with interests that inhere in a claimant's title, the second factor balances against the government, provided that the claimant can demonstrate some pre-regulation intent to exercise those interests. Unlike the economic impact factor, fairness underlies the expectations inquiry. For example, in Penn Central the title holders expected to build a fifty-five-story addition on top of Grand Central Station. In Lucas, Lucas expected to build beach houses on his two beachfront lots. The analysis under the second factor entails determining whether the property owner reasonably could have expected to use the property in a way that the regulation now prevents.

This factor recently came to the takings forefront in Palazzolo. Palazzolo obtained title to his predominantly wetlands parcel after Rhode Island enacted the Coastal Resources Management Council

96. See, e.g., Concrete Pipe & Prods. of Cal., Inc. v. Constr. Laborers Pension Trust, 508 U.S. 602, 645 (1993) (finding 46% diminution in value "insufficient to demonstrate a taking"); Village of Euclid v. Ambler Realty Co., 272 U.S. 365, 384, 390 (1926) (holding 75% diminution caused by recently enacted zoning program not a taking); Hadacheck v. Sebastian, 239 U.S. 394, 405 (1915) (upholding 92.5% diminution without compensation when plaintiff forced to close down brickyard). In Euclid and Hadacheck, however, the disputed ordinances each dealt with a nuisance. Consequently, even had the regulations destroyed 100% of the property owner's value in either case, presumably no compensation would have been required under today's standards. Euclid's famous 75% high water mark for diminution in value, thus, represents an inapposite measure for cases where the regulation aims at some harm other than a nuisance. See also Lucas v. S.C. Coastal Council, 505 U.S. 1003, 1064 (1992) (Stevens, J., dissenting) ("A landowner whose property is diminished in value 95% recovers nothing, while an owner whose property is diminished 100% recovers the land's full value.").

97. See, e.g., Tahoe-Sierra Preservation Council, Inc. v. Tahoe Reg'l Planning Agency, 216 F.3d 764, 773 (9th Cir. 2000), cert. granted, 121 S. Ct. 2589 (2001). There, plaintiffs conceded that because of the government's compelling interest in preserving Lake Tahoe, they could succeed on a takings claim only under Lucas. Id. In other words, the Tahoe plaintiffs proceeded under the assumption that they could prove a total taking (of a slice in time), but that they nonetheless could not prove a favorable balance under Penn Central. See also Huffman, supra note 29, at 602 ("There is no reason that the [Penn Central] balance will favor the claimant in every case when there is a total loss of economic value.").

98. See Michelman, Property, supra note 16, at 1229-34.

99. See id.

100. See Palm Beach Isles Assocs. v. United States, 231 F.3d 1365, 1369 (Fed. Cir. 2000) (Gajarsa, J., dissenting from denial of petition for rehearing) ("[I]nvestment-backed expectations analysis looks not to 'how much' is taken, but rather at fairness and reliance interests." (citing Michelman, Property, supra note 16, at 1231-33)).


("CRMC") enabling act. The Rhode Island Supreme Court ruled that because the regulation came into place before Palazzolo obtained the property, he could not reasonably expect to develop the wetlands acres. The timing rendered the second factor determinative of the entire case in Rhode Island's favor. The United States Supreme Court reversed, holding that a state does not shape property rights merely by creating laws that impact land use. Thus, a post-regulation land transfer does not foreclose a takings claim. Concurring, Justice O'Connor instructed the Rhode Island court on remand to weigh the relative timing of Palazzolo's land acquisition under the second Penn Central factor, but not to categorically rule against Palazzolo on that fact alone.

The third factor, the character of the government action, implies one or all of three inquiries. First, some courts observe whether the regulatory action acts like a physical invasion. Second, other courts determine "whether the regulation has a legitimate public purpose." Third, still other courts address the character of the government action more broadly, inquiring into the purposes of the regulation and the degree to which it impacts one property owner more than others. The Supreme Court has addressed the first two factors sufficiently to provide guidance as to the meaning of each, but has not explained the precise aim of the third factor. Notwithstanding the varying interpretations of the character of the government action, and, apart from instances of physical invasion, the third factor typically favors the government.

Applying the balancing test, the Penn Central Court ruled for New York City. On the second and third factors, the Court emphasized that the regulation did not interfere with any current uses and that landmark preservation is an accepted, common practice. On the first factor, the Court found that the regulation permitted Penn

104. See id. at 2462.
105. See id.
107. See Palazzolo, 121 S. Ct. at 2462-64.
108. See id.
109. See id. at 2465-67 (O'Connor, J., concurring).
112. See, e.g., Loveladies Harbor, Inc. v. United States, 28 F.3d 1171, 1177 (Fed. Cir. 1994); Brace, 48 Fed. Cl. at 278-79. But see Forest Properties, Inc. v. United States, 177 F.3d 1360, 1366 (Fed. Cir. 1999) (finding the character of the government action irrelevant because the relevant permit was not denied pursuant to a nuisance).
Central to obtain a "reasonable return" on its investment.\(^{114}\) It also found that value remained in Grand Central Station's airspace, because the historic landmark regulation permitted Penn Central to transfer air rights from Grand Central Terminal to its neighboring property, thereby permitting Penn Central to build higher in places where it was not otherwise permitted.\(^{115}\) Finally, in an oft-quoted section of the opinion, Justice Brennan flatly rejected Penn Central's argument that its air rights should be vertically severed from the remainder of the fee simple.\(^{116}\) Though the Court's rejection was explicit, the argument for conceptual severance has returned to the Court more than once, each time drawing a new response.

**B. Supreme Court Treatment of the Denominator Problem**

The Court has not reached a definitive position on the denominator problem. In the cases where the Court has expressly ruled on the problem the results have varied, and appear at odds with each other, at least philosophically. In other takings cases where the Court has not expressly addressed the denominator problem, the Court's ruling nonetheless implies a stance. Often, ruling for the property holder implies that at least the concept at issue is severable, and ruling for the government implies that it is not. In still other takings cases when conceptual severance is not at issue, the Court has commented on the denominator problem in dicta.

Two variables influence the Court's stance on conceptual severance. The first is simply the passage of time. The Court's view changes over time, as new justices cast different votes on the same problem. For example, the Court has ruled twice on the severability of mining, or support rights: once for the property owner, once sixty-five years later for the government.\(^{117}\) The second variable influencing the Court's solution of the denominator problem is the concept at issue. Some concepts sever property, others do not. For example, within four months in 1987 the Court confronted conceptual severance three times. In *Keystone Bituminous Coal Ass'n v. DeBenedictis*,\(^{118}\) *First English Evangelical Lutheran Church v. County of Los Angeles*,\(^{119}\) and *Nollan v. California Coastal Commission*,\(^{120}\) the government regulation affected mining support rights, temporary development,
and the right to exclude, respectively. None of the claimants had suffered a total loss; each complained of a partial loss that should be evaluated apart from the value remaining in the fee simple. Ruling twice for the property owner and once for the government, the Court severed the slice in time and the right to exclude, and rejected the argument for severing support rights from the fee simple.

Although ultimately this Note is concerned with horizontal severance, the Court's comments on the denominator problem do not fit neatly into boxes of severing concepts. Often when confronted with a specific concept, such as vertical severance, the Court uses general language that seems to apply not only to vertical severance, but to every potential severing concept. The overview below thus includes all types of conceptual severance, and identifies the particular concepts on which the Court has ruled, even when the Court's language implies a general application to the denominator problem.

This part assembles the Court's treatment of the denominator problem in three groups. First, it reviews those instances where the Court has rejected conceptual severance. Then it reviews the Court's intermittent acceptance of conceptual severance. This section finishes by assessing where the Court currently stands on conceptual severance, and where it seems headed.

1. Conceptual Severance Rejected

In 1978, the Supreme Court expressly rejected conceptual severance in *Penn Central.* Penn Central argued that the airspace over Grand Central Station should comprise the relevant stick against which to compare the regulation's harm. This argument implicated vertical severance, as Penn Central asked the Court to observe the profile of its city block and declare the loss of a particular height taken. Responding to Penn Central's argument, Justice Brennan squarely rejected conceptual severance:

"Taking" jurisprudence does not divide a single parcel into discrete segments and attempt to determine whether rights in a particular segment have been entirely abrogated. In deciding whether a particular governmental action has effected a taking, this Court focuses rather both on the character of the action and on the nature and extent of the interference with rights in the parcel as a whole—here, the city tax block designated as the "landmark site."

125. *Id.*
126. *See id.*
127. *Id.*
Although Penn Central’s argument presented vertical severance, the Court’s rejection made no distinction between vertical and any other conceptual severance. After *Penn Central*, conceptual severance seemed without support.

Citing *Penn Central*’s disapproval of conceptual severance, the Court rejected the argument for severing mining support rights in *Keystone Bituminous Coal Ass’n v. DeBenedictis.* Interestingly, the Court turned away virtually the same severance argument that it had accepted six decades earlier in *Pennsylvania Coal.* Where Justice Holmes emphasized that the Pennsylvania Coal Company had lost all of its support rights, Justice Stevens characterized Keystone’s nearly identical loss as “one strand of the bundle.” With Keystone’s vertical severance tactic behind them, the Court ruled that enough coal remained available after Pennsylvania’s Subsidence Act to overcome Keystone’s taking challenge.

The Court also rejected an effort to sever personal property in 1993, in *Concrete Pipe & Products of California, Inc. v. Construction Laborers Pension Trust.* *Concrete Pipe* argued for conceptually severing pension funds owed under ERISA. In response, the Court stated: “To the extent that any portion of property is taken, that portion is always taken in its entirety; the relevant question, however, is whether the property taken is all, or only a portion of, the parcel in question.”

2. Conceptual Severance Accepted

Ruling for the Pennsylvania Coal Company in 1922, Justice Holmes’ majority not only explicitly legitimized regulatory takings claims, but it implicitly legitimized conceptual severance. In *Pennsylvania Coal*, the Court considered three property rights stacked on top of each other in a fee simple: subsurface rights; support rights; and surface rights. Support rights, though only a vertical segment of any fee simple, were recognized in Pennsylvania at the time. Professor Carol Rose explained Pennsylvania’s historical recognition of support rights:

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129. For the majority, Justice Stevens advanced several arguments to distinguish the case from *Pennsylvania Coal*. Id. at 481-93; see infra Part I.B.2.
130. Id. at 497.
131. See id. at 498.
133. Id. at 644 (citing *Keystone*, 480 U.S. at 497). The Court also rejected severance in the context of personal property in *Andrus v. Allard*, 444 U.S. 51, 64-68 (1979) (finding a regulation that prevented selling eagle feathers not compensable, but merely a “destruction of one strand of the bundle”).
Pennsylvania common law recognized three separate "estates" in mining property: first, an estate in the surface, second, an estate in the minerals below, and finally, an estate in the support of the surface (the third estate). The third estate arose from the miners' common law duty to support the surface under which they mined, a duty which could be released through agreement with the surface owner.\(^1\)

Initially possessing all of these rights, the Coal Company deeded surface rights to potential homeowners, but reserved the support rights for the purpose of mining.\(^2\) Pennsylvania enacted the Kohler Act, which prohibited mining coal in such a way as to cause residences above ground to subside.\(^3\) The Kohler Act effectively took the supporting coal from the subsurface owners, and gave it to the surface owners. Pennsylvania Coal brought suit to regain these support rights.

The Court responded with the "too far" test, which continues to echo in takings law.\(^4\) Implicit in the Court's holding was a willingness to assess the Kohler Act's impact on support rights, apart from the remainder of subsurface rights.\(^5\) The Court's analysis thus incorporated conceptual severance.

In dissent, Justice Brandeis criticized this tactic:

> [V]alues are relative. If we are to consider the value of the coal kept in place by the restriction, we should compare it with the value of all other parts of the land. That is, with the value not of the coal alone, but with the value of the whole property. The rights of an owner as against the public are not increased by dividing the interests in his

136. Pennsylvania Coal, 260 U.S. at 412; Fischel, Regulatory Takings, supra note 74, at 15; Rose, supra note 135, at 564; see infra notes 206-09 and accompanying text.
137. Pennsylvania Coal, 260 U.S. at 412; Fischel, Regulatory Takings, supra note 74, at 15; Rose, supra note 135, at 563.
138. See supra notes 31-34 and accompanying text; see also, e.g., Lucas v. S.C. Coastal Council, 505 U.S. 1003, 1014 (1992).
139. See Richard A. Epstein, Pennsylvania Coal v. Mahon: The Erratic Takings Jurisprudence of Justice Holmes, 86 Geo. L.J. 875, 898-99 (1998) [hereinafter Epstein, Erratic Takings Jurisprudence] ("Holmes's view of the subject seems to be that the inability to mine the coal in the support pillars was a total loss of that limited amount of property: the ratio of numerator to denominator is thus one to one."). But see Fischel, Regulatory Takings, supra note 74, at 49 ("Holmes was not anywhere in his opinion arguing that if one stick in the bundle of property is extinguished that fact alone makes it a taking."); Radin, supra note 17, at 1677 ("In [Pennsylvania Coal], legislation that de facto prevented coal mining 'took' a coal company's mining rights, but mining rights were all that the company owned . . . ."). The dispute over whether Justice Holmes, in fact, conceptually severed support rights is not merely academic. If he did not, then Pennsylvania Coal rested on a rare, favorable (anachronistic) application of Penn Central's balancing test for a property owner.
property into surface and subsoil. The sum of the rights in the parts can not be greater than the rights in the whole.\textsuperscript{140}

Justice Brandeis expressed deference to the Legislature's attempt to protect health and safety.\textsuperscript{141} Segmenting the fee simple broadened the reach of the Takings Clause, which ran contrary to Justice Brandeis's understanding that the police power operates constitutionally when it applies generally.\textsuperscript{142} Holmes's deference, on the other hand, extended to the landowner, with conceptual severance the consequence.

During the 1980s, the Court embraced conceptual severance in three unique settings. First, the Court ruled for Jean Loretto, owner of a Manhattan apartment building, in \textit{Loretto v. Teleprompter Manhattan CATV Corp.}\textsuperscript{143} Loretto demanded compensation in exchange for compliance with New York Executive Law section 828, which effectively granted the defendant cable television company the right to string a cable wire across her property.\textsuperscript{144} Loretto claimed that the cable wire effected a taking. The Court agreed, electing not to weigh the harm caused by a cable wire against the entire fee simple, but rather declaring the physical invasion a \textit{per se} taking.\textsuperscript{145} For the majority, Justice Marshall represented that the regulation did not merely harm one stick in the bundle, rather it "chop[ped] through the bundle, taking a slice of every strand."\textsuperscript{146}

Essentially, the Court severed the space occupied by the cable and used that as the denominator in the takings analysis.\textsuperscript{147} According to Professor Margaret Jane Radin,\textit{Loretto} moves away from [\textit{Penn Central's}] position and toward conceptual severance. In order to find that placing a cable on a building "effectively destroys each" of the liberal rights, one must first decide that one is talking about fee simple absolute not in the building as a whole, but rather in the space occupied by the cable.\textsuperscript{148}

The entire body of physical takings law rests on the premise that when government physically appropriates property for public use, the accompanying loss must be compensated, regardless of the value

\textsuperscript{140} \textit{Pennsylvania Coal}, 260 U.S. at 419 (Brandeis, J., dissenting).
\textsuperscript{141} Id. at 417.
\textsuperscript{142} Id. at 419. \textit{See generally Lucas}, 505 U.S. at 1073 (Stevens, J., dissenting); \textit{Treanor, Jam for Justice Holmes, supra} note 31, at 855-56.
\textsuperscript{143} 458 U.S. 419, 426 (1982).
\textsuperscript{144} Id. at 423.
\textsuperscript{145} Id. at 426; \textit{see supra} notes 64-67 and accompanying text.
\textsuperscript{146} \textit{Loretto}, 458 U.S. at 435. Justice Marshall's use of the bundle of sticks metaphor suggests a two-dimensional model. But if horizontal, vertical, temporal, and functional present coherent divisions of property, then the bundle of rights must properly be envisioned in no less than four dimensions. For example, the cable wire took all of one spatial stick, and one small part of every functional, use stick (the right to exclude, the right of disposition, etc.).
\textsuperscript{147} \textit{See Radin, supra} note 17, at 1676.
\textsuperscript{148} Id.
remaining in the claimant's fee simple. *Loretto* affirmed that even when the invasion is minute, an individual's right to own property free from physical interference enjoys individual consideration. Because the Supreme Court has unequivocally embraced physical invasion as distinct, compensable harm in every instance, the body of physical takings law has developed distinct from regulatory takings.

In *First English Evangelical Lutheran Church v. County of Los Angeles*, the Court likewise engaged in conceptual severance, when it compared the plaintiff's harm against the value of a slice in time.\(^{149}\) The property owner complained of a loss in development value for a short period. The lower court ruled that because the taking lasted only temporarily, First English *per se* could not prevail on a takings challenge.\(^{150}\) The Supreme Court reversed, finding that "temporary takings... are not different in kind from permanent takings."\(^{151}\) Like the holding in *Loretto*, the holding in *First English* rested upon the assumption that the fee simple can be sliced, and that the resulting slices suffice as relevant parcels for the denominator. *First English* reflects the Court's acceptance of temporal severance.

Finally, the Court severed the right to exclude in *Nollan v. California Coastal Commission*.\(^{152}\) There, California made a trade with the Nollans: the right to build a new beach house in exchange for public access to the beach. The Court, per Justice Scalia, began with the premise that "the right to exclude [others is] one of the most essential sticks in the bundle of rights that are commonly characterized as property."\(^{153}\) Justice Scalia characterized California's coastal regulation as "extortion,"\(^{154}\) and ruled that "if [California] wants an easement across the Nollans' property, it must pay for it."\(^{155}\) *Nollan* thus accepted functional severance, finding the right to exclude a "complete thing taken."\(^{156}\)

\(^{149}\) First English Evangelical Lutheran Church v. County of Los Angeles, 482 U.S. 304 (1987).

\(^{150}\) See id. at 309.

\(^{151}\) Id. at 318 (internal quotations omitted); see supra text accompanying notes 64-67.


\(^{153}\) Id. at 831 (citing *Loretto*) (alterations in original) (internal quotations omitted).

\(^{154}\) Id. at 837.

\(^{155}\) Id. at 842.

Evaluating the whole of Supreme Court precedent on the denominator problem, this much is certain. One, when government physically invades property, the relevant parcel is only the area physically taken. Two, when a regulation violates a property owner's right to exclude, this harm will not be weighed against the unregulated value of the fee simple, but only against the value of that isolated right. Three, takings claimants can temporally sever a fee simple, thereby comparing temporary harm with temporary value. Four, the Court never has accepted horizontal severance.

Four discrete rules notwithstanding, the Court's see-saw treatment of the denominator problem has left its current stance predominantly uncertain. The Court denounced conceptual severance with respect to personal property as recently as 1993 in Concrete Pipe. But dicta in Lucas and Palazzolo mitigate Concrete Pipe's seemingly definitive stance, at least with respect to real property. In footnote seven of Lucas, Justice Scalia suggested that "[t]he answer to this difficult question may lie in how the owner's reasonable expectations have been shaped by the State's law of property." In Palazzolo, Justice Kennedy suggested that the denominator problem deserves fresh consideration, when he stated that the Court has "at times expressed discomfort with the logic" of using the fee simple as the relevant parcel for the denominator in the takings fraction.

The sum of the Supreme Court's analysis of the denominator problem, for example, does not avail P of his takings challenge. Owning eighteen economically devastated wetlands acres, P will liken his plight to that of Lucas, and will ask the court to find a per se total...
But to frame his economic loss as a total taking, $P$ must assert that the relevant parcel for the takings equation is not the fee simple (twenty acres), but rather the eighteen wetlands acres. In other words, $P$ will attempt to horizontally sever the wetlands from the fee simple, so that the takings fraction equals $18/18$. The regulator will respond that $P$'s economic loss is not total; instead the takings fraction equals $18/20$. *Penn Central* and its progeny mandate using the latter fraction. But several of the approaches detailed below urge using the former.

II. HORIZONTAL SEVERANCE

Without clear guidance from the Supreme Court, lower courts and scholars have suggested resolutions for the denominator problem in the context of horizontal severance. Six approaches have emerged: (1) common ownership; (2) the fee simple approach; (3) historically cognizable property rights; (4) multifactor analysis; (5) economic substantiality; and (6) the libertarian approach. Each approach suggests where to draw the line on a map so as to define the relevant parcel in the denominator of the takings fraction. These approaches arrange along a theoretical continuum. At the far left end of the continuum resides Justice Holmes's maxim that “[g]overnment 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.” Approaches that discourage severing property interests tend toward this end of the continuum. These approaches place a regulation's impact in the context of all of a claimant's property, which creates comparatively smaller takings fractions. Producing smaller takings fractions, these approaches result in a permissive understanding of government's police power, thereby heeding Justice Holmes's familiar maxim.

At the far right end of the continuum resides Professor Richard Epstein's view that “[t]he amount of compensation should always depend on what is taken from the owner.” Approaches toward this end of the continuum result in a constrained understanding of government's police power, as the shrunken denominators supported by these approaches project the image of a compensable taking with comparatively greater regularity. Horizontal severance is employed with increasingly loose criteria as the continuum progresses toward Professor Epstein's libertarian view, making more and more government infringements appear as takings.

If the maxim of Justice Holmes or of Professor Epstein was heeded without pause, then an accepted legal doctrine would be rendered
meaningless: the Takings Clause in the former case or the police power in the latter. These polar results underlie the two common criticisms of horizontal severance approaches: arbitrariness and manipulation. First, an approach that arbitrarily distinguishes between successful and unsuccessful takings plaintiffs is likely untenable, because no fair inquiry will turn on happenstance. The arbitrariness criticism is strongest at the left end of the continuum, and a proposed strength of approaches nearer the right end of the continuum is that they avoid arbitrary criteria in refining the takings denominator. Second, an approach suffers when it permits an affected property owner to manipulate the denominator in every instance, such that every government action that impacts private property will appear as a taking, as, in other words, 1/1. Approaches nearer the right end of the continuum induce the manipulation criticism. Moreover, because excessive plaintiff manipulation threatens to upend government’s police power, any acceptable approach must either answer the manipulation criticism, or admit of a break with that rooted doctrine.

A. The Common Ownership Approach

The common ownership approach includes more of a claimant’s holdings in the denominator than any other approach. Under the common ownership approach, the relevant parcel includes all of a claimant’s holdings in the vicinity of the affected property. Eligible holdings include property that is not contiguous with the area harmed by the regulation. In other words, property beyond the fee simple is relevant to the measurement of a regulation’s impact on a claimant under the common ownership approach.

Before the Supreme Court granted certiorari, the New York Court of Appeals made its own relevant parcel determination in Penn

167. On arbitrariness, see, e.g., John E. Fee, Unearthing the Denominator in Regulatory Takings Claims, 61 U. Chi. L. Rev. 1535, 1552 (1994), and Michelman, Property, supra note 16, at 1234. On manipulation, see, e.g., Radin, supra note 17, at 1677-78, and Rose, supra note 135, at 568.


Central, articulating the common ownership approach. At the outset, the court found New York City's goal of landmark preservation an acceptable purpose. In light of the city's acceptable purpose, Penn Central would prevail only by showing that the regulation did not permit a "reasonable return" on its investment. Whether the owners of Grand Central Terminal retained a reasonable post-regulatory return invoked a denominator analysis: the denominator equaled the pre-regulation, potential return on all the relevant property; the numerator equaled the post-regulation return on that same property; and the resulting fraction made out the evidence of "reasonableness," or lack thereof.

The New York Court of Appeals determined that all of Penn Central's land interests in the vicinity were relevant in the takings fraction. Penn Central's nearby real estate included eight parcels, including office buildings and the Biltmore and Commodore Hotels. The court found the value of the hotels and other, commonly-owned, nearby land interests relevant on the issue of reasonable return.

The return on these holdings intertwined with the landmark preservation regulation on the Terminal in two significant ways. First, the value of the hotels and office buildings depended on the operation of Grand Central Terminal. Thus, even though Penn Central complained that the Terminal operated at a loss with the regulation in place, the additional value of a preserved Terminal to the office buildings and hotels could be "imputed to the terminal." Second, the landmark preservation regulation did not abolish the development rights of Grand Central Terminal's air space. Rather, it transferred those development rights to other parcels in the vicinity, so that Penn Central could build higher in other places as a result of the regulation. The added value to these commonly owned, "receiving parcels" tallied toward a finding of reasonable return.

Other courts have not embraced the New York Court of Appeals approach in Penn Central. Justice Scalia denounced the approach in footnote seven of Lucas v. South Carolina Coastal Council, calling it "extreme" and "unsupportable." Later courts have accepted Lucas's dictum. While thoroughly preventing plaintiff manipulation

170. See id.
171. See id. at 1274-75.
172. Id.
173. See id. at 1276-77; Rose, supra note 135, at 567-68.
174. Penn Central, 366 N.E.2d at 1277.
175. Id.
176. Id. at 1276.
177. Id.
178. Id. at 1277.
179. Id.
of the denominator, common ownership represents an “extreme” approach because it comes under the full force of the arbitrariness attack. Under this approach, a takings plaintiff who holds several parcels in a “vicinity” suffers an expanded denominator, even when the other parcels are completely distinct from the devalued parcel but for common ownership. Contrary to the state court’s view, whether a claimant holds other property in the vicinity will vary from one case to the next, for reasons often having nothing to do with the disputed regulation and corresponding devalued property. For this reason, other commonly owned parcels seem anything but relevant. For example, Penn Central owned the Biltmore Hotel, but had it not, the landmark preservation regulation would have devalued Grand Central Terminal just the same. The New York Court of Appeals Penn Central decision adopted an apparently arbitrary analysis, the avoidance of which underlies, to a greater or lesser degree, each of the conceptual severance approaches.

B. Common Ownership Plus Contiguity—The Fee Simple Approach

The most common boundary line for the relevant parcel in the denominator analysis is the property owner’s fee simple. When a regulation devalues part of a landowner’s fee simple, a court will use the landowner’s entire contiguous parcel as the denominator in the takings equation. The factors needed to determine the relevant parcel under this approach, thus, are limited to common ownership and contiguity of the property. A court can fix the denominator with little more than the deed to the property.

Professor Radin explained the natural tendency of courts to implement the fee simple approach:

[T]he Court has traditionally understood the ordinary meaning of property to be the owner’s parcel as a whole. . . . This traditional reluctance to use conceptual severance is usually chalked up to crystallized expectations or ordinary language and culture. That is, the appropriate understanding of what constitutes a “parcel as a whole” — and hence the owner’s “property” — is previous real-life treatment of the resource, not the conceptual possibilities property law holds available.

Much earlier than Radin, Justice Brandeis pinpointed the fundamental concept underlying contemporary “crystallized expectations,” when he perceived that “[t]he sum of the rights in the parts can not be greater than the rights in the whole.” The value of

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182. See id. (“The Lucas dictum casts aspersions on the state court’s elevation of one factor, unity of ownership, over other factors in determining the relevant parcel.”)
183. Radin, supra note 17, at 1677.
184. Pennsylvania Coal Co. v. Mahon, 260 U.S. 393, 419 (1922) (Brandeis, J., dissenting); see supra note 140 and accompanying text.
any segment of a fee simple only can be appreciated with respect to the entire fee.\footnote{185} Simplicity, and instincts about property, buttress the fee simple approach, and courts are prone to adopt it for these reasons.\footnote{186}

Justice Stevens leads the advocates of the contiguous fee simple approach, not just with respect to horizontal severance but to all theories of conceptual severance.\footnote{187} \textit{Keystone}\footnote{188} and \textit{Concrete Pipe}\footnote{189} weighed the harm caused by the respective regulations against the whole of each claimant's property, and Justice Stevens, in dissent, argued for the same analysis in \textit{First English}.\footnote{190}

\textit{Bevan v. Brandon Township} provides one example of a court using the fee simple as the denominator.\footnote{191} The plaintiffs owned six acres, to which a twenty foot easement across a neighbor's land allowed the only public road access. A town ordinance prevented plaintiffs from building more than one home on their property without a public access road at least sixty-six feet wide. Justifying Brandon Township's ordinance was "the need for road services adequate to provide year around access by fire, police, and like emergency vehicles."\footnote{192} Plaintiffs proposed horizontally severing the six acres into two parcels, because their predecessor had done so for tax purposes, and they had acquired the contiguous lots separately, but simultaneously.\footnote{193}

The Michigan Supreme Court rejected plaintiff's argument, and defined the commonly owned, contiguous, six-acre fee simple as the relevant parcel.\footnote{194} The court justified rejecting horizontal severance by pointing to the negative implications of accepting it:

If [horizontal severance] were held to be so, the result would be that it would be competent for landowners to perpetually defeat future zoning restrictions by crisscrossing their lands on a plat map with lines ostensibly dividing the same into parcels so small that each would be unsuited to any foreseeable use unless combined with

\footnotesize{185. This concept is referred to as "synergy." \textit{See infra} notes 315-19 and accompanying text.  
186. \textit{See Fee, supra} note 167, at 1546 n.54 (1994); \textit{Recent Cases, Regulatory Takings, supra} note 160, at 929 n.27.  
190. \textit{See 482 U.S. at 330-31 (Stevens, J., dissenting).}  
192. \textit{Id.} at 44 (internal quotations omitted).  
193. \textit{Id.} at 43.  
194. \textit{Id.} at 42-43 ("This Court has recognized that contiguous lots under the same ownership are to be considered as a whole for purposes of judging the reasonableness of zoning ordinances, despite the owner's division of the property into separate, identifiable lots.").}
The test of reasonableness may not be distorted or thwarted by any such artificial device.\textsuperscript{195}

The \textit{Bevan} court viewed plaintiff manipulation as a sufficiently probable consequence to reject the claimant’s proposed severance as an “artificial device.”

Having determined the relevant parcel, the \textit{Bevan} court addressed what it considered the more relevant takings inquiry,\textsuperscript{196} namely, whether the Township ordinance applied as part of a general zoning scheme, or whether it unfairly singled out the plaintiffs.\textsuperscript{197} As Brandon Township was not “spot zoning,” but rather the ordinance burdened all property owners equally, Bevan’s takings claim failed.\textsuperscript{198}

The \textit{Bevan} court, Justice Stevens, Professor Radin, and others recognize that the fee simple approach avoids the pitfalls of plaintiff manipulation. Once a property owner gains permission to horizontally sever a fee simple, every regulation that minimally intrudes on property rights will demand compensation under \textit{Lucas}.\textsuperscript{199} Property owners always will manipulate the takings fraction to achieve a ratio of 1/1. The “slippery slope” toward the manipulation result frustrates proposed severances such as the plaintiff’s in \textit{Bevan}.\textsuperscript{200} The chief benefit of the fee simple approach is that it prevents limitless plaintiff manipulation of the denominator—thus preventing limitless compensation.

Arbitrariness is a likely criticism of the fee simple approach.\textsuperscript{201} For example, consider two neighbors, \textit{A} and \textit{B}. A town ordinance deprives all economic use of ten acres of each’s property. \textit{A} owns ten acres, therefore \textit{A} will prevail under \textit{Lucas}, having suffered a total taking. But suppose that \textit{B} owns 100 acres. \textit{B} and \textit{A} have suffered the same loss, but \textit{B} will fail under \textit{Lucas} and almost certainly under \textit{Penn Central}. The fee simple arbitrarily selects \textit{A} for compensation and excludes \textit{B}. \textit{B} loses simply because of coincidentally possessing a greater parcel.\textsuperscript{202} The \textit{Bevan} court did not directly address the

\textsuperscript{195} Id. at 43 (emphasis in original) (quoting Korby v. Redford Township, 82 N.W.2d 441, 443 (Mich. 1957)).

\textsuperscript{196} Justice Stevens, too, finds the general application of the law the most relevant issue in regulatory takings cases. See \textit{Lucas} v. S.C. Coastal Council, 505 U.S. 1003, 1072-75 (Stevens, J., dissenting).

\textsuperscript{197} \textit{Bevan}, 475 N.W.2d at 43-44.

\textsuperscript{198} Id. at 43 n.11.

\textsuperscript{199} See Radin, supra note 17, at 1678.

\textsuperscript{200} See id.

\textsuperscript{201} Professor Epstein, however, condones the “slippery slope.” See infra text accompanying notes 270-76.

\textsuperscript{202} See \textit{Fee}, supra note 167, at 1552.

\textsuperscript{203} See id. Fee notes that not only does the fee simple approach discriminate arbitrarily, but it does so against owners of larger tracts. The fee simple approach thus acts as a “deep-pocket rule.” Id. But Fee adds that the approach can also discriminate against poor (presumably “shallow-pocket”) landowners, such as farmers and ranchers owning large parcels. See id. at 1553.
arbitrariness criticism, and one commentator suggests that courts applying the fee simple approach do so mechanistically, without evaluating its drawbacks and alternatives.204

C. Historically Cognizable Property Interests—Justice Scalia’s Approach

Between never horizontally severing the fee simple, and endlessly severing the fee simple, rests the suggestion that a property owner can define the relevant parcel according to historically cognizable property rights. Justice Scalia originally appended this approach in footnote seven of Lucas:

The answer to [the denominator problem] may lie in how the owner’s reasonable expectations have been shaped by the State’s law of property—i.e., whether and to what degree the State’s law has accorded legal recognition and protection to the particular interest in land with respect to which the takings claimant alleges a diminution in (or elimination of) value.205

Under this approach, a demarcated property right can enclose the relevant parcel if state law had commonly recognized that demarcation before the offending regulation came into effect. Justice Scalia did not elaborate in footnote seven, but presumably, if a court could determine that state law has legally distinguished one stick in the bundle of property rights, then that stick defines the relevant parcel.

Pennsylvania Coal exemplifies the footnote seven approach. Pennsylvania law had recognized support rights before the Legislature impacted those rights with the Kohler Act.206 Although only a vertical slice of the coal company’s fee simple, support rights were known at the time as the “third estate.”207 It was the “third estate” for which the Pennsylvania Coal Company bargained when it deeded surface rights to homeowners.208 Implicit in the Kohler Act, of course, was historical recognition of the “third estate,” as it transferred support rights from underground owners to above-ground owners.209 Boundaried by bright lines, support rights easily stood apart for Justice Holmes to analyze them distinctly.

204. See id. at 1546, 1550 (“[A] number of courts seem to have implicitly employed this uniformity-of-ownership definition without even evaluating the propriety of other rules.”).
206. See supra notes 134-37 and accompanying text.
207. See supra note 135 and accompanying text.
209. One state regulation, however, does not shape reasonable expectations. Palazzolo v. Rhode Island, 121 S. Ct. 2448 (2001). Justice Scalia’s approach, presumably, would require considerably more than one mere regulation to sever a fee simple for the takings fraction.
The courts have not seized on Justice Scalia's historically cognizable rights approach, perhaps because it is not clear what rights count as historically recognized.\textsuperscript{210} Water rights might provide one example.\textsuperscript{211} Definitional objections over what rights are historically recognized presumably could be resolved without modifying the basic approach. The multifactor approach discussed below, for example, commonly incorporates reasonable expectations into the denominator analysis, evaluating recognizability on a case-by-case basis.\textsuperscript{212} Under the multifactor approach, then, a compelling, recognizable property interest could influence a court to horizontally sever a fee simple.

Justice Scalia's approach responds both to the chief objection to the prevalent fee simple approach—arbitrariness—and to the chief objection to the libertarian approach—denominator manipulation by the claimant. First, when a regulation strips a historically recognized property right, a property owner will not be denied compensation merely because the fee simple extends greater than that right. Second, a property owner will not succeed in refining the denominator at will, but history and traditional acceptance will guide the denominator analysis.

D. Subjective Multifactor Analysis—The Federal Circuit Approach

Rigidly applying the common ownership and contiguity criteria arbitrarily harms landowners possessing larger tracts, because large parcels are less likely to suffer total economic loss.\textsuperscript{213} Yet straying too far from the common ownership or fee simple approaches contravenes Holmes's maxim: "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."\textsuperscript{214} Courts uncomfortable with either result, the Federal Circuit in particular, have found a middle ground, setting out multifactor analyses to determine "the parcel as realistically and fairly as possible, given the entire factual and regulatory environment."\textsuperscript{215}

\textsuperscript{210} Consider, for example, that in \textit{Lucas}, Justice Scalia pondered that common law principles "rarely support prohibition of the essential use of land." \textit{Lucas}, 505 U.S. at 1031 (internal quotations omitted). Matching Justice Scalia's stray dicta produces the result that whenever a government regulation prevents an "essential" use of land it will be a total taking requiring compensation. The \textit{Lucas} exception will not apply, unless common law deemed the use in question an "essential nuisance." In any event, given the amorphous and potentially broad concept of "essential use," it is easy to imagine a large subset of severing concepts under Justice Scalia's approach.

\textsuperscript{211} See generally Stupak-Thrall v. United States, 89 F.3d 1269 (6th Cir. 1996).

\textsuperscript{212} See infra notes 231-40 and accompanying text.

\textsuperscript{213} See supra note 203.

\textsuperscript{214} Pennsylvania Coal Co. v. Mahon, 260 U.S. 393, 413 (1922); \textit{supra} text accompanying note 165.

Beginning with *Florida Rock Industries, Inc. v. United States*\(^{216}\) and *Loveladies Harbor, Inc. v. United States*\(^{217}\) the Federal Circuit has repeatedly invoked subjective factors with which to sever a claimant's fee simple. In both cases, the Federal Circuit evaluated a smaller parcel than the property owner's entire fee simple. Subsequent cases have used *Florida Rock* and *Loveladies Harbor* to launch a number of multifactor analyses, each of which accepts that the mindset of the property owner may suffice to sever a parcel into smaller segments.

In 1972, Florida Rock Industries purchased 1,560 acres in the Everglades for the purpose of mining limestone.\(^{218}\) In 1980, Florida Rock applied to the U.S. Army Corps of Engineers ("Corps") under § 404 of the Clean Water Act to mine ninety-eight of its acres. The Corps denied the permit, and Florida Rock brought a regulatory takings claim for the ninety-eight acres. The Federal Circuit upheld the trial court's determination that the ninety-eight acres, not the 1560 acre fee simple, defined the relevant parcel.\(^{219}\) The pivotal fact for the *Florida Rock* court was that the Corps would have denied a permit for the whole 1560 acres.\(^{220}\) The court likened the possibility that the Corps would grant a permit on any of the remaining acres to the possibility that "one might put a pot of water on a hot stove and have it freeze."\(^{221}\)

In *Loveladies Harbor*, the claimant, Loveladies, began with 250 acres in Ocean County, New Jersey. It developed 199 of those acres before Congress passed the Clean Water Act in 1972.\(^{222}\) Wetlands made up the remaining 51 acres, with one of those acres having already been filled. Loveladies needed permits from the New Jersey Department of Environmental Protection ("NJDEP") and the Corps before it could fill its land. When Loveladies applied for the first permit, the NJDEP permitted filling and developing 11.5 acres and the one previously filled acre on the condition that Loveladies leave its remaining 38.5 acres intact as a conservation easement.\(^{223}\) The Corps then denied Loveladies's application for a second permit for the 12.5 acres.\(^{224}\)

The Federal Circuit defined the relevant parcel as the 12.5 impacted acres. It excluded the remaining 38.5 acres essentially on fairness grounds, holding that "[i]t would seem ungrateful in the extreme" to force Loveladies to forfeit some of its property yet continue to
attribute to it the value of that property. Additionally, when the government argued that the original 250 acres ought to comprise the relevant parcel, the court sliced through the original fee simple. The court found that "the timing of transfers in light of the developing regulatory environment" was a relevant consideration for the takings fraction. This factor worked in Loveladies's favor, as they sold 199 acres prior to the Clean Water Act's implementation, thus those acres could not count in the denominator.

Both cases departed from the traditional fee simple approach. The Federal Circuit added to the analysis its understanding that the denominator problem needs "a flexible approach, designed to account for factual nuances." This nuanced approach diverges from the fee simple and libertarian approaches, each of which apply rigidly.

Drawing on the "nuance" principle to define the denominator, the Federal Circuit has led several courts to implement multifactor analyses. The most common approach, first articulated by Ciampitti v. United States, specifies four factors for consideration: (1) "the degree of contiguity"; (2) "the dates of acquisition"; (3) "the extent to which the parcel has been treated as a single unit"; and (4) "the extent to which the protected lands enhance the value of remaining lands." Under this approach, a court will horizontally sever a fee simple when a balance of the factors tips in the claimant's favor. Several courts have adopted Ciampitti's multifactor analysis.

For example, the Supreme Court of Michigan considered the Ciampitti factors in K & K Construction v. Department of Natural Resources. The Department of Natural Resources denied plaintiffs' proposal to build a restaurant, sports complex, and multiple-family homes on its eighty-two acres, because wetlands soaked twenty-eight acres of the property. Plaintiffs argued that its fee simple must be split into four parcels, as zoning laws and previous development already provided bright lines with which to sever. The court's analysis began with Bevan's fee simple, "nonsegmentation" principle. But the court declared that "[d]etermining the size of the

225. Id. at 1181.
226. Id.
227. Id.
228. Id.
231. 575 N.W.2d 531, 536-37.
232. Id. at 534.
233. See id. at 536-38.
234. Id. at 536; see supra notes 191-198 and accompanying text.
denominator parcel is inherently a factual inquiry,” then marched through Ciampitti’s multifactor analysis. First, three of the four segments within the claimant’s fee simple were contiguous. Second, the same three segments were commonly owned prior to commencement of litigation. And third, the three segments were subject to a comprehensive development plan. The court ruled that the denominator must contain at least the three segments, and remanded the case for further factual inquiry into the fourth segment.

**Palm Beach Isles Associates v. United States** used a slightly altered multifactor approach. The plaintiffs, Palm Beach Isles Associates (“PBIA”), purchased 312 acres, then sold 261 of those acres to a developer for one million dollars. All that remained was Lake Worth. Florida’s Department of Environmental Regulation (“DER”) denied a permit to fill and develop the 51 acres, under the Rivers and Harbors Act of 1899 and the Clean Water Act of 1972. The Federal Circuit’s point of departure was Loveladies Harbor’s mandate to consider factual “nuances” in the denominator analysis. It then found that “[t]he timing of property acquisition and development, compared with the enactment and implementation of the governmental regimen that led to the regulatory imposition, is a factor, but only one factor, to be considered in determining the proper denominator for analysis.” The Federal Circuit then reversed the trial court, and horizontally severed PBIA’s property.

The crucial fact for the court was that PBIA owned different development schemes for the upland portion and the lake portion of the property (Ciampitti’s third factor). Also relevant was that the court found the DER’s denial rested heavily on the Clean Water Act, and PBIA purchased the property prior to that law’s enactment. The Federal Circuit essentially reversed the trial court’s factual finding that the Rivers and Harbors Act supported the DER’s denial,

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235. *K & K Constr.*, 575 N.W.2d at 536.
236. *Id.* at 536-38.
237. *Id.* at 537.
238. *Id.*
239. The court did not apply Ciampitti’s fourth factor. See *id*.
240. *Id.* at 538-39.
242. *Palm Beach*, 208 F.3d at 1377.
243. *Id.*
244. *Id.* at 1378.
245. *Id.* at 1381.
246. *Id.*
247. See *id*.
248. See *id*.
which, if true, would suggest that PBIA was on notice about restrictions on its property.249

Other multifactor analyses have gained approval. A New Jersey appeals court recently employed a ten-factor analysis to determine the relevant parcel.250 The court noted that the factors grouped into two categories: the history of the ownership and the development of the property.251 One commentator has proposed a six-factor approach, which in several respects resembles the Penn Central balancing test for whether a taking has occurred.252

The thread weaving together the multifactor approaches is the willingness to consider subjective criteria when horizontally severing a fee simple.253 Whether a property owner thinks of a fee simple in segments becomes relevant under every multifactor approach. Subjective factors partially meet the arbitrariness and manipulation objections, but not satisfactorily. Regarding arbitrariness, a takings claim will not fail under the multifactor approach simply because a claimant happens to own a parcel greater than that which was harmed.254 However, because common ownership and contiguity constitute two important factors, the possibility that a takings claim will fail on account of a claimant’s additional holdings remains under the multifactor approach.255

Plaintiff manipulation of the kind that Bevan sought to avoid,256 similarly appears a likely outcome of the multifactor approach. Returning to Palm Beach, a simple restatement of PBIA’s maneuver looks as follows: (1) purchase 312 acres for $380,000; (2) sell all but the lake portion of the property for $1,000,000, in light of a 69-year-old regulatory scheme on the lake and four years prior to a second regulatory scheme; (3) attempt to dredge and fill the lake; (4) find that the established regulatory schemes prevent filling the lake; (5) demand $10,000,000 compensation for a “taking” of the lake portion.257 With contiguity and common ownership stacked against it, PBIA prevailed upon the Federal Circuit to sever its original 312 acres simply by asserting that it thought of parts of its property differently. Although PBIA’s tactic succeeded in the Federal Circuit, it illustrates

251. See id. at 1025-26.
252. See Lisker, supra note 18, at 720-25.
253. Accord Fee, supra note 167; Huffman, supra note 29; Recent Cases, Regulatory Takings, supra note 160.
254. See, e.g., Florida Rock Indus., Inc. v. United States, 791 F.2d 893 (Fed. Cir. 1986).
255. See Fee, supra note 167.
256. See supra text accompanying note 195.
257. Palm Beach Isles Assocs. v. United States, 208 F.3d 1374, 1377-78 (Fed. Cir. 2000).
precisely the type of "distorted, ... artificial device" that the Bevan court, among others, steadfastly rejected.  

E. Economic Substantiality—Fee’s Approach

John Fee proposes the following approach: “any identifiable segment of land is a parcel for purposes of regulatory taking analysis if prior to regulation it could have been put to at least one economically viable use, independent of the surrounding land segments.” Fee would permit the plaintiff to define the relevant, economically "substantial" parcel. If the parcel contains at least one economic use, independent of the remainder of the fee simple, then a court must use the parcel for the denominator. For example, when a set-back ordinance prevents a building owner from constructing a magazine stand on his front lawn, then the front lawn will suffice as the denominator.

Fee asserts that two limiting principles prevent his approach from allowing complete plaintiff manipulation. First, the rule applies only to horizontal severance. Second, a segment of a fee simple will not suffice as the relevant parcel unless a claimant demonstrates “that there existed prior to regulation at least one economically viable use for the land, the value of which is derived independently of the immediately surrounding land interests.” Fee’s second limiting principle is essentially the substantiality rule restated. A claimant able to prove a parcel’s substantiality will succeed in horizontally severing his property under Fee’s approach.

Having horizontally severed an economically independent parcel, a property owner is only halfway to prevailing on a total taking. The property owner must prove that the regulation has taken not only the parcel’s independent economic use, but all of the parcel’s economic uses, including those dependent on the “surrounding land interests.” When the parcel retains any post-regulatory use then it has not lost all economically beneficial or productive use under Lucas. Returning to the vacant front lawn, Fee suggests: “a building owner could not claim damages from a set-back ordinance for loss of magazine stand

258. Supra text accompanying note 195.
259. Fee, supra note 167, at 1557. Substantiality’s origin can be traced perhaps to Justice Rehnquist’s dissent in Keystone. Keystone Bituminous Coal Ass’n v. DeBenedictis, 480 U.S. 470, 514-15 (1987) (Rehnquist, J., dissenting) (“The need to consider the effect of regulation on some identifiable segment of property makes all important the admittedly difficult task of defining the relevant parcel.”).
260. See Fee, supra note 167, at 1557.
261. See id.
262. Id. at 1558.
263. Id. at 1561.
264. Id.
profits if in fact the operation of a magazine stand would lower the value of the entire lot.\textsuperscript{265}

The basis of the substantiality approach is that when a claimant suffers a total taking of less than the entire fee simple, the \textit{Lucas} rule should still be eligible. Substantiality insures that government will not deny compensation merely because a harmed landowner coincidentally owns more contiguous property than that segment which is harmed. This coincidence was not present in \textit{Lucas}, but substantiality suggests that had it been present it would not have mattered. Substantiality also answers the critics of subjective factor analysis, by withdrawing the property owner's intentions from consideration.\textsuperscript{266} Subjective criteria are not relevant to substantiality, because any rational property holder will put land to its most valuable economic use.\textsuperscript{267} A court can safely assume that only "rare" circumstances will find a plaintiff claiming the total loss of an economically beneficial stick that he never intended to use.\textsuperscript{268}

One court, the Commonwealth Court of Pennsylvania, has adopted the substantiality approach.\textsuperscript{269}

\textbf{F. The Libertarian Approach}

If common ownership represents one terminus of the denominator problem continuum, then Professor Richard Epstein's libertarian approach represents the other. Professor Epstein would find a taking any moment that the government inhibits any property right. "Any deprivation of rights is a taking, regardless of how it is effected or the damages it causes."\textsuperscript{270}

The critical inquiry under this approach is of the thing taken.\textsuperscript{271} Whether a wetlands regulation deprives an owner of one or twenty acres, each instance deserves reimbursement. Professor Epstein believes that the denominator, therefore, is irrelevant.

\begin{itemize}
  \item \textsuperscript{265} \textit{Id.}
  \item \textsuperscript{266} \textit{See id.} at 1560.
  \item \textsuperscript{267} \textit{Id.} at 1560-61.
  \item \textsuperscript{268} \textit{Id.}
  \item \textsuperscript{269} \textit{Machipongo Land \\
\& Coal Co. v. Dept. of EnvTL. Res., 719 A.2d 19, 26-27 (Pa. Commw. Ct. 1998).} The Pennsylvania court stated: However, while the regulated land would first be considered under this approach, to determine whether it actually would be the denominator would depend on the answers the courts received to the following questions: whether the regulated land had value prior to the regulation; whether the regulated land has a separate use from the non-regulated contiguous parcel(s)—i.e., whether it may be profitably used if it is the only parcel; and if the regulated land has value separate from the contiguous land, whether all of its economic benefit is gone.
  \item \textsuperscript{270} \textit{Epstein, Takings, supra} note 66, at 62.
  \item \textsuperscript{271} \textit{See id.; Epstein, Erratic Takings Jurisprudence, supra} note 139, at 899.
\end{itemize}
[A]ny conceptualization of numerators and denominators bears absolutely no relationship to what is gained or lost by property owners as a result of the statute.... The amount of compensation should always depend on what is taken from the owner. The more that is taken, the more that should be paid. The bill the courts hand to the state should depend only on the loss sustained, not on the ratio of the size of what is taken to the size of what is retained.272

Takings analysis needs not a fraction, only a number indicating the harm. Professor Epstein’s response to the denominator problem is to deny that it exists, on the ground that any remaining value that might inflate the denominator is not relevant.

In reality, whether the libertarian approach admits a ratio or not, the result is the same. The relevant parcel in the takings fraction is defined by a regulation’s harm. Because the numerator derives from the same criterion, under Professor Epstein’s view, the takings fraction will always equal 1/1. In short, Lucas plus Professor Epstein equals repayment in every instance of government action.273

The advantage of the libertarian approach is that it answers the arbitrariness criticism of the common ownership approach.274 The disadvantage is that it substitutes for arbitrariness the same harm that the common ownership approach prevents: excessive plaintiff manipulation. Excessive plaintiff manipulation would thwart Justice Holmes’s maxim, requiring government to pay “for every . . . change in the general law” that “incident[ally]” affects private property.275 Unlike the common ownership approach, no court ever has adopted the libertarian approach to defining the relevant parcel. Professor Epstein has, however, influenced the denominator problem considerably, as his view consistently underlies the opinions of Justices Scalia and Rehnquist.276

None of the six approaches described above has resolved the denominator problem. The next part closely scrutinizes the approaches, addressing the internal flaws and troubling consequences of each. It concludes with the fee simple approach, which alone satisfactorily preserves fair takings inquiries.

III. RETHINKING THE DENOMINATOR PROBLEM

Part II laid out six approaches to the denominator problem on a theoretical continuum. At the far left of the continuum, common

272. Epstein, Erratic Takings Jurisprudence, supra note 139, at 899.
273. Professor Epstein concedes, however, a limit to his categorical approach, admitting that compensation is not due when government acts to prevent a common law nuisance. See Epstein, Takings, supra note 66, at 111.
274. See supra text accompanying notes 202-04.
ownership presents the preferable approach from the government’s—the public’s—perspective. This approach inflates the denominator, making the private individual’s burden appear light at times when it is heavy. The common ownership approach suggests little chance of success for takings claimants, thereby stripping much of the meaning from the Takings Clause. At the far right of the continuum, the libertarian view wholly embodies the private individual’s perspective. This approach neglects the government’s competing interest, making every uncompensated interference with property rights appear unconstitutional. The libertarian view renders the police power to promote public health, safety, and welfare meaningless. Neither the common ownership approach nor the libertarian view recognizes the valid arguments at the opposite pole.

The remaining four approaches propose a middle ground. Each approach offers a method for limiting government’s ability to include additional segments of property in the takings equation. Such a limiting principle is needed to avoid the left extreme, which suffers for including additional segments arbitrarily, when a claimant happens to own them. Each of the remaining four approaches also proposes a method for limiting a private individual’s ability to manipulate the denominator, such that compensation will be required for every slight infringement. Without such a limiting principle, these approaches would not achieve a middle ground, but would slide the “slippery slope” to Professor Epstein’s libertarian view.

Merely navigating between the extreme approaches, however, will not suffice to resolve the denominator problem. In regulatory takings disputes, a claimant seeks to emphasize the harm caused by a regulation. But regulations do not merely harm individuals, they also benefit the public. If a court ignores this benefit, then every burden on private individuals will appear unreasonable, or, literally, without a reason.

Because legitimate reasons support all land use regulations, this part challenges the approaches to account for those reasons. The form of this challenge is the benefits fraction, which measures a regulation’s benefits in much the same way that the takings fraction measures harm. The result of this challenge is two-fold. First, horizontal severance approaches are seen to embody an impermissibly narrow focus. By advocating that fee simple boundary lines are irrelevant, each version of horizontal severance fails to bound the measurement of benefits by a government regulation. Second, by responding to the benefits fraction, the fee simple approach

277. See supra Part II.A.
278. See supra Part II.F.
279. See Radin, supra note 17, at 1677-78 (“[A]s soon as one adopts conceptual severance . . . there is an easy slippery slope to the radical Epstein position.”).
satisfactorily, rather than arbitrarily as critics fear, distinguishes between takings claimants.

A. The Extreme Approaches—The Libertarian View and Common Ownership

Professor Epstein refers to the “whole exercise” to which this Note is directed as a “massive diversion.” If Professor Epstein is right, then the inquiry into the takings fraction must end with the libertarian view, and every government action that offends a property holder’s right to possess, use, or dispose of property (except common law nuisance regulations) requires monetary compensation. But it is useful at least to assume that Professor Epstein’s dismissal of the denominator problem is in error, for three reasons.

First, the libertarian approach uses a broad reading of the Takings Clause, justified by a historical understanding that the framers of the Fifth Amendment generally opposed measures designed to redistribute wealth. This historical understanding is not universally accepted, and more thorough accounts of the Founding reveal precisely the contrary, that the framers intended a narrow scope for the Takings Clause. Further, the Supreme Court exhibited deference to government’s police power in nineteenth-century takings cases, demonstrating an approach to the Takings Clause inconsistent with the libertarian view.284

Second, although the libertarian approach is clear and consistent, its implementation would overturn decades of Supreme Court precedent, including several key decisions—Penn Central, Keystone, and Concrete Pipe, both generally on the Takings Clause and specifically on the denominator problem. Professor Epstein explicitly held out Hodel v. Virginia Surface Mining, in which the Supreme Court upheld a strip mining regulation against a takings challenge, as wrongly decided. Yet not only does Hodel remain good law, Justice Scalia cited Hodel to support the Lucas categorical total takings rule

280. Epstein, Erratic Takings Jurisprudence, supra note 139, at 899; see supra Part II.F.
281. Cf. supra note 66.
282. See Epstein, Takings, supra note 66, at 29 (“It is very clear that the founders shared Locke’s and Blackstone’s affection for private property, which is why they inserted the eminent domain provision in the Bill of Rights.”); Treanor, Takings Clause, supra note 54, at 815-16 (“The Takings Clause, according to Epstein, mirrors Locke’s philosophy about property, whose central premise is antiredistributivism.”).
284. See, e.g., Mugler v. Kansas, 123 U.S. 623 (1887); see also Treanor, Takings Clause, supra note 54, at 797 n.81 (reviewing nineteenth-century and early twentieth-century cases); id. at 816 (“[T]he clause was initially read to have a limited scope.”).
287. See Epstein, Takings, supra note 66, at 124-25.
claimed as a victory for property rights advocates. But then, Professor Epstein found Lucas, though rightly decided, wrongly principled too.

Third, plaintiff manipulation of the denominator is not necessary under the libertarian view, because a claimant will win compensation in every case. However, the results of excessive manipulation, where the claimant chooses the denominator, and the libertarian view, where the denominator is irrelevant, are the same. Common law nuisances will circumscribe the police power, such that citizens will be forced to pay offending property owners to obey government regulations enacted for public health, safety, and welfare. Consequently, private property holders will consistently trump sincere efforts to enact regulations that benefit those unable to pay compensation. Recalling P, for example, future generations of Rhode Island citizens, and, of course, plant and animal inhabitants of the wetlands ecosystem cannot compensate P for the benefit they receive from the CRMC’s protection. Under the libertarian approach, either current Rhode Island residents must rally to cover those interests, or P will pave over eighteen acres of coastline. As the other approaches aim to avoid this trap, indulging those approaches, and the “massive diversion,” is worthwhile.

Like the libertarian approach, the common ownership approach—that all of a claimant’s property in the vicinity of the affected parcel is relevant—is too extreme to provide an adequate denominator. In P’s case, the success of the takings claim will turn on whether P

288. See supra note 77.
289. See Epstein, Symposium, supra note 73.
290. See supra Part II.F.
291. See supra notes 165-68 and accompanying text.
292. Regardless of the ability of taxpayers to compensate individuals, and the complications with such a shift in policy, the prospect of paying property holders to obey government regulations is less reasonable than it is absurd. See, e.g., John A. Humbach, Should Taxpayers Pay People To Obey Environmental Laws?, 6 Fordham Envl. L.J. 423, 425-26 (1995).

Should taxpayers have to pay people not to put pollutants into streams and reservoirs? Should taxpayers have to pay people not to kill off entire species? Should taxpayers have to reach into their pockets and pay people not to disperse development seamlessly across the countryside, relentlessly consuming, fragmenting, and degrading our nation’s remaining natural lands until almost all is gone? Should we, in short, have to pay people not to engage in land-uses that have been determined to be too socially unacceptable to allow?

Id.

293. Future generations of neighboring property owners, poor citizens, endangered species, and threatened ecosystems can be most harmed by an unregulated parcel, yet none of these groups own a benefactor able to compensate offending property owners.
294. See supra notes 87-88 and accompanying text. “P’s” example is based on Palazzolo v. Rhode Island, 121 S. Ct. 2448 (2001).
295. See supra Part II.A.
happens to own other parcels in the vicinity of Winnipaug Pond. The full force of the arbitrariness criticism comes to bear at this point. P's non-contiguous holdings may not relate in any way to the affected parcel apart from ownership by the same person, yet the common ownership, vicinity standard is met, and the denominator expands accordingly. No successful approach to the denominator should turn on such happenstance.

Applied generally, the common ownership approach seems an "extreme" and "unsupportable" alternative to the denominator problem, as Justice Scalia observed. But the approach operated sensibly in *Penn Central*. There, the economic potential of each of Penn Central's additional holdings directly depended on Grand Central Station, as smaller stores depend on a flagship store in a shopping center. The economic interdependence of Penn Central's holdings partially solved the arbitrariness problem, as the court found nothing unfair about including the benefit conferred on Penn Central by the landmark designation along with the harm. When commonly owned holdings in the vicinity and the affected parcel are economically interdependent, as in *Penn Central*, including those holdings presents an approach no more "extreme" than the fee simple approach.

**B. Numerator Theory—Three Versions of Horizontal Severance**

Justice Scalia, the Federal Circuit, and John Fee offer three round versions of horizontal severance, each of which fail to squeeze into the denominator problem's square hole. Horizontal severance focuses on harm to a private individual. When the right factors are present, each approach would ignore a property owner's fee simple, and narrowly circumscribe the takings denominator to reflect more closely the harm caused by a regulation. Each version of horizontal severance advocates conceptualizing property in pieces smaller than the fee simple, because often it is small pieces of land that a regulation harms. Under this conceptualization, when one small piece is harmed, no other pieces are relevant, because that small piece is capable of being evaluated on its own. In other words, that small piece alone

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296. Lucas v. S.C. Coastal Council, 505 U.S. 1003, 1016 n.7 (1992); see text accompanying notes 180-82.
298. *See id.* at 1276.
299. *See id.* at 1277.
300. *See infra* Part III.C.
301. The "right factors" vary between each approach. *See supra* Parts II.C., II.D., II.E.
302. The small piece can be evaluated on its own, provided, of course, that it meets the minimal criteria for severance set out in each of the three approaches. *See supra* Parts II.C., II.D., II.E.
can be a “complete thing taken.” To accept any version of horizontal severance, one must envision property as a collection of tiny “complete things,” each of which functions independent enough of the other that an entire constitutional takings inquiry should be conducted into that piece alone.

But horizontal severance’s conceptualization of property does not account for the interdependence between pieces of land. The use of one piece of property impacts other, adjacent pieces. It is land’s interdependence that prompts legislation to begin with. When the use of wetlands will impact other land interests, for example, government represents those interests, regulating when necessary for their betterment. To insure public health, safety, and welfare, government must conceptualize land more broadly than does each private individual. The harm from filling wetlands spreads much farther than one horizontally severed parcel, and farther than even the fee simple. But, representing the public interest, government does not force its broad conceptualization upon private individuals, compelling each to abandon his wetlands to coordinate their use with all the adjacent, interdependent parcels. Government does, however, provide parameters for land use, when private individuals’ inability to account for neighboring interests threatens public health, safety, and welfare.

Horizontal severance narrowly focuses on the individual’s conception of a regulation’s impact, to the exclusion of the government’s conception. But takings disputes are about reconciling one conception with the other. The landowner asserts harm to his independent parcel of property; government asserts benefit to the community’s interdependent parcels. A court’s task is to weigh the harm and the benefit. If it adopts one conception to the exclusion of the other, as horizontal severance suggests, then the court will not be able to carry out its task. Under horizontal severance, a regulation appears only to cause harm. By misrepresenting every regulation’s actual impact, horizontal severance’s narrow focus is inadequate.

In response to this inadequacy, I propose a benefits fraction. The benefits fraction reflects government’s conception of land as interdependent parcels. The purpose of creating the benefits fraction is: (1) to represent accurately the beneficial impact of a regulation on one segment of property to neighboring segments; (2) to provide a method for comparing a regulation’s harmful impact with its beneficial impact; (3) to demonstrate that when the fee simple boundary line does not circumscribe the regulation’s impact, the benefit will unfailingly outweigh the harm caused by a regulation; and (4) to reemphasize the need for balance in takings inquiries.

303. Radin, supra note 17, at 1677 (commenting on Nollan v. California Coastal Commission); supra text accompanying note 156.
The remainder of this section describes how the benefits fraction fulfills these four purposes. Subsection 1 sets out the benefits fraction. It explains the relationship between the numerator in the benefits fraction and the denominator in the takings fraction, using a recent case in the District of Columbia, *District Intown Properties v. District of Columbia*, as a means for comparison. Subsections 2, 3, and 4 criticize each version of horizontal severance for suggesting too narrow an approach to the denominator problem. "Numerator theory" captures the unusual consequence of horizontal severance. When fee simple boundary lines are not relevant to the takings denominator, they remain irrelevant to the benefits numerator. The result is that a regulation's benefit will greatly exceed the harm in every instance, such that, under horizontal severance, no private individual ever will prevail on a takings claim. Numerator theory is the proposition that when a claimant is permitted to deviate from the fee simple boundary line in the takings denominator, government is thereby permitted to deviate from the fee simple boundary line in the benefits numerator.

This Note's final section reviews the fee simple approach, which alone adequately responds to the benefits fraction. As the fee simple approach negotiates between the individual's and the public's conceptions of property, it presents the only approach able to balance the interests on both sides of takings claims.

1. The Benefits Fraction

The benefits fraction measures, generally speaking, a particular parcel's impact on the property surrounding it. When a piece of property could be used in one way to benefit the surrounding land interests, or in another way to harm the surrounding land interests, the benefits fraction will reflect the difference. For example, the benefits fraction would measure the difference between draining and filling a lake versus leaving the lake in place, according to each use's impact on all of the lakefront property, and any other property affected by the use of the lake. As shown below, draining and filling the lake likely would result in a smaller benefits fraction than would leaving the lake in place. Imposing a no dumping regulation on the lake likely would drive the fraction even higher, closer to one. The benefits fraction works as a mirror image of the takings fraction, which measures, of course, harm.

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304. 198 F.3d 874 (D.C. Cir. 1999).
Denominator analysis begins with the assumption that the best way to represent harm associated with government action is with a fraction:

\[
\frac{\text{economic harm to a particular parcel caused by a government regulation}}{\text{unregulated economic value of the relevant parcel}}
\]

The same fraction, slightly restated, reads

\[
\frac{\text{actual harm done by the regulation to a particular parcel}}{\text{potential harm a regulation could have done to the relevant parcel}}
\]

“Relevance” sets in motion the takings inquiry using this fraction. First, a claimant must define the relevant parcel. Second, the claimant must calculate the unregulated value of that particular parcel, i.e., the potential harm that particular parcel can suffer. Third, the claimant must identify the actual harm suffered by the defined, particular parcel. If the claimant defines the relevant parcel narrowly, then the denominator will contract and the fraction will come closer to 1/1.

But most of the time government actions create benefits, as well as harm. A regulation’s benefit, unlike its harm, cannot be measured

305. “Harm,” of course, really means “economic harm.” This definition is as idiomatic as it is inevitable. See Lucas v. S.C. Coastal Council, 505 U.S. 1003, 1065 n.3 (Stevens, J., dissenting). Harm caused by a regulation need not be economic to imply constitutional concerns. Nevertheless, takings claimants will always ask the court to address the economic impact of a regulation. Thus, to a plaintiff, harm equals economic harm.

“Benefit” need not be so constrained. If only the economic benefit of a regulation were relevant, then the following phenomenon would result. When the economic harm to the individual exceeds the economic benefit to the relevant surrounding land interests, the individual will always win. When the economic benefit to the surrounding land interests exceeds the economic harm to the individual, no takings dispute will arise, because the relevant surrounding land interests will pay the individual to use the parcel as if it is regulated. Further, mere transaction costs, which, theoretically, taxation and just compensation could remedy, are not the only obstruction to the natural transaction between the harmed and the benefited. The real obstruction is that substantial non-economic benefits, such as preventing harmful externalities to future generations of neighboring property holders, or vulnerable ecosystems, have no economic benefactors in the market. See supra note 293 and accompanying text.

Nor need “benefit” connote the conventional sense of “benefit,” as in value gained. As Justice Scalia instructs, “gaining a benefit” only differs semantically from “avoiding a harm.” Lucas, 505 U.S. at 1024. “Benefit,” in the benefit fraction, can mean the avoidance of harm, as in “the relevant surrounding land interests benefit from the absence of a nearby nuclear facility.”

“Benefit” thus should mean, simply, all that is improved by a government action. It is partly for this reason that the benefits fraction, unconstrained by the commonly owned fee simple, overwhelms the harm fraction likewise unconstrained.
by observing the relevant parcel in the denominator analysis. Instead, the benefit to the property surrounding the relevant parcel must be taken into account. Once the takings fraction is resolved so that the relevant parcel is determined, it becomes possible to ascertain the benefit that the relevant parcel, as regulated, provides nearby property. And, as with harm, the best representation of a regulation’s benefit is a fraction:

\[
\frac{\text{actual benefit created by the regulation on the particular parcel}}{\text{potential benefit created by a regulation on the particular parcel that could be realized by particular surrounding land interests}}\]

The denominator of the benefits fraction is the maximum benefit that a regulation on a parcel can provide to surrounding land interests. If the relevant parcel is a lake, opening the lake to the public and providing free boat, swimming, and fishing access conceivably represents the lake’s maximal benefit to surrounding land interests.\(^{306}\) The numerator in the benefits fraction is the actual benefit that a parcel, as regulated, provides surrounding land interests. Resolution of the numerator depends on which actual benefits properly count in the equation.

As with the harm fraction, “relevance” sets in motion the takings inquiry using the benefits fraction. First, the government must define the relevant surrounding land interests. Second, the government must identify the actual benefit that the particular surrounding land interests realize from the regulation on the particular parcel (as defined by the claimant in the harm fraction). Third, the government must calculate the potential benefit that the defined, particular surrounding land interests can realize from a regulation on the defined, particular parcel. If the government defines the relevant surrounding land interests broadly, then the numerator will expand and the fraction will come closer to 1/1.

The benefits fraction numerator functions as the direct inverse of the takings fraction denominator. A takings plaintiff seeks to horizontally sever the denominator to give the appearance that a regulation has harmed the relevant parcel as completely as possible. To this end, the plaintiff asserts that a fee simple denominator (in the takings fraction) fails to appreciate the regulation’s harm, because his fee simple is too big. Conversely, government seeks to expand the benefits fraction numerator to give the appearance that a regulation

\[306\] Other uses might provide an equally maximal benefit. Perhaps the lake’s best use for a community is as drinking water. If so, then that use marks the benefits denominator, as taxpayers cannot ask government to do better than convert the lake to a reservoir.
on the relevant parcel has benefited the surrounding land interests as completely as possible. To this end, the regulation’s supporters assert that a fee simple numerator (in the benefits fraction) fails to appreciate the regulation’s benefit, because the benefits of the regulation extend beyond the plaintiff’s property, i.e., his fee simple is too small.

But neither party can refute the other’s objective. However powerful a claimant’s arguments are for departing from the fee simple approach, the same strength will adhere to the government’s argument for likewise departing from the fee simple. The reason is that the argument on both sides is the same. Both sides argue that the fee simple is arbitrary. Thus, any property owner who asserts that the remaining fee simple is irrelevant in assessing a regulation’s adverse impact, may not turn around and claim that the remaining fee simple is relevant in assessing a regulation’s positive impact.

Consider District Intown Properties v. District of Columbia. Washington D.C.’s Historic Preservation Review Board (“Review Board”) designated Cathedral Mansions South, an apartment building located across from the National Zoo, and its adjacent lawn a landmark. Accordingly, District Intown’s application to tear down the building and lawn to erect eight townhouses was denied. District Intown argued for horizontally severing its commonly owned, contiguous fee simple into nine subdivisions, as it had for the townhouse proposal. The court rejected this proposal, applying Ciampitti’s multifactor analysis to find the fee simple the relevant parcel.

But suppose that the court, whether under the substantiality or multifactor or Justice Scalia’s approach, accepted District Intown’s suggestion to define each severed lot as a relevant parcel. Regardless of the justification for severance, District Intown would have to demonstrate that its remaining property bears no relevance in the takings analysis. But having eliminated the fee simple boundary line from consideration, District Intown would have opened the door to considering the benefits to surrounding land interests beyond the fee simple. To verify District Intown’s actual loss, the court must ask whether the severed, harmed parcel actually benefits the surrounding land interests by remaining regulated. The District of Columbia could argue that the relevant surrounding land interests include the National Zoo, whose visitors benefit from Cathedral Mansions’ landmark designation. District Intown already has convinced the court that the fee simple boundary line bears no relevance to the measurement of

307. 198 F.3d 874 (D.C. Cir. 1999).
308. See id. at 877.
309. See id. at 877-78.
310. See id. at 880.
311. See id.
harm, therefore it will fail to persuade the court that the fee simple boundary line is of any consequence to the measurement of benefit. Without the fee simple boundary line, each tiny lot appears to serve its most beneficial function with the regulation in place. Having framed the conflict as the loss of one townhouse against the gain of a substantial benefit to the entire citizenry of Zoo-goers, it is hard to imagine a court finding the landmark designation responsible for a compensable taking.

Every government regulation creates benefits. Numerator theory suggests that, for this reason, government likely will prevail whenever it may define the relevant surrounding land interests. Such is the case with nuisances. A government regulation prohibiting the operation of a nuclear plant atop a fault line drives the benefit numerator so high that no resultant harm ever will be compensated. Even when such a regulation's harm to the private land owner is total, the avoidance of harm—the benefit—to the neighbors also is total, and is multiplied by the number of benefited neighbors. The benefits fraction also overwhelmed Penn Central, when the Court emphasized that "the preservation of landmarks benefits all New York citizens and all structures, both economically and by improving the quality of life in the city as a whole."312 Essentially, the "reciprocity of advantage" to all New Yorkers easily overcame one property owner's suffering.313 Undeniably, when government is permitted to define the relevant surrounding land interests irrespective of the claimant's fee simple, the definition will always encapsulate so great a benefit that the property owner never will prevail.

Judge Williams, concurring in District Intown, perceived this lopsided result, and worse.314 Judge Williams referred to the beneficial relationship between two adjoining parcels as "synergy."315 Judge Williams aptly noted that within a commonly owned fee simple, averting the harmful use of one portion of the property often reciprocates an advantage in other portions of the property.316 "Internal synergy" explains the natural absence of billboards in every residential yard, as even profitable billboards devalue the remainder of a resident's property.317 Judge Williams continued with respect to the case at hand:

313. "Reciprocity of advantage" originated with Justice Brandeis's dissent in Pennsylvania Coal, as a term identifying the mutuality between being constrained by a government action and being advantaged because others are equally constrained by the same government action. Pennsylvania Coal Co. v. Mahon, 260 U.S. 393, 422 (1922) (Brandeis, J., dissenting).
314. District Intown, 198 F.3d at 884 (Williams, J., concurring).
315. Id. at 888.
316. See id.
317. Cf. supra text accompanying note 265.
Of course, there is another synergy between [the claimant's] two parcels and adjacent Connecticut Avenue, namely the historical value that inheres in the preservation of a building as it was initially constructed (i.e., with an expansive lawn beside it). Uncompensated landmark preservation seems to rest on this synergy....

Apart from obliterating takings law, such a view has peculiarly perverse effects in the realm of historic preservation. Although such laws try to preserve for society the positive externalities created by buildings like Cathedral Mansions, inflicting the entire cost on the creator of the landmark... is bound to discourage investment in first-class design....

...[R]estoring uncompensated landmark preservation on the idea of reciprocal advantage stretches the concept into meaninglessness.318

What Judge Williams perhaps would refer to as "external synergy" is what the government would seek to include in the benefits fraction numerator, that is, benefits to surrounding land interests beyond the fee simple. Judge Williams presumably would find that without the fee simple to limit the government's inclusion of external synergy under the benefits fraction, takings law would be "obliterated." Indeed, Judge Williams would be absolutely right.319

318. District Intown, 198 F.3d at 889-90.
319. Judge Williams did not seize on synergy to criticize horizontal severance, however. Rather, Judge Williams expressed dissatisfaction with the District Intown majority's use of Ciampitti's subjective factor analysis to arrive at a fee simple denominator. Id. at 889. Judge Williams' principle concern was that because "there will be some synergy between almost any two neighboring parcels under common ownership," any remaining synergy in a regulated fee simple will thwart a total takings claim. Id. Judge Williams would prefer a relevant parcel analysis that places a greater emphasis on the synergy between commonly owned parcels, and on the proposed, rather than the historical use of those parcels. Id. at 890.

Numerator theory advances that horizontal severance logically implicates an expanded notion of which synergy "counts" in assessing the benefit of a regulated parcel on neighboring parcels. Without contiguity and common ownership available to contain the benefit of regulated land to its neighbors, synergy becomes even easier to find than Judge Williams feared under the fee simple approach. Any good resulting from a land use regulation "counts," and any individual's loss would seem insignificant compared to all that benefit. In short, numerator theory does not share Judge Williams' starting point, but borrows his conclusion that too much synergy in the takings analysis will "obliterat[e] takings law." Id. at 889.

But Judge Williams' characterization that the fee simple approach similarly includes an inordinate amount of synergy finds less support. Underlying Judge Williams' criticism of the fee simple approach were intermittent references to Professor Epstein's extreme understanding of the Takings Clause and he repeatedly expressed resignation with the Supreme Court "militat[ing]" its parcel as a whole approach with respect to other concepts. Id. at 885, 86, 90. Judge Williams baldly asserted that the fee simple approach "is at odds with the underlying principle of the Takings Clause," without offering a statement of that offended "principle." Id. at 887.
Once the benefits fraction is expanded, the benefit of a land use regulation always will outweigh the harm to a claimant. A court considering an expanded benefits fraction will never rule for an individual property owner. Such a lopsided result indicates numerator theory's insight on the denominator problem, rather than its obscurity. Numerator theory is the acceptance of an expanded benefits fraction as a logical consequence of treating the fee simple as irrelevant. This Note offers numerator theory not because it is a plausible solution to the denominator problem, but rather because it demonstrates that the substantiality, multifactor, and Justice Scalia approaches are implausible.

2. Economic Substantiality

The benefits fraction does not enter the ordinary takings analysis. Ordinarily, undertaking to determine the economic impact of a regulation, a court will use a fee simple denominator and assess the resulting fraction. If it is 1/1, then the court will rule for compensation under *Lucas*. If it is less than 1/1, then the court will complete the *Penn Central* balancing test.

But another level of inquiry attaches to the substantiality approach. Economic substantiality proposes that "any identifiable segment of land is a parcel for purposes of regulatory taking analysis if prior to regulation it could have been put to at least one economically viable use, independent of the surrounding land segments." Having jumped through this hoop, a claimant next must demonstrate that the regulation "took" all economically beneficial use to prevail under *Lucas*. Fee cautions that "the existence of a post-regulatory use for the property need not be independent of surrounding land interests." A court must verify that the remaining portion of the

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320. Even a 1/1, total taking, however, will not require compensation when government is regulating a common law nuisance. See *Lucas v. S.C. Coastal Council*, 505 U.S. 1003, 1027 (1992); *supra* text accompanying notes 83-85.
321. See *id.*; *supra* text accompanying notes 259-60.
322. See *id.*; *supra* text accompanying notes 259-60.
323. Fee, *supra* note 167, at 1561; *see supra* text accompanying notes 263-265.
claimant's fee simple does not benefit from the regulated, severed parcel.\textsuperscript{324} This inquiry serves to check whether a claimant is attempting deceptively to grab compensation for a regulation from which, in fact, he already benefits. The benefits fraction enters the inquiry at this level. Using Judge Williams' terms, when synergy remains between the relevant parcel and another parcel, then the claimant will not prevail under \textit{Lucas}, because there is value in the synergy.\textsuperscript{325} But there is no reason to assume that only internal synergy may be considered in the analysis. External synergy, that is, the benefit to surrounding land interests beyond the claimant's fee simple, must factor in as well. Government will have no trouble proving beneficial external synergy, as that synergy prompted the regulation in the first place.

A likely response to external synergy is that the purpose of inquiring into the surrounding land interests is only to verify that a claimant has not gained by a regulation, when the severed fraction indicates that the same regulation inflicted a total, or near total loss. Any effect on property other than the claimant's, i.e., any external synergy, seems incapable of furthering this inquiry. Indeed, if the purpose of verifying the economic impact was to find the claimant's \textit{actual} gain throughout his property, then such a response is a strong one. But under substantiality, a claimant's \textit{actual} gain is no more relevant than a claimant's \textit{actual} loss. The relevant loss under substantiality is the product of imagining that one concept, a horizontally severed slice of property, is all that a claimant owns. "Total" takings under substantiality really are "conceptually total" takings; there is nothing \textit{actually} "total" about the loss of a small part of a bigger piece. Verifying the benefit to the surrounding land interests means measuring not the \textit{actual} benefit to the claimant, but rather imagining that the claimant owns enough neighboring property to appreciate all of a regulation's "conceptual benefit." Although there is nothing \textit{actual} about the benefit to the plaintiff, this fact should not bother the substantiality advocate.

On a broader level, the benefits fraction is meant to illustrate that when a claimant asks a court to ignore real fee simple boundary lines, then that claimant is essentially asking the court to ignore the actual impact of the government regulation. Substantiality deals with losses to conceptually independent parcels of land. Yet, real parcels never are independent; the value of one relies on the use of others. Government regulation of land use responds to the interdependence between neighboring properties, and substantiality's notion of independence fails to grasp that undeniable interdependence.

\textsuperscript{324} Fee, supra note 167, at 1562.
\textsuperscript{325} See supra notes 314-19 and accompanying text.
If substantiality suggests an inferior approach, this should not come as a surprise. Fee posits that "[t]he only cases in which the standard of independent economic viability would produce a different result are those in which a different result should occur," according to "the principles of fairness and justice underlying the Fifth Amendment." Fee scarcely offers any explanation of the sort of justice that he invokes. Reasonable expectations and the character of the government action, two factors thought necessary for achieving fair results in most takings cases, find no place in the substantiality approach. The absence of reasonable expectations in Fee's approach is particularly conspicuous, as the second sentence of Fee's article emphasizes that at the time of purchase in Lucas, "[Lucas's] building plans violated no existing regulations."

Substantiality instead derives from the premise that if Lucas can recover on a total taking, then $P$ also should recover on a total taking. "Fairness and justice" presumably would carry out the principles behind Lucas's categorical takings rule to $P$'s advantage, because, aside from $P$'s two upland acres, Lucas and $P$ are similarly situated. But substantiality's premise is faulty, because none of the justifications asserted in Lucas for total takings apply to $P$. First, from $P$'s point of view, the total economic loss of eighteen acres of his property is not the equivalent of a physical appropriation. Indeed, Nollan's fundamental right to exclude remains in the wetlands portion, and this right may benefit $P$'s remaining upland portion in both economic and non-economic ways. Second, $P$'s case is not "relatively rare." The extraordinary setting that has driven the Lucas rule from the outset is not present in $P$'s situation, because government regulations are more likely to impact segments of property than whole fee simplxes. Third, $P$'s case holds less of a likelihood that government has singled his property out for the subversive purpose of dedicating it for public service without paying for it.

The economic substantiality approach contravenes established regulatory takings principles. Without such support, Fee's approach instead appears to be an attempt to apply a principle of physical takings law to regulatory takings. Loretto held that the magnitude of a physical taking holds no consequence for the Takings Clause;

326. Fee, supra note 167, at 1562 (emphasis omitted).
327. See supra notes 97-116 and accompanying text; see generally Michelman, Property, supra note 16.
328. Fee, supra note 167, at 1535.
329. See supra notes 78-81 and accompanying text.
330. In Lucas, no segment of Lucas's fee simple remained to inherit the benefit of the right to exclude on adjacent parcels. See supra text accompanying notes 74-75.
331. On the actual extraordinary circumstances of the Lucas case, see supra note 74 and accompanying text.
compensation is due even for the smallest of physical infringements.\textsuperscript{332} No such principle applies in regulatory takings, however. The Court has developed entirely distinct bodies of regulatory takings and physical takings jurisprudence.\textsuperscript{333} Fairness is not a criteria in physical takings law, but it is the overarching purpose of regulatory takings law. Transferring principles from physical takings to regulatory takings is an imprudent, and unsupportable measure.\textsuperscript{334}

3. The Multifactor Approach

The multifactor approach, which considers the subjective intent of the property owner in the takings denominator,\textsuperscript{335} comes under scrutiny similar to the substantiality approach. First, the multifactor approach invites the benefits fraction. To verify the intent of a claimant, a court using the multifactor approach must inquire into a claimant’s remaining holdings.\textsuperscript{336} In particular, the inquiry must reveal whether the remaining holdings benefit from the imposed regulation on the affected parcel.\textsuperscript{337} \(P\), for example, would not proceed on separate development schemes for the wetlands and uplands parcels, if those combined schemes would net less economic benefit than one, unified scheme for the whole fee simple. Thus, a court must verify that \(P\) is not claiming a taking of a property interest that, acting rationally, he never would have pursued.

But if the intent behind the development scheme adequately defines the harm, then the intent behind the regulation defines the benefit with equal adequacy. In other words, once the multifactor approach deems the fee simple irrelevant for assessing a “conceptual taking,” it remains irrelevant in the assessment of “conceptual

\textsuperscript{332} See, e.g., Loretto v. Teleprompter Manhattan CATV Corp., 458 U.S. 419 (1982). Loretto’s giant step at the Supreme Court level translated to a small step on remand, when the New York Court of Appeals awarded her $1 for suffering the permanent physical invasion of a cable wire dangling across her Manhattan apartment building. See Loretto v. Teleprompter Manhattan CATV Corp., 446 N.E.2d 428 (1983).

\textsuperscript{333} Compare Pennsylvania Coal Company v. Mahon, 260 U.S. 393 (1922), with Transp. Co. v. Chicago, 99 U.S. 635, 642 (1878), and Loretto, 458 U.S. at 432. See Palazzolo v. Rhode Island, 121 S. Ct. 2448, 2463 (2001) (noting that physical takings “by invocation of the State’s power of eminent domain, presents different considerations than cases alleging a taking based on a burdensome regulation”); see supra notes 64-67 and accompanying text.

\textsuperscript{334} Cf. Palazzolo, 121 S. Ct. at 2463. For the Court, Justice Kennedy contrasted the rules in physical and regulatory takings for when a taking has occurred. In physical takings, “it is a general rule . . . that any award goes to the owner at the time of the taking, and that the right to compensation is not passed to a subsequent purchaser.” Id. In regulatory takings, however, the right to compensation can pass to a subsequent purchaser. Id. at 2462-64. Transferring one rule into the other body of law, even on a seemingly identical issue, did not work.

\textsuperscript{335} See supra Part II.D.

\textsuperscript{336} See supra Part II.D.

\textsuperscript{337} See supra note 229 and accompanying text.
benefit.” Consider, for example, Palm Beach, in which the Federal Circuit relied on PBIA’s different development schemes for the upland and lake portions of its 312 acre fee simple to horizontally sever 51 acres for the relevant parcel.338 The court determined that PBIA should not fail merely because it happened to own261 acres as part of the same development scheme. But admitting this happenstance, the Federal Circuit should have considered numerator theory, because it likewise was happenstance that PBIA did not possess the surrounding land interests relevant to the disposition, or development scheme, of Lake Worth. When the court allowed that PBIA should not suffer because it owned too much, it should have allowed that the government, and ultimately the taxpayers, should not suffer because PBIA owned too little.

Second, placing critical priority on the subjective intent of the property owner creates a disordered, manipulable test. Commentators have been critical of the Federal Circuit’s recent takings jurisprudence for this reason.340 Dubious land transfers and confidently asserted intent can make the difference between a fully compensable, total taking, and no compensation at all.341

Third, the multifactor approach appears to be an attempt to squeeze the entire takings inquiry into the denominator analysis. Admittedly, a court must approach the denominator problem carefully because the resulting takings fraction greatly influences the final adjudication of a case.342 But the multifactor approach misplaces pieces of the ultimate takings inquiry into the denominator analysis, where they do not belong. The Court invokes the three-factor Penn Central test to assess fairness in regulatory takings. The denominator problem is a troubling legal issue for how to define one factor: economic impact on the claimant. The subjective intent of the claimant has a place in the takings inquiry, but under the second factor: reasonable investment-backed expectations.343 Placing the intent of the claimant under the first factor, the Federal Circuit masquerades the multifactor approach as a wholly-contained fairness test.344 But as more than mere mindset is needed to determine

338. See Palm Beach Isles Assocs. v. United States, 208 F.3d 1374, 1381 (Fed. Cir. 2000); supra text accompanying note 246.

339. It was disputed in Palm Beach which regulation, in fact, prompted the denial of PBIA’s permit, and therefore whether PBIA “owned” the 261 acres at the time of the regulation remained unresolved. See supra note 249 and accompanying text.

340. See Fee, supra note 167, at 1536; Recent Cases, Regulatory Takings, supra note 160, at 931; Huffman, supra note 29, at 600-15.

341. See supra text accompanying notes 256-58.

342. See supra text accompanying notes 28-30.


whether a government regulation has unfairly burdened a private individual,\footnote{345} the multifactor approach seems under-equipped to administer that test.

4. Historically Cognizable Property Rights

Justice Scalia's footnote seven\footnote{346} represents the superior approach among the versions of horizontal severance. It assures that a claimant will not succeed in severing the fee simple without historical understanding to support his claim. Unlike the substantiality and multifactor approaches, Justice Scalia's approach couches the relevant parcel analysis in traditional understanding of property interests.\footnote{347} The standard, fee simple approach implicitly rests on the same traditional acceptance, on the "rich tradition of protection at common law."\footnote{348} But the fee simple approach restricts the applicability of historical acceptance, its advocates perhaps assuming that no other property rights enjoy the same "rich tradition" as does the fee simple. Justice Scalia's approach would unrestrict that premise and apply it to every asserted property interest, thereby debasing the assumption that only the fee simple enjoys traditional recognition among property interests.

Three criticisms nonetheless pervade historically cognizable property rights. First, as with any version of horizontal severance, Justice Scalia's approach fails to account for the benefits of the disputed regulation. Admittedly, the approach does not directly implicate the benefits fraction. Historically cognizable property rights can be severed without ever accounting for the property rights remaining in a fee simple. Justice Scalia's approach differs in this respect from the substantiality and multifactor approaches, each of which requires a court to take notice of the value remaining in the fee simple to make a relevant parcel determination in the takings fraction. No additional inquiry into the relationship between the impacted parcel and the remaining fee simple is required to implement Justice Scalia's approach. Without the additional inquiry, the \textit{Lucas} footnote seven approach does not open the door to the benefits fraction.

However, while severing according to historically cognizable property rights does not directly implicate the benefits fraction, the inquiry under Justice Scalia's approach is no more complete for avoiding it. Fractional harm appears whole under Justice Scalia's view merely as a result of historical recognition. When historical recognition gives the appearance of a total taking, government only

\footnote{345. See \textit{supra} Part I.A.4.}
\footnote{346. See \textit{supra} Part II.C.}
\footnote{347. See \textit{supra} text accompanying notes 205-09.}
\footnote{348. \textit{Lucas v. S.C. Coastal Council}, 505 U.S. 1003, 1016 n.7 (1992); see \textit{supra} notes 183-86 and accompanying text.}
has one opportunity to notify the court of the taxpayer's competing interest, by invoking the *Lucas* exception for common law nuisances. Countervailing considerations, such as whether a limitation on a historically recognized property right offers a necessary, disproportionate benefit to adjacent property, never enlighten the dispute. Unless government is, in fact, merely codifying common law, a court will not even allow the government to state the reason the legislature has enacted the regulation. The scale proposed by Justice Scalia weighs only one side of the takings balance.

*Lucas* itself operates a faulty scale as applied to horizontally severed parcels. When the takings balance weighs against a landowner, *Lucas* holds that the landowner will nonetheless prevail. The *Lucas* rule presumes that even when the benefit to the public outweighs the harm to the individual, the unique loss of an economically devastated fee simple nonetheless merits compensation. But, as noted above, none of the justifications for the total takings category apply when property is horizontally severed. Without support from the justifications for the *Lucas* rule, horizontally severed parcels enjoy no presumption, or, faulty scale.

Second, the approach articulated in footnote seven of *Lucas* threatens to freeze the law against society's progress. The denominator problem often pits those who would exercise common law property rights against those governments regulating to reshape those same common law rights. Under Justice Scalia's approach, though, the moment that a property right gains enough "legal recognition," the government forever loses its power to reshape that property right. This is because the historical legal recognition will facilitate shoehorning the takings fraction into 1/1, and the landowner will prevail under *Lucas* before the arguments for reshaping the historically recognized right—i.e., the character of the government action—ever will be heard in court.

Justice Stevens advanced this argument in *Lucas*, but not with respect to the denominator problem. Rather, Justice Stevens aimed at *Lucas*'s common law nuisance exception. Because the government only will escape compensation if its regulation codifies an existing restraint on the relevant property, the nuisance exception is frozen in time at the moment of the *Lucas* decision. Justice Stevens offered an example: "if a State should decide to prohibit the manufacture of asbestos, cigarettes, or concealable firearms, for example, it must be prepared to pay for the adverse economic consequences of its decision." With respect to the footnote seven

349. See supra note 96.
350. See supra text accompanying notes 329-31.
351. See Lucas, 505 U.S. at 1068-69 (Stevens, J., dissenting).
352. See supra notes 83-86 and accompanying text.
353. Lucas, 505 U.S. at 1068 (Stevens, J., dissenting). Such an outcome would
approach to the denominator problem, the example needs only slight modification: if a state should decide to prohibit one destructive, unchecked, historically cognizable property right, it must be prepared to lose under *Lucas* footnote seven without a court balancing the character of its decision.\(^{354}\)

The frozen law objection to Justice Scalia’s approach, like the definitional objection\(^ {355}\) perhaps can be resolved without modifying the approach. Even when historically cognizable property rights are frozen so that loss of one such right equals a takings fraction of 1/1, the government can counter that it is regulating according to its evolving conception of general safety, welfare, and health. In other words, even if severing “concepts” are frozen, an unfrozen conception of the police power will keep takings law in step with contemporary understanding of what land uses harm the general public.

For example, one understanding of *Pennsylvania Coal* may be that because support rights were bargained for and historically recognized in Pennsylvania, such rights were frozen against the state’s efforts to change them via the Kohler Act.\(^ {356}\) But perhaps if the state could have forwarded evidence, say, of a massive, destructive geological ripple effect of subsidence, and that the recently discovered destruction substantially harmed the general welfare, then the state may have overcome even the total loss of a frozen property right with a “rich tradition.”\(^ {357}\)

A third objection to Justice Scalia’s approach is that it fails to square with important regulatory takings precedent. In *Penn Central*, for example, air rights certainly enjoyed historically cognizable recognition, as New York City had worked an elaborate scheme for zoning and transferring those rights,\(^ {358}\) yet the Court rejected the attempt to sever those rights. *Keystone*, from which Justice Scalia dissented, refused to sever a historically cognizable property right.\(^ {359}\)

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\(^{354}\) The awkward result of frozen property rights can be illustrated by *Euclid*. Under footnote seven, in 1922, Ambler Realty could have severed its commonly accepted right to develop its property unfettered, asserted a taking similar to *Pennsylvania Coal*, and prevailed. But had Ambler Realty instead brought suit in 2001, either it would fail, or unfettered development would still be the norm, leaving pigs in everyone’s parlor.

\(^{355}\) See *supra* text accompanying note 211.

\(^{356}\) See *supra* notes 206-09 and accompanying text.

\(^{357}\) Cf. *Keystone Bituminous Coal Ass’n v. DeBenedictis*, 480 U.S. 470, 488 (1987) (“The Subsidence Act is a prime example that ‘circumstances may so change in time . . . as to clothe with such a [public] interest what at other times . . . would be a matter of purely private concern.’” (alterations in original) (quoting *Block v. Hirsh*, 256 U.S. 135, 155 (1921))).


\(^{359}\) See *supra* notes 129-30 and accompanying text.
Implementing Justice Scalia's approach would require reversing these bedrock Supreme Court cases.

C. The Fee Simple Approach and The Fairness Principle

Horizontal severance, the vehicle by which $P$ seeks more than three million dollars for the lost vision of his eighteen saltwater-soaked acres, has run into several objections, including numerator theory, adverse Supreme Court precedent, and traditional, common sense understanding of the boundary lines that divide property. The fee simple approach, on the other hand, weathers each of these objections.

First, the fee simple approach does not suffer under numerator theory. As the fee simple boundary line is relevant in assessing a regulation's harm, the boundary line remains to enclose the scope of the benefits numerator. Under the fee simple approach, the only relevant beneficial impact of a contested regulation is that upon the claimant. Thereby constrained, the benefits fraction merely completes the measurement of the actual impact on the individual property owner. In Judge Williams' terms, the fee simple serves to exclude consideration of external synergy, thereby limiting the benefit assessment to internal synergy—the way that the regulated use of a parcel affects the remainder of the commonly owned property.

The benefits fraction reveals that the fee simple draws anything but an arbitrary boundary line for the denominator. The fee simple strikes the correct balance between construing a regulation's harm too narrowly, and construing its benefit too broadly.

Horizontal severance, in any form, requires conceptualizing property as a collection of fragmented parts, each of which functions apart from the others. The benefits fraction, unconstrained by the fee simple, conceptualizes property as an unified whole. Under this conception, the use of one part is so vital to the rest that government appears a necessary land manager, because the legislature more ably accounts for that unity than any individual private property owner. But these conceptions are extreme, property is no more completely independent than it is completely interdependent. The fee simple approach strikes a necessary balance between the competing conceptions. It appreciates that property is divided into estates owned by individuals, but that preserved within the estates are a number of interdependent rights. Restated according to the familiar metaphor, horizontal severance recognizes the sticks but ignores that they are bundled. The unconstrained benefits fraction recognizes the bundle

360. See supra notes 314-19 and accompanying text.
361. See supra notes 202-04 and accompanying text.
362. For a discussion of the bundle of rights metaphor, see Tedrowe, supra note 168.
but ignores that it is made up of sticks. Only the fee simple approach appreciates the completed metaphor, that property is a bundle of sticks.

Second, recognition of the fee simple underlies much of Supreme Court regulatory takings jurisprudence.\textsuperscript{363} \textit{Penn Central}, \textit{Keystone}, and \textit{Concrete Pipe} each rely on the fee simple to assess the true impact of government regulations on respective individuals.\textsuperscript{364} \textit{Lucas} relies even more heavily on the fee simple to assess the true impact of government regulations on respective individuals.\textsuperscript{365} Although Justice Scalia lamented that the “rhetorical force” of the total takings rule “is greater than its precision,”\textsuperscript{366} clearly the precise force of the rule is supported by the tradition of the fee simple in regulatory takings law, and the special harm occasioned by its total economic deprivation.

Moreover, the tradition of the fee simple also supports generally government’s role as land use regulator. Rhode Island’s Coastal Resource Management Council, for example, operates on the assumption that it can constitutionally adjust the uses of segments of wetlands parcels, provided that it does not destroy the value of all of an individual’s property.\textsuperscript{367} The Clean Water Act also operates on the premise that government has the authority to regulate individual uses of land when necessary to the public interest.\textsuperscript{368} The Act remains effective under the fee simple approach, because when it regulates a parcel smaller than the fee simple a court will balance the competing interests of the individual and the Act, rather than rule \textit{per se} for the individual. The Clean Water Act and similar legislation need the fee simple approach to the denominator to carry out their respective purposes.

Third, frequent use of the fee simple approach throughout takings law is no accident.\textsuperscript{369} The fee simple approach fits with common understanding of the method by which real property is divided.\textsuperscript{370} The reason is that “[t]he sum of the rights in the parts can not be greater than the rights in the whole.”\textsuperscript{371} In accordance with Justice Brandeis’s axiom, the value of a use for one parcel only can be assessed relative to a property holder’s adjacent property. Returning to an example

\textsuperscript{363} See supra notes 183-86 and accompanying text.
\textsuperscript{364} See supra Part I.B.1.
\textsuperscript{366} \textit{Id.} at 1016 n.7; see supra text accompanying notes 330-32.
\textsuperscript{367} See, e.g., supra notes 1-5 and accompanying text.
\textsuperscript{368} See supra note 5 and accompanying text.
\textsuperscript{369} Contra Fee, supra note 167, at 1550; see supra notes 203-04 and accompanying text.
\textsuperscript{370} See supra note 183 and accompanying text.
\textsuperscript{371} Pennsylvania Coal Co. v. Mahon, 260 U.S. 393, 419 (1922) (Brandeis, J., dissenting).
above, perhaps erecting a billboard on the front lawn of a residence presents a valuable use, but the relative value of that use with respect to the fee simple is less because the billboard devalues the residence. Tallying the use of the billboard and the residence independently grosses an illusory total, because the real value of the two uses is the net between them. Common understanding by residents keeps billboards off of front lawns. Common understanding by legislators does the same for a community, so that the value of independent fee simples is not offset because of mutually harmful uses. The fee simple approach translates common understanding into legal understanding, as it allows a court to evaluate a regulation’s impact relative to an individual’s remaining adjacent property.

The fee simple approach, finally, offers the superior method for defining the relevant parcel. In P’s case, the answer to the initial legal question, therefore, is that P’s loss is best measured as 18/20. The economic impact of the CRMC’s regulatory action is 90% lost development potential. P has not established a total taking, and must proceed under the balancing test. P’s reasonable investment-backed expectations and the character of the government action enter the analysis at this juncture.

Under the reasonable investment-backed expectations prong, P now admits that he obtained title to the twenty-acre parcel after Rhode Island had enacted regulations to prevent filling coastal wetlands. While this fact will not bar P’s claim, it remains crucial to the analysis. Indeed, in Palazzolo Justice O’Connor affirmed the relevance of the timing of the acquisition of title, saying:

[If existing regulations do nothing to inform the analysis, then some property owners may reap windfalls and an important indicium of fairness is lost.... [O]ur decision today does not remove the regulatory backdrop against which an owner takes title to property from the purview of the Penn Central inquiry. It simply restores balance to that inquiry. Courts properly consider the effect of existing regulations under the rubric of investment-backed expectations in determining whether a compensable taking has occurred.]

P, it turns out, was on notice about the risks of the eighteen wetlands acres.

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372. See supra text accompanying note 317.
373. It is worth noting that Palazzolo’s is a tougher takings case than most with respect to the denominator problem. Few regulation-inflicted losses will command the same sympathy as does Palazzolo’s loss. This Note uses Palazzolo because it presents horizontal severance’s best case, and still horizontal severance fails in that case to adequately account for necessary competing interests. Most takings claimants, however, withstand less diminution in value than did Palazzolo. In those more common cases, horizontal severance presents an even less prudent approach.
375. Id. at 2467 (O’Connor, J., concurring).
The timing of the land acquisition certainly is vital to the takings analysis, as it diminishes both sympathy for \( P \) and the leverage \( P \) gained by the severe economic impact. Yet three of the horizontal severance approaches never would have reached this critical factor.\(^{376}\) The libertarian approach would have immediately awarded compensation. Substantiability would have credited \( P \) with a total taking, as the wetlands owned independent development possibilities and Rhode Island would not meet Lucas's common law nuisance exception. The multifactor approach would focus on \( P \)'s intent to build (even amidst the regulatory scheme),\(^ {377}\) then severe the wetlands intended for development and award compensation, again, under Lucas.

Reasonable investment-backed expectations is one of the factors used to determine whether "[g]overnment [is] forcing some people alone to bear public burdens which, in all fairness and justice, should be borne by the public as a whole."\(^ {378}\) This is the Armstrong principle. The Supreme Court explicitly developed the three-factor test as the means to resolve takings cases according to this principle of fairness.\(^ {379}\) The Takings Clause requires that courts compare the needs of the individual property owner with the needs of the general public. Beginning with the fundamental fairness principle, the Court has found that the comparison is best made by avoiding any "set formula," and by instead gathering as much relevant information as possible in a takings dispute.\(^ {380}\)

Yet the theory behind horizontal severance is that less information better serves the takings inquiry. The libertarian, substantiability, multifactor, and Justice Scalia's approach each advocate that when the correct concept is present, segments of an individual's property should be eliminated from the analysis. By eliminating these segments, these approaches frame all degrees of infringements as total takings, thereby funneling claims into Lucas before the fairness principle ever gets addressed. In this way, each of these approaches is impermissibly narrow in its application.

Consistent with the Armstrong principle, the fee simple approach best preserves the balancing process in takings law. The resolution of

\(^{376}\) Whether Justice Scalia's approach would have favored \( P \)'s takings claim needs a more specific illustration. But examples of an inequitable result using historically cognizable property rights are not hard to imagine. For example, if only one of Lucas's lots suffered under South Carolina's regulation, and if the regulation went into effect before Lucas obtained the land, Justice Scalia's approach still would calculate a total taking.

\(^{377}\) Cf. Palm Beach Isles Assocs. v. United States, 208 F.3d 1374 (Fed. Cir. 2000) (deferring to plaintiff's intent to build even amidst contrary regulatory scheme); see supra notes 241-49 and accompanying text.

\(^{378}\) Armstrong v. United States, 364 U.S. 40, 49 (1960); see Treanor, Armstrong, supra note 32.


\(^{380}\) Id.
regulatory takings cases depends on a balance of competing interests: the right of the individual to use and enjoy his property, against the right of society to improve general health, safety, and welfare. When a regulation overburdens the individual, the balance fairly tips toward finding a compensable taking. When a regulation proportionately burdens the individual in furtherance of health, safety, and welfare, then the balance fairly tips toward upholding the regulation without compensating the individual. The denominator problem does not encompass the ultimate takings question, and precisely for this reason, horizontal severance does not answer it.
Notes & Observations