Imminently Eminent: A Game Theoretic Analysis of Takings Since Kelo v. City of New London

Alex Hornaday

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Table of Contents

I. Introduction

On June 23, 2005, the United States Supreme Court decided *Kelo v. City of New London*[1] and reignited the debate over the proper role of property rights and the power of eminent domain. There was considerable backlash. According to Congressman Phil Gingrey, the majority decision in *Kelo* "placed a for-sale sign on the doorstep of every American home or business;"[2] Justice O'Connor, in her dissent to *Kelo*, noted that the majority decision "effectively [deleted] the words 'for public use' from the Takings Clause of the Fifth Amendment."[3]   The decision, however, practically invited legislative reexamination of eminent domain,[4] which has been followed by a scholastic reconsideration of how much the government should be able to interfere in economic matters.[5] The scholastic debate *Kelo* sparked was as heated as the one between the majority and the dissent.[6] Even before *Kelo*, there were some

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1. Kelo v. City of New London, 545 U.S. 469, 484 (2005) (determining that economic development qualifies as "public use" under the Takings Clause of the Fifth Amendment).

2. 151 CONG. REC. H5370 (daily ed. June 29, 2005) (statement of Rep. Gingrey).

3. *Kelo*, 545 U.S. at 494 (O'Connor, J., dissenting).

4. *See id.* at 489 (majority opinion) ("We emphasize that nothing in our opinion precludes any State from placing further restrictions on its exercise of the takings power.").

5. *See* Richard A. Epstein, *The Public Use, Public Trust & Public Benefit: Could Both Cooley and Kelo Be Wrong?*, 9 GREEN BAG 2d 125, 125 (2006) (stating that *Kelo* had two unintended consequences: (1) significant public outcry, and (2) systematic scholarly consideration of the role of government and the economy).

6. *See, e.g.*, Walter Block, *Coase and Kelo: Ominous Parallels and Reply to Lott on Rothbard on Coase*, 27 WHITTIER L. REV. 997, 997 (2006) (criticizing *Kelo* insofar as it follows the line of thinking of Ronald Coase that where there are transaction costs, the proper role of the judiciary is to enhance societal welfare and make the "best use"of the property); David L. Callies, Kelo v. City of New London: *Of Planning, Federalism, and a Switch in Time*, 28 U. HAW. L. REV. 327, 344 (2006) (noting that the legislative backlash following *Kelo* represents "[f]ederalism exercised with a vengeance"); Daniel H. Cole, *Why* Kelo *Is Not Good News for Local Planners and Developers*, 22 GA. ST. U. L. REV. 803, 847 (2006) (arguing that legislatures rather than courts better protect property rights); Gideon Kanner, Kelo v. New

clearly drawn sides in the public use debate; in broadest terms, the eminent domain debate comes down to a balance between efficiency and equity.[7]

Those on the side of efficiency typically point to the impossibility of efficiently purchasing large parcels of land on the open market.[8] Because land is unique, property owners have a monopoly and can, absent the power of eminent domain, extract monopoly prices for their land.[9] Typical market negotiations would result in very high transaction costs, making whatever project a buyer intends cost prohibitive.[10] Market imperfections allow at least one party to extract rents from the other and to reduce ultimate social welfare.[11] For this reason, the efficiency camp argues that the government should maximize welfare by using eminent domain to channel the property into its best use.[12] Judge Posner provided a very qualified defense of the *Kelo* decision, but expressed frustration that the Court did not consider the hold out problem.[13]

The equity side of the debate, which is generally the larger camp, tends to center around the argument that a liberal use of eminent domain will allow a

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London: *Bad Law, Bad Policy, and Bad Judgment*, 28 URB. LAW. 201, 206 (2006) (characterizing *Kelo* as "Hood Robin" by taking from the poor and giving to the rich); Peter G. Sheridan, Kelo v. City of New London: *New Jersey's Take on Takings*, 37 SETON HALL L. REV. 307, 324–32 (2007) (outlining changes to New Jersey's takings law and public use interpretation as resulting from *Kelo*). *But see generally* Joseph L. Sax, Kelo: *A Case Rightly Decided*, 28 U. HAW. L. REV. 365 (2006) (arguing that in terms of constitutional law there is no principle on which public use can be differentiated from public purpose).

7.   *See* Frank I. Michelman, *Property, Utility, and Fairness: Comments on the Ethical Foundations of "Just Compensation" Law*, 80 HARV. L. REV. 1165, 1214–24 (1967) (exploring the dichotomy in "just compensation" between utility and fairness).

8.   *See* Thomas W. Merrill, *The Economics of Public Use*, 72 CORNELL L. REV. 61, 74–75 (1986) ("[E]minent domain applies where market exchange, if not impossible to achieve, is nonetheless subject to imperfections.").

9.   *See* RICHARD A. POSNER, ECONOMIC ANALYSIS OF LAW 55 (6th ed. 2002) (stating that one persuasive argument for eminent domain is to prevent monopoly, and referring to the hold out problem as one type of monopoly).

10.   *See* Michelman, *supra* note 7, at 1174–75 (arguing that it is difficult to create voluntary arrangements that fully account for the costs of bargaining and strategic concealment in activities of public investment and that such difficulty justifies collective coerced action).

11.   *See* Merrill, *supra* note 8, at 76 ("[T]he underlying predicament is the same: market conditions allow the seller to seek economic rents, that is to charge a price higher than the property's opportunity cost.").

12.   *See* R. H. Coase, *The Problem of Social Cost*, 3 J.L. ECON 1, 16 (1960) (arguing that the legal system ought to arrange rights in such a way as to achieve the greater productive value of property).

13.   *See* Richard A. Posner, *The* Kelo *Case, Public Use, and Eminent Domain—Posner Comment*, Becker-Posner Blog, ¶¶ 5, 8 (June 26, 2005), http://www.becker-posner-blog.com/archives/2005/06/ (last visited March 5, 2007) (arguing that the hold out problem is the only justification for eminent domain but noting that the Court did not discuss whether there had been a hold out problem in *Kelo*) (on file with the Washington and Lee Law Review).

government or those acting with the power of government to unjustly acquire property.[14] Within the typical parade of horribles, such as those expressed by Justice O'Connor,[15] lies the worry that a broad application of eminent domain is not only subject to abuse but actually creates incentives to avoid the marketplace and good faith negotiations altogether.[16] Richard Epstein suggests incorporating the theory of public goods to clarify and limit the concept of public use,[17] although he modifies the concept slightly by focusing on the right to consume even if everyone cannot consume simultaneously, thus broadening the concept of public goods to include common carriers.[18] Justice Thomas in his separate dissent in *Kelo* echoed Professor Epstein's sentiment.[19] Others advocate a complete ban on economic takings in order to eliminate the ability of special interests to wield the power of government in oppressive takings.[20]

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14.   *See, e.g.*, Lee Anne Fennell, *Taking Eminent Domain Apart*, 2004 MICH. ST. L. REV. 957, 968 (2004) ("Small numbers of transferees raise the specter of manipulation of the political process by those wielding disproportionate concentrated power."); Nicole Stelle Garnett, *The Public-Use Question as a Takings Problem*, 71 GEO. WASH. L. REV. 934, 952–53 (2003) (noting that in some cases urban renewal programs were used to remove African-Americans from certain neighborhoods); Ilya Somin, *Overcoming* Poletown: County of Wayne v. Hathcock, *Economic Development Takings and the Future of Public Use*, 2004 MICH. ST. L. REV. 1005, 1014–16 (2004) (arguing that a lack of binding post-condemnation requirements on new owners leads to a danger of eminent domain abuse).

15.   *See* Kelo v. City of New London, 545 U.S. 469, 501 (2005) (O'Connor, J., dissenting) ("Nothing is to prevent the State from replacing any Motel 6 with a Ritz-Carlton, any home with a shopping mall, or any farm with a factory.").

16.   *See* STEVEN GREENHUT, ABUSE OF POWER: HOW THE GOVERNMENT MISUSES EMINENT DOMAIN 6 (2004) ("Whatever the plan is, it is far easier to use government police power to scrape away existing properties than it is to follow the rule of law and the rule of the marketplace . . . .").

17.   *See* RICHARD EPSTEIN, TAKINGS: PRIVATE PROPERTY AND THE POWER OF EMINENT DOMAIN 166–69 (1985) (arguing that the theory of public goods could clarify the poorly understood and ambiguous concept of public use).

18.   *See id.* at 168 ("So long as all individuals have the *right* to use the facility . . . then the public use requirement is satisfied, even if all individuals cannot simultaneously use it.").

19.   *See Kelo*, 545 U.S. at 508 (Thomas, J., dissenting) ("The most natural reading of the Clause is that it allows the government to take the property only if the government owns, or the public has the legal right to use, the property as opposed to taking it for any public purpose or necessity whatsoever.").

20.   *See, e.g.*, Charles E. Cohen, *Eminent Domain After* Kelo v. City of New London: *An Argument for Banning Economic Development Takings*, 29 HARV. J.L. & PUB. POL'Y 491, 543 (2006) ("The only way to mitigate [the efficiency and fairness] concerns sufficiently is by banning economic development takings altogether."); Inst. for Justice, White Paper, Kelo v. City of New London: *What It Means and the Need for Real Eminent Domain Reform* 6 (2005), http://www.castlecoalition.org/pdf/Kelo-White_Paper.pdf (last visited Nov. 1, 2007) (including an explicit prohibition against commercial development takings among "the basic elements of a good [eminent domain] law").

In an effort to find a balance between efficiency and equity with regard to eminent domain, this Note uses tools of game theory to examine the incentives created by various regimes as well as the strategies of actors reacting to those incentives. Game theory is the study of interactions between rational decisionmakers who are aware that their actions affect each other.[21] The hypothetical models studied in game theory may seem unrealistically and, perhaps, inappropriately simple in some respects; however, the simplicity of a model allows the game theorist to distill the situation to its most fundamental conflict and gain insight into how people are likely to behave in the real life conflict that the game attempts to model.[22] A central goal of the application of economics to the law is to understand how rules affect behavior.[23] Apart from the simple "prisoner's dilemma," the use of game theory in legal reasoning is still fairly new but growing.[24] Indeed, Derek K. Yonai is the first to use game theory beyond the prisoner's dilemma in modeling the effect of *Kelo*.[25] Professor Yonai, however, examines the interaction between a developer and the government, whereas this Note concentrates on how different regimes affect the incentives involved in interactions between developers and property

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21. *See* ERIC RASMUSEN, GAMES AND INFORMATION: AN INTRODUCTION TO GAME THEORY 11 (4th ed. 2007) (describing the purpose of the field of game theory).

22. *See* ROGER B. MYERSON, GAME THEORY: ANALYSIS OF CONFLICT 2 (1991) (describing game theoretic models generally).

23. *See* DOUGLAS G. BAIRD ET AL., GAME THEORY AND THE LAW 4 (1994) (describing the application of game theory to the law).

24. *See* Ian Ayres, *Playing Games with the Law*, 42 STAN. L. REV. 1291, 1292 (1990) (describing how game theory has been "slower to diffuse into legal reasoning than other economic contributions"). For applications of game theory to legal problems, see generally BAIRD ET AL., *supra* note 23; Manel Baucells & Steven A. Lippman, *Justice Delayed Is Justice Denied: A Cooperative Game Theoretic Analysis of Hold-Up in Co-Ownership*, 22 CARDOZO L. REV. 1191 (2001); Lucien Ayre Bebchuk, *Litigation and Settlement Under Imperfect Information*, 15 RAND J. ECON. 404 (1984); Robert Cooter, Stephen Marks & Robert Mnookin, *Bargaining in the Shadow of the Law: A Testable Model of Strategic Behavior*, 11 J. LEGAL STUD. 225 (1982); Jeffrey N. Gordon, *Shareholder Initiative: A Social Choice and Game Theoretic Approach to Corporate Law*, 60 U. CIN. L. REV. 347 (1991); Jason Scott Johnston, *Strategic Bargaining and the Economic Theory of Contract Default Rules*, 100 YALE L.J. 615 (1990); Avery Katz, *The Strategic Structure of Offer and Acceptance: Game Theory and Law of Contract Formation*, 89 MICH. L. REV. 215 (1990); Robert J. Mnookin & Robert B. Wilson, *Rational Bargaining and Market Efficiency: Understanding* Penzoil v. Texaco, 75 VA. L. REV. 295 (1989); I.P.L. P'ng, *Strategic Behavior in Suit, Settlement, and Trial*, 14 BELL J. ECON. 539 (1983); Martin Shubik, *A Game Theorist Looks at Antitrust Laws and the Automobile Industry*, 8 STAN. L. REV. 594 (1956); Derek K. Yonai, Kelo *and the Games People Play: A Game Theoretic Analysis of* Kelo v. City of New London, 29 CAMPBELL L. REV. 83 (2006).

25. *See* Yonai, *supra* note 24, at 99–107 (using a signaling game of incomplete information to examine how developers might interact with government when seeking condemnation).

owners. Professor Yonai's article does, however, provide a springboard for further analysis of the effects of the hold out problem and transaction costs.[26]

This Note attempts to examine the issue of eminent domain using tools from game theory. Part II discusses the history and current state of eminent domain in the United States. Part III uses game theory first to examine the problems that eminent domain attempts to solve and then to develop a general game theoretic model for the use of eminent domain. Part IV uses the basic model to determine which of the various post-*Kelo* proposals lead to a better outcome given the concerns of both efficiency and fairness. Finally, Part V concludes that adjusting the compensation models provides a better, though imperfect, solution than adjusting interpretations of public use. Part V also notes a few policy and logistical considerations attendant to that conclusion.

As much as eminent domain jurisprudence tries to balance efficiency and equity, a Note of this nature must balance readability with technical rigor. In order to accommodate both considerations, this Note must include a Mathematical Appendix that lays out, step by step, the mathematical reasoning alluded to in the body of the text. Readers who are mathematically inclined or wish to verify the Note's assertions may do so without setting up the equations on their own. Similarly, readers who are less mathematically inclined may read the body of the Note to understand its ideas without being bombarded with equations and Greek letters.

II. Kelo v. City of New London and Eminent Domain

In order to determine which eminent domain structure provides the most efficient outcomes, both in terms of the use of property and ease of administration, it is helpful to begin with a broad overview of both the history and current state of eminent domain. Part II.A provides a brief survey of the history of eminent domain in the United States by looking primarily at Supreme Court public use cases. Part II.A also examines two prominent public use cases from Michigan, which provide a unique contrast to each other. Part II.B outlines the various legislative reactions to the decision of *Kelo v. City of New London*.

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26. *See id.* at 99 (describing the assumptions of the analysis, including assumptions that no hold out problem exists and that a developer incurs no costs in seeking condemnation).

A. *Eminent Domain Jurisprudence and What* Kelo *Changed*

Kelo is merely one of the most recent and most publicized decisions in a fairly well-established line of eminent domain jurisprudence dealing specifically with takings for economic development.[27] Although the history of eminent domain stretches back into antiquity, [28] a natural starting point for discussion of eminent domain for economic development in the United States is the Mill Acts[29] of the eighteenth and nineteenth centuries.[30] The Mill Acts allowed a mill owner to construct a dam to power a mill, although the dam flooded his neighbors' land and rendered the land unusable, so long as the condemning owner paid damages.[31] Courts found the grist mills to be public and upheld the Mill Acts because regulations required them to be open to any paying customers.[32] Maryland's Mill Act of 1719,[33] however, took the first step towards private-to-private takings by extending its mill protections to privately owned mills for iron production.[34] Furthermore, as the Industrial Revolution progressed, fewer mills were the grist mills used by local farmers as contemplated by the original Mill Acts, and more mills were privately owned and operated saw mills, pulp mills, and foundries.[35] Courts continued to

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27. *See* Cohen, *supra* note 20, at 500–16 (describing the history of the public use doctrine); *see also* Alberto B. Lopez, *Weighing and Reweighing Eminent Domain's Political Philosophies Post*-Kelo, 41 WAKE FOREST L. REV. 237, 255–72 (2006) (discussing the evolution of the public use doctrine).

28. *See* Errol E. Meidinger, *The "Public Uses" of Eminent Domain: History and Policy*, 11 ENVTL. L. 1, 6–8 (1980) (describing eminent domain in ancient Rome and the civil law jurisdictions); *see also* William V. Stoebuck, *A General Theory of Eminent Domain*, 47 WASH. L. REV. 553, 553–56 (1971) (noting that King Ahab's seizure of Naboth's vineyard in 1 *Kings* 21 may be the first recorded exercise of eminent domain).

29. *See* Head v. Amoskeag Mfg. Co., 113 U.S. 9, 26 n.2 (1885) (listing the Mill Acts from each state in the United States at the time of the decision).

30. *See* Lopez, *supra* note 27, at 256 (discussing the evolution of the public use doctrine in the context of private beneficiary takings with the Mill Acts).

31. *See* Meidinger, *supra* note 28, at 14–15 (giving an overview of the Mill Act in the colonial era); *id.* at 23 (noting that the seven colonial Mill Acts had grown to twenty-nine by 1884).

32. *See* Nathan Alexander Sales, *Classical Republicanism and the Fifth Amendment's "Public Use" Requirement*, 49 DUKE L.J. 339, 373 (1999) (noting that grist mills were not purely private because they were required to grind the grain for all citizens).

33. An Act for the Encouragement of an Iron Manufacture, Within this Province (June 8, 1719), ch. 15, Prov. St. 1719 (Md. 1719) (on file with the Washington and Lee Law Review).

34. *See* Cohen, *supra* note 20, at 502 (describing Maryland's Mill Act of 1719).

35. *See* Meidinger, *supra* note 28, at 23 (commenting on the increased privatization of mills in the industrial revolution).

uphold such protections for private mills by reasoning that mills provided a public benefit similar to railroads and canals.[36]

In the mid-nineteenth century, a countermovement in the public use doctrine arose, interpreting public use more narrowly to mean "use by the public."[37] Whether the countermovement ever became the majority view is in debate, but the narrower view of public use gained considerable support in the courts.[38] Nonetheless, the push toward development in the late nineteenth century saw a record number of private corporations using the power of eminent domain, which held up under both the broad and narrow views of eminent domain.[39] Railroads and other infrastructural projects that enjoyed the power of eminent domain easily passed the public use requirement, and the development of widespread transportation led to an accelerated industrial development.[40]

By the beginning of the twentieth century, the narrow interpretation of public use as "use by the public" became nothing more than a rhetorical obligation, or at best, only a minor hurdle to the use of the eminent domain power.[41] Indeed, in 1916, the Supreme Court formally rejected the narrow view, stating that "[t]he inadequacy of use by the general public as a universal test is established."[42] Little more than a decade later, the Great Depression created widespread economic distress that led to an unprecedented focus on urban redevelopment.[43] Such redevelopment programs led to the landmark

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36.   *See* Cohen, *supra* note 20, at 506 (outlining the rationale used to uphold the private takings that occurred in the construction of dams for private mills); *see also* Harry N. Scheiber, *Property Law, Expropriation, and Resource Allocation by Government: The United States, 1789–1910*, 33 J. ECON. HIST. 232, 237 (1973) (noting the broadening of "public use" in the Industrial Revolution to include railroads, turnpikes, bridges, and canals).

37.   *See* Meidinger, *supra* note 28, at 24 (identifying the gradual shift of the interpretation of "public use" in some jurisdictions).

38.   *See* Cohen, *supra* note 20, at 507 (discussing the scholarly disagreement about how prevalent the narrow view eventually became); *see also* Lopez, *supra* note 27, at 259–60 (describing late nineteenth century criticism of the broad interpretation of public use by judges and legal commentators).

39.   *See* Meidinger, *supra* note 28, at 28 (observing that the push for development counterbalanced the "ostensible tightening of the public use requirement").

40.   *See id.* ("Now that broad transportation and substantial industrial sectors had been developed, the country entered a period of accelerated industrial development that would . . . prove to be unprecedented.").

41.   *See* Cohen, *supra* note 20, at 508–10 (describing the state of the public requirement at the beginning of the twentieth century).

42.   Mt. Vernon-Woodberry Cotton Duck Co. v. Ala. Interstate Power Co., 240 U.S. 30, 32 (1916).

43.   *See* Meidinger, *supra* note 28, at 33 (describing early uses of eminent domain for the purpose of slum clearance).

decision in *Berman v. Parker*.[44] In *Berman*, the Supreme Court examined an act that allowed the government to "employ[] all means necessary and appropriate" to address "conditions existing in the District of Columbia with respect to substandard housing and blighted areas."[45] Petitioners argued that because their property was commercial and not "slum housing," and because the project was to be managed by a private agency, the redevelopment plan was for private rather than public use.[46] The Court found that the act served legitimate ends in that it ensured public health, safety, and morality.[47] The Court then stated that because the ends were within the authority of the legislature, "the right to realize it through the exercise of eminent domain is clear" because "eminent domain is merely the means to the end."[48]

In *Berman*, the Court adopted a very light standard of review for government determinations that a proposed project satisfies the public use requirement.[49] Furthermore, the Court also endorsed a broad interpretation of public use as "public welfare."[50] Once the Court found that the legislative purpose for using eminent domain was to make the District of Columbia both sanitary and beautiful, it stated that "[t]here is nothing in the Fifth Amendment that stands in the way."[51] The Court also determined that the city may redevelop the area as a whole, even if some property taken "standing by itself, is innocuous and unoffending."[52]

Thirty years later, the Court decided the case of *Hawaii Housing Authority v. Midkiff*,[53] again affirming the broad understanding of public use.[54] In *Midkiff*, the Court considered whether the Takings Clause of the Fifth

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44. *See* Berman v. Parker, 348 U.S. 26, 33 (1954) (finding that a revitalization and development project designed to remove blight satisfied the public use requirement).

45. *Id.* at 28.

46. *See id.* at 31 (outlining the petitioner's argument).

47. *See id.* at 32 (describing traditional applications of the police power).

48. *Id.* at 33.

49. *See id.* at 32 ("[W]hen the legislature has spoken, the public interest has been declared in terms well-nigh conclusive. In such cases the legislature, not the judiciary is the main guardian of public needs to be served by social legislation.").

50. *See id.* at 33 (using the "broad and inclusive" concept of "public welfare" to determine if legislative ends are legitimate when exercising the power of eminent domain).

51. *Id.*

52. *Id.* at 35.

53. Haw. Hous. Auth. v. Midkiff, 467 U.S. 229, 241–42 (1984) (finding that the use of eminent domain to address the problems of highly concentrated land ownership did not violate the public use requirement of the Fifth Amendment).

54. *See id.* at 244 ("The Court long ago rejected any literal requirement that condemned property be put into use for the general public.").

Amendment allowed Hawaii to use the power of eminent domain to redress the concentration of land ownership in the state.[55] The Court noted that *Berman* compels significant deference to the legislature when determining questions of public use.[56] The Court then noted that the extremely concentrated land ownership in Hawaii had significant negative effects on the residential property market.[57] The Court stated that "[r]egulating oligopoly and the evils associated with it is a classic exercise of a State's police powers."[58] After finding that the purpose of the act was legitimate, the Court found that the act's approach to the problem was a rational one.[59] The Court would not review whether the use of the eminent domain power was likely to accomplish the public purpose and thus explicitly endorsed a rational basis review of takings cases.[60]

One of the most prominent state decisions endorsing a very broad interpretation of public use is *Poletown Neighborhood Council v. City of Detroit*.[61] In *Poletown*, the Michigan Supreme Court upheld a taking "to alleviate and prevent conditions of unemployment and fiscal distress."[62] Because the benefit to the residents of invoking eminent domain to assist in economic development was clear, the court found that the project was a legitimate object of the legislature.[63] The court relied on an interpretation of public use that was broader than that in *Berman*. *Berman* concerned urban blight—which, as the Supreme Court famously remarked, "suffocate[s] the

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55. *See id.* at 232–33 (explaining the problem of highly concentrated land ownership in Hawaii).

56. *See id.* at 240 (noting that *Berman* found that the role of judicial review of takings is a narrow one).

57. *See id.* at 242 ("The land oligopoly has, according to the Hawaii Legislature, created artificial deterrents to the normal functioning of the State's residential land market and forced thousands of individuals to lease, rather than buy, the land underneath their homes.").

58. *Id.*

59. *See id.* ("Nor can we condemn as irrational the Act's approach to correcting the problem.").

60. *See id.* at 241 ("But where the exercise of the eminent domain power is rationally related to a conceivable public purpose, the Court has never held a compensated taking to be proscribed by the Public Use Clause.").

61. *See* Poletown Neighbor'd Council v. City of Detroit, 304 N.W.2d 455, 459 (Mich. 1981) (finding that the condemnation of a large tract of land for transfer to a private corporation for an assembly plant satisfied the public use requirement because of the positive economic effects), *overruled by* County of Wayne v. Hathcock, 684 N.W.2d 765, 787 (Mich. 2004).

62. *Id.* at 458.

63. *See id.* at 459 (explaining that because the public was to receive a clear benefit from the economic development, such benefit was sufficient to satisfy the public use requirement).

spirit by reducing the people who live there to the status of cattle"[64]—while *Poletown* dealt with unemployment.[65] The court found that the benefit of boosting the economy to be sufficiently within the public interest to satisfy Michigan's public use requirement, and that the benefit to a private interest was merely incidental.[66]

Twenty-three years later, the Michigan Supreme Court revisited the issue in *County of Wayne v. Hathcock*.[67] This time around the court looked at the development takings more skeptically.[68] The court first found that Michigan's takings statute authorized the taking, but that the limitations of the state constitution applied to the taking regardless.[69] The court determined that the constitutional inquiry was whether the condemnation at issue was "consistent with the common understanding of 'public use' at [the time of Michigan's current constitution's] ratification" in 1963.[70] After reviewing its pre-ratification eminent domain jurisprudence and Justice Ryan's dissent to *Poletown*, the Michigan Supreme Court determined that *Poletown* was an anomaly and should be overruled.[71] The court tightened the public use requirement in Michigan, only allowing it in three circumstances: (1) the creation of instrumentalities of commerce; (2) the requirement that the recipient remain accountable to the public in its use; or (3) the elimination of a public concern such as blight.[72] This, however, caused substantial uncertainty because a number of other courts had cited *Poletown* as support

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64. Berman v. Parker, 348 U.S. 26, 32 (1954).

65. *See Poletown*, 304 N.W.2d at 459 ("The power of eminent domain is to be used in the instance primarily to accomplish the essential public purposes of alleviating unemployment and revitalizing the economic base of the community").

66. *See id.* ("[T]he benefit to be received by the municipality invoking the power of eminent domain is a clear and significant one and is sufficient to satisfy this Court . . . even though a private party will also, ultimately, receive a benefit as an incident thereto.").

67. *See* County of Wayne v. Hathcock, 684 N.W.2d 765, 787 (Mich. 2004) (overruling *Poletown* and prohibiting the use of eminent domain for economic development takings).

68. *See id.* at 786 ("Before *Poletown*, we had never held that a private entity's pursuit of profit was a 'public use' for constitutional takings purposes simply because one entity's profit maximization contributed to the health of the general economy.").

69. *See id.* at 778 (finding that although the taking was authorized under Michigan takings statutes, such was not the end of the inquiry).

70. *Id.* at 781.

71. *See id.* at 787 ("We have concluded that this Court's *Poletown* opinion is inconsistent with our eminent domain jurisprudence and advances an invalid reading of our Constitution.").

72. *See id.* at 781–83 (listing the three circumstances in which Michigan's pre-*Poletown* jurisprudence allowed the use of eminent domain to transfer property to a private party).

for the more expansive view of public use,[73] a development that encouraged those who argue against the use of eminent domain in development takings.[74]

The Supreme Court once again weighed in on the issue of public use and development takings less than a year after *Hathcock* when it decided *Kelo v. City of New London*.[75] After decades of decline, in February 1998, the pharmaceutical company Pfizer Inc. announced a $300 million research facility to be built in the New London Area, which would draw new business to the area.[76] The New London Development Corporation (NLDC) proposed an integrated development plan, and the city council authorized the NLDC to use the power of eminent domain in the city's name.[77] Several homeowners in the area to be redeveloped refused to sell, and the NDLC initiated condemnation proceedings.[78]

The Court acknowledged that a state may use eminent domain to transfer property to private actors if public use is the purpose of the taking; however, a state may not take property under the pretext of public use when the actual purpose is to bestow a private benefit.[79] The Court defined public use as "public purpose" and noted that it is the purpose rather than the mechanics of condemnation that determine whether a use is public.[80] The Court refused to adopt the bright line rule that economic development does not qualify as public use because promoting economic development is a "traditional and long

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73. *See, e.g.*, Las Vegas Downtown Redev. Agency v. Pappas, 76 P.3d 1, 12 (Nev. 2003) (citing *Poletown* for the proposition that "creating a significant increase in jobs in an area suffering from high unemployment" satisfies the public use requirement despite its effects on current businesses in the area).

74. *See* Lopez, *supra* note 27, at 268–69 (explaining how *Hathcock* affected eminent domain jurisprudence outside of Michigan).

75. *See* Kelo v. City of New London, 545 U.S. 469, 472 (2005) ("[T]he question presented is whether the city's proposed disposition of this property qualifies as a 'public use' within the meaning of the Takings Clause of the Fifth Amendment to the Constitution.").

76. *See id.* at 473 (noting the conditions that led to the city of New London implementing the redevelopment plan).

77. *See id.* at 475 (stating that the city authorized the NLDC to exercise the power of eminent domain for the purposes of the development plan).

78. *See id.* ("[The NLDC's] negotiations with petitioners failed. As a consequence, in November 2000, the NLDC initiated the condemnation proceedings that gave rise to this case.").

79. *See id.* at 477 ("[I]t has long been accepted that the sovereign may not take the property of A for the sole purpose of transferring it to another private party B, even though A is paid just compensation.").

80. *See id.* at 482 ("'[I]t is only the taking's purpose, and not its mechanics,' we explained, that matters in determining 'public use.'" (quoting Haw. Hous. Auth. v. Midkiff, 467 U.S. 229, 244 (1984))).

accepted function of government," and because the pursuit of a public purpose will often benefit private parties as well.[81]

In her vigorous dissent, Justice O'Connor, joined by three other justices, argued that "[u]nder the banner of economic development, all private property is now vulnerable to being taken and transferred to another owner, so long as it might be upgraded."[82] Justice O'Connor distinguished the situation at issue in *Kelo* from the cases of *Berman* and *Midkiff* by pointing out that in both *Berman* and *Midkiff*, a social harm was being rectified: (1) blight in *Berman*, and (2) market skewing highly concentrated land ownership in *Midkiff*.[83]

The majority's interpretation approaches that of *Poletown* but falls just short. The plan at issue in *Kelo* also included a pedestrian "riverwalk" and provided parking and retail services to support either a nearby public park or the nearby marina, which would satisfy even narrow interpretations of public use.[84] The majority opinion, however, also indicates some discomfort with the possible implications of its holding by "emphasiz[ing] that nothing in [the] holding precludes any State from placing further restrictions on exercise of the takings power," citing *Hathcock* as an example.[85]

An understanding of the history of public use in the United States is useful for several reasons. First, it illustrates that the interpretation of public use by the courts has not always marched in one direction. Although the end of the nineteenth century saw a tightening of the concept of public use, shifting from the fairly broad interpretation that courts used to uphold the Mill Acts,[86] the twentieth century saw a widening once again of the Supreme Court's interpretation of public use.[87] Secondly, the examination of *Poletown* and *Hathcock* illustrates two very different—indeed almost diametrically opposed—interpretations of public use, made even more interesting by the fact

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81. *See id.* at 484 (deciding against the petitioner's request "to adopt a new bright-line rule that economic development does not qualify as 'public use'").

82. *Id.* at 494 (O'Conner, J., dissenting).

83. *See id.* at 500 (O'Connor, J., dissenting) ("The Court's holdings in *Berman* and *Midkiff* were true to the principle underlying the Public Use Clause . . . a public purpose was realized when the harmful use was eliminated.").

84. *See id.* at 474–75 (outlining the plan for the condemned land at issue).

85. *Id.* at 489.

86. *See* Meidinger, *supra* note 28, at 23–33 (describing the various shifts in the understanding of the public use requirement during the nineteenth century).

87. *See generally* Kelo v. City of New London, 545 U.S. 469 (2006) (upholding the use of eminent domain for the purpose of economic development); Haw. Hous. Auth. v. Midkiff, 467 U.S. 229 (1984) (finding eminent domain a permissible means to remedy highly concentrated land ownership that adversely affected the housing market); Berman v. Parker, 348 U.S. 26 (1954) (allowing the use of eminent domain to rectify urban blight).

that they arose from the same court.[88] Finally, it is important to note the consistent emphasis of the fact that courts are loathe to scrutinize the use of eminent domain very strictly: A court will only overturn the legislature's grant of eminent domain in cases demonstrating the most egregious abuse. Therefore, any procedural changes will likely have to come from legislatures.[89]

B. Reactions to Kelo

Disappointing petitioners, *Kelo* was not a federal version of *Hathcock*. Nonetheless, *Kelo* may have done almost as much to tighten public use requirements at the state level as if it had been decided the other way.[90] On June 30, 2005, a week after the *Kelo* decision, the United States House of Representatives passed House Resolution 340 by an overwhelming majority, which formally condemned the decision.[91] Similarly, many state legislatures reacted in horror to the decision, and introduced many bills to limit the power of eminent domain.[92] Reactions to *Kelo* have fallen broadly into two

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88. *Compare* Poletown Neighbor'd Council v. City of Detroit, 304 N.W.2d 455, 458–59 (Mich. 1981) (describing the purpose of alleviating unemployment as sufficient to satisfy the public use requirement in a private-to-private taking), *with* County of Wayne v. Hathcock, 684 N.W.2d 765, 783 (Mich. 2004) (restricting the use of eminent domain in private-to-private takings to three limited circumstances).

89. *See Berman*, 348 U.S. at 32 ("[W]hen the legislature has spoken, the public interest has been declared in terms well-nigh conclusive. In such cases the legislature, not the judiciary, is the main guardian of public needs to be served by social legislation.").

90. *See* Patricia E. Salkin, *Swift Legislative (Over)Reaction to Eminent Domain: Be Careful What You Wish For*, SM004 ALI-ABA 865, 867 (2006) ("[T]his article examines some of the various legislative approaches that have been offered and concludes that more thoughtful consideration must be given to the short-term and long-term consequences of the various proposals.").

91. *See* H.R. Res. 340, 109th Cong. (2005) (enacted) (expressing congressional disapproval of the *Kelo* decision).

92. *See, e.g.*, H.R. 318, 24th Leg., 2d Reg. Sess. (Alaska 2005) (enacted) (prohibiting the use of eminent domain for economic development but allowing for certain narrow exceptions); H.R. 1411, 65th Gen. Assem., 2d Reg. Sess. (Colo. 2006) (enacted) (requiring the condemning entity to prove by a preponderance of the evidence that the taking is for public use and stipulating that economic development does not constitute sufficient public use); H.R. 1010, 114th Leg., 2d Reg. Sess. (Ind. 2006) (enacted) (prohibiting condemnations for economic development and establishing a greater than market value compensation scheme); Legis. Doc. 1870, 122d Leg., 2d Reg. Sess. (Me. 2006) (enacted) (prohibiting the use of eminent domain for the purpose of economic development and providing an exception for the elimination of blight); S. 881, 189th Gen. Assem., 2005–2006 Reg. Sess. (Pa. 2005) (enacted) (banning private-to-private transfers except when the private entity occupies an incidental area within a public project, such as retail space, for common carriers, for eliminating blight, or to provide low income housing); S. 3296, 104th Gen. Assem., 2005 Sess. (Tenn. 2005) (enacted) (stipulating that economic

categories: (1) restrictions of eminent domain based on purpose, and (2) valuation and compensation requirements.[93]

1. Restrictions Based on Purpose

Most of the proposals offered since the *Kelo* decision have been restrictions of eminent domain based on the purpose of the project seeking condemnation, although few go about it the same way.[94] For instance, legislation in some states lists specific types of development that do not satisfy the public use requirement,[95] while legislation in other states generally prohibits the use of eminent domain for economic development.[96] Utah, however, passed a bill that, although increasing the procedural requirements for the use of eminent domain, actually expands the definition of "public use" to include bicycle paths and sidewalks.[97]

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development does not constitute "public use," but among the typical exceptions for blight or common carriers, also allows the a local government to use eminent domain for an industrial park); S. 246, 2005 Leg., 68th Biennial Sess. (Vt. 2005) (enacted) (prohibiting the use of eminent domain for economic development except pursuant to Vermont's urban renewal statute).

93. *See* Salkin, *supra* note 90, at 869–72 (describing the various types of state legislative reactions to *Kelo*).

94. *See id.* at 869–70 (noting that a majority of the states either restrict eminent domain for economic development or redefine "public use").

95. *See, e.g.,* S. 68, 2005 Leg., 1st Spec. Sess. (Ala. 2005) (enacted) (prohibiting condemnation for the "private retail, office, commercial, industrial, or residential development"); H.R. 2351, 81st Gen. Assem., 1st Sess. (Iowa 2006) (enacted) (excepting "increased employment opportunities, privately owned or privately funded housing and residential development, privately owned . . . commercial or industrial development" from "public use"); S. 881, 189th Gen. Assem., 2005–2006 Reg. Sess. (Pa. 2005) (enacted) ("[T]he exercise . . . of eminent domain to take private property in order to use it for private enterprise is prohibited.").

96. *See, e.g.,* H.R. 318, 24th Leg., 2d Reg. Sess. (Alaska 2005) (enacted) ("The power of eminent domain may not be exercised . . . [for] economic development purposes."); H.R. 1411, 65th Gen. Assem., 2d Reg. Sess. (Colo. 2006) (enacted) (excepting the purpose of economic development or enhancement of tax revenue from "public use"); S. 7, 79th Leg. Sess. (Tex. 2005) (enacted) (forbidding the use of eminent domain for the purpose of economic development).

97. *See* S. 117, 56th Leg., 2004 Gen. Sess. (Utah 2006) (enacted) ("This bill expands the public uses for which eminent domain may be used to include bicycle paths and sidewalks adjacent to paved roads.").

By far, the most popular method has been to take a cue from *Hathcock*[98] and limit "public use," such that economic development is either explicitly insufficient or given increased scrutiny.[99] An example of one of the more comprehensive proposals is Minnesota's modification to its eminent domain statute.[100] The bill explicitly provides that "[t]he public benefits of economic development, including an increase in tax base, tax revenues, employment, or general economic health, do not by themselves constitute a public use or public purpose,"[101] and defines "public use" and "public purpose" to mean:

> [E]xclusively: (1) the possession, occupation, ownership, and enjoyment of the land by the general public, or by public agencies; (2) the creation or functioning of a public service corporation; or (3) mitigation of a blighted area, remediation of an environmentally contaminated area, reduction of abandoned property, or removal of a public nuisance.[102]

The Minnesota bill further requires that, in takings for blight or environmental contamination, the condemner must prove by a preponderance of the evidence that a taking is necessary for the designated public use.[103] Minnesota's proposal also includes specific procedural and compensation requirements that will be discussed in the following section.[104]

On the other end of the spectrum lies those legislatures that failed to pass any eminent domain abuse bills or those whose bills were vetoed.[105] New

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98. *See* County of Wayne v. Hathcock, 682 N.W.2d 765, 783 (Mich. 2004) (limiting "public use" to three contexts: (1) where the hold out problem threatens the "public necessity of an extreme sort;" (2) where the property remains subject to public oversight; and (3) where the developer selects the property for facts of "independent public significance").

99. *See, e.g.,* S. 217, 143d Gen. Assem., 1st Spec. Sess. (Del. 2005) (enacted) (limiting the use of eminent domain for recognized public uses and providing an exception for easements for public utilities); H.R. 1313, Gen. Assem., 2006 Reg. Sess. (Ga. 2006) (enacted) (restricting "public use" to eliminating blight, providing for common carriers, and appropriating land for use by the government or other public entities); Legis. Doc. 1870, 122d Leg., 2d Reg. Sess. (Me. 2006) (enacted) (barring the use of eminent domain "[f]or the purposes of private retail, office, commercial, industrial or residential development"); S. 881, 189th Gen. Assem., 2005–2006 Reg. Sess. (Pa. 2005) (enacted) (banning private-to-private transfers except when the private entity occupies an incidental area within a public project, such as retail space, for common carriers, for eliminating blight, or to provide low income housing).

100. S. 2750, 84th Leg., 2006 Reg. Sess. (Minn. 2006) (enacted) (amending 117 Minn. Stat. §§ 025, 036, 055, 075, 085, 51, 52 (2004) and repealing 117 Minn. Stat. 011 (2004)).

101. *Id.* § 2(11)(b).

102. *Id.* § 2(11)(a).

103. *See id.* § 8(1)(b) (requiring a particular evidentiary standard in actions pursuant to the blight or environmental public purpose).

104. *See id.* §§ 3–12 (setting forth procedural and compensation requirements for the use of eminent domain).

105. *See* DANA BERLINER, OPENING THE FLOODGATES: EMINENT DOMAIN ABUSE IN A POST-

Mexico Governor Bill Richardson's veto message is indicative of the concerns of those skeptical of such swift limitations on public use. First, the veto message worries that a bill prohibiting the use of eminent domain for economic development would hinder prosperity in rural areas of the state.[106] Secondly, the bill might make it difficult to engage in projects necessary for public health, safety, and welfare.[107] Finally, such requirements may make it difficult to convert abandoned or rundown properties that may not reach the definition of blight.[108]

2. Procedural and Compensation Requirements

The second type of proposal outlines administrative procedures and compensation models designed to minimize the possibility that a *Kelo*-type taking might occur.[109] For instance, Minnesota's proposal requires the condemnor to acquire and present to the owner an appraisal of the property at the time of the offer and to pay up to $1,500 of the costs of the owner's own appraisal of the property.[110] Minnesota's bill then sets forth requirements of a public hearing before a local governing body, allowing reasonable time for the property owner to present testimony.[111] A proposal in Virginia would require a mandatory dispute resolution evaluation session following the initiation of

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KELO WORLD 7 (2006) (stating that as of June 2006, Virginia had failed to pass any eminent domain reform bills); *see also* H.R. 746, 47 Leg. Sess., 2d Reg. Sess. (N.M. 2006) (restricting the use of eminent domain for the purpose of economic development); House Executive Message No. 138 (N.M. 2006), *available at* http://www.governor.state.nm.us/legislative/2006 legislation/house/HEM138.pdf [hereinafter N.M. Executive Message No. 138] (vetoing New Mexico House Bill 746, which would have prohibited economic development takings).

106. *See* N.M. Executive Message No. 138, *supra* note 105, at ¶ 2 (noting the anxiety of leaders in small towns and rural areas that the bill would impede development).

107. *See id.* ¶ 4 (expressing the concern that the bill would hamper the construction of highways and other infrastructural developments).

108. *See id.* ¶ 5 (stating that the bill would make the removal of blight more difficult).

109. *See, e.g.*, H.R. 1010, 114th Leg., 2d Reg. Sess. (Ind. 2006) (enacted) (creating notice and hearing procedures for the condemnation of property and requiring compensation of greater than market value at varying rates depending on the current use of the land); H.R. 2351, 81st Gen. Assem., 1st Sess. (Iowa 2006) (requiring greater notice and hearing procedures in condemnation actions and requiring the acquiring party to pay costs and reasonable attorney's fees to the condemnee); S. 323, 81st Legis. Assem., 2006 Reg. Sess. (Kan. 2006) (enacted) (setting compensation at greater than market value); S. 2750, 84th Leg., 2006 Reg. Sess. (Minn. 2006) (enacted) (initiating new notice and procedural requirements for condemnation and providing new compensation schedules, including attorney's fees, for various types of property).

110. *See* Minn. S. 2750, § 5 (setting forth "appraisal and negotiation requirements").

111. *See id.* § 6 (creating notice and public hearing requirements in condemnation actions).

condemnation.[112] Many state legislatures have proposed bills that require a developer or redevelopment agency to have a specific and comprehensive plan before initiating condemnation proceedings.[113] Yet another proposal would give the condemnee the right to reacquire the condemned land under certain circumstances.[114] However, this may turn out to be of only nominal interest to the residential property owner whose house has already been destroyed.

Although most proposals set forth administrative procedures, Idaho goes a step further and requires that a jury determine whether an action constitutes proper public use.[115] One proposal in Maryland would allow either condemnor or condemnee to seek a trial within ninety days, which would take precedence on the civil docket.[116] Another procedure considered by a number of states would require not only an administrative determination, but also legislative approval of the taking.[117] For example, the Florida legislature proposed an amendment to the state constitution requiring a three-fifths vote of both legislative houses to approve a private-to-private taking.[118]

Several schemes have been proposed to amend the meaning of "just compensation."[119] Unlike the more ambiguous definition of public use, the

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112. *See* H.D. 631, Gen. Assem., 2006 Reg. Sess. (Va. 2006) ("Following the filing of a petition initiating a condemnation proceeding, the court shall refer the matter to a dispute resolution orientation . . . .").

113. *See, e.g.*, S. 53, Gen. Assem., 2005 Reg. Sess. (Cal. 2006) (enacted) ("This bill would require redevelopment plans to contain a description of the agency's program to acquire real property by eminent domain, including prohibitions, if any, on the use of eminent domain.").

114. *See* H.D. 898, 421st Gen. Assem., Reg. Sess. (Md. 2006) (requiring that if condemnor decides to sell property acquired through the use of eminent domain, condemnor must first offer it to the condemnee).

115. *See* S. 1273, 59th Leg., 2d Reg. Sess. (Idaho 2006) (amending procedural requirements in condemnation actions).

116. *See* H.D. 961, 421st Gen. Assem., Reg. Sess. (Md. 2006) ("[A]n action for condemnation shall be set for trial within a certain period of time after the case is at issue and shall take precedence over all other civil cases.").

117. *See* Assemb. 8865, 228th Leg. Sess. (N.Y. 2006) (requiring a vote by local government for the acquisition of property for use by a private developer).

118. *See* H.R.J. 1569, 108th Leg., Reg. Sess. (Fla. 2006) (amending the state constitution to require more stringent approval of private-to-private takings).

119. *See, e.g.*, H.R. 1010, 114th Leg., 2d Reg. Sess. (Ind. 2006) (enacted) (setting just compensation at above market value at varying rates depending on current use); S. 2750, 84th Leg., 2006 Reg. Sess. (Minn. 2006) (enacted) (including attorney's fees in just compensation and providing for an increase in compensation for takings of a "going concern"); *see also* Steve P. Calandrillo, *Eminent Domain Economics: Should "Just Comensation" Be Abolished, and Would "Takings Insurance" Work Instead?*, 64 OHIO ST. L.J. 451, 451 (2003) (arguing that "just compensation" creates the incentive for landowners to excessively improve land and that takings insurance might be a superior alternative); James E. Krier & Christopher Serkin, *Public Ruses*, 2004 MICH. ST. L. REV. 859, 871 (2004) (advocating "gain-based compensation," which would

definition of just compensation has almost always been synonymous with fair market value.[120] The traditional definition of fair market value, and thus just compensation, has been:

> [T]he highest price on the date of valuation that would be agreed to by a seller, being willing to sell but under no particular or urgent necessity for so doing, nor obliged to sell, and a buyer, being ready, willing, and able to buy but under no particular necessity for so doing, each dealing with the other with full knowledge of all the uses and purposes for which the property is reasonably adaptable and available.[121]

Such a definition of fair market value and just compensation is problematic for several reasons. First, fair market value contemplates voluntariness that is not present in the forced transfers requiring eminent domain.[122] Second, fair market value does not take into account any sentimental or other such value that an owner may place upon his property beyond what the market might normally bear.[123] The literature often refers to this additional value as the "subjective premium," a term this Note shall adopt.[124]

The subjective premium in *Kelo* may indeed have been quite high; one of the petitioners, Wilhelmina Dery, lived in the house in which she was born and that had been in her family for over a century.[125] This high subjective premium has prompted some legislatures to adjust upward the compensation a property owner would receive for condemned property. Such proposals would give owners greater than 100 percent of fair market value, with the exact amount

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compensate property owners based on the value of their property in proportion to the gain the condemnor expects from the project).

120. *See* Lopez, *supra* note 27, at 280 ("[T]he amount that dispossessed owners have received in exchange for property has invariably equaled the value of the land taken for a public use.").

121. CAL. CIV. PROC. CODE § 1263.320(a) (Deering 2005).

122. *See* Patricia Munch, *An Economic Analysis of Eminent Domain*, 84 J. POL. ECON. 473, 473 (1976) ("[E]minent domain . . . is the legal right to acquire property by forced rather than [by] voluntary exchange.").

123. *See* Krier & Serkin, *supra* note 119, at 865 (explaining that the practical difficulties in assessing the subjective value of a property is why owners are not indifferent to condemnation).

124. *See* Merrill, *supra* note 8, at 83 ("['Just compensation'] does not compensate [an owner] for the subjective 'premium' he might attach to his property above its opportunity cost."); *see also* Cohen, *supra* note 20, at 538 ("This premium may include sentimental attachment, unique suitability of the property to the owner's needs, relocation costs, replacement costs of the land and improvements, consequential damages to the retained property, attorney's fees, lost business revenue goodwill, or going-concern value."); Fennell, *supra* note 14, at 963 ("Most property owners value their property above market value; if they did not, they likely would have sold it already.").

125. *See* Kelo v. City of New London, 545 U.S. 469, 494 (2005) (O'Connor, J., dissenting) (explaining the sentimental value to owners of some of the properties at issue).

depending on various factors, such as type of property or length of time the current owner has owned the property.[126] For example, Indiana considered a proposal that would give owners of condemned property the higher of either 150 percent of the assessed value of the property, or the average of three independent property value appraisals.[127] Other proposals also include items incidental to condemnation in just compensation. Minnesota requires the condemnor to pay the condemnee's attorney's fees related to the condemnation if the condemnee shows the offer to be too low.[128] An Idaho proposal provides for a relocation payment of between $2,500 and $10,000 to business owners.[129]

It seems clear that legislatures have responded to Justice Steven's invitation to limit eminent domain.[130] This overview of legislative proposals suggests that in determining which regime offers the better outcome, it is useful to look at one which restricts public use and another which increases compensation. These post-*Kelo* proposals, though often very different in the details, fall into one of these two categories. Although it may not be possible (nor would it be useful) to analyze every single proposal made since the *Kelo* decision, these categories represent a useful starting point for inquiry.

III. A Game Theoretic Model of Eminent Domain

This Part will use game theory to analyze the hold out problem and how eminent domain solves the hold out problem. The essential characteristics of a game theoretic model are players, actions, payoffs, and information.[131] Because game theory assumes that players are rational and intelligent, they choose

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126. *See, e.g.*, H.R. 1010, 114 Gen. Assem., 2d Reg. Sess. (Ind. 2006) (enacted) (setting "just compensation" at above market value and at varying rates depending on current use); S. 323, 2006 Reg. Sess. (Kan. 2006) (enacted) (obligating the legislature to consider compensation of at least 200% of the fair market value of property condemned for economic development).

127. *See* Lopez, *supra* note 27, at 291 (outlining a proposal considered by the Indiana House of Representatives).

128. *See* S. 2750, 84th Leg., 2006 Reg. Sess. § 4 (Minn. 2006) (enacted) (requiring the court to award attorney's fees if the final judgment is 40% above the final offer of compensation and giving the court discretion to award such fees if the final judgment is 20% greater than the final offer).

129. *See* S. 1152, 58th Leg., 1st Reg. Sess. (Idaho 2005) ("Any displaced person who moves or discontinues a business . . . shall receive a fixed location payment . . . not less than [$2,500] nor more than [$10,000].").

130. *See Kelo*, 545 U.S. at 489 ("We emphasize that nothing in our opinion precludes any State from placing further restrictions on its exercise of the takings power.").

131. *See* RASMUSEN, *supra* note 21, at 12 (describing the fundamental aspects of a game theoretic model).

actions to maximize their expected payoffs.[132] Payoffs are measured in utility, which is not necessarily equivalent to monetary value and thus can incorporate subjective values such as sentiment or risk-aversion.[133] Information is a crucial aspect to the game because it affects the strategies each player is likely to employ, and includes not only the player's knowledge of the expected payoffs but also knowledge of the actions other players have taken previously.[134] Information therefore gains central importance in games where players move in sequence, such as the bargaining game that will be the starting point for analysis of eminent domain.[135] The players' information sets do not need to be symmetric, meaning that no player has any information different from other players.[136] Indeed, in the models examined by this Note, neither player knows exactly the other player's valuation of the property. Similarly, uncertainty can be introduced into the models by making "chance" a player who selects a particular state of the world, with or without the knowledge of the other players, or by simply discounting the final payoffs.[137]

At its core, the model will have two players—a Developer and an Owner. Owner has a house on land that Developer would like to develop. Developer values the house at 175. Owner may value his home at market price, 100, or the Owner may have a subjective premium, with Owner valuing the house at 200. The basic order of play is as follows: (1) Developer offers price p_1; (2) Owner either accepts or rejects p_1; (3) if Owner rejects p_1, Developer may quit bargaining or offer price p_2; (4) if Developer offers price p_2, Owner either accepts or rejects p_2; (5) if Owner rejects p_2 and the Developer has the power of eminent domain, Developer may then choose either to do nothing or to condemn.

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132. *See* MARTIN J. OSBORNE & ARIEL RUBINSTEIN, A COURSE IN GAME THEORY 4 (1994) (explaining that "rational behavior" requires that the player is "aware of his alternatives, forms expectations about any unknowns, has clear preferences, and chooses his actions deliberately after some process of optimization").

133. *See* MYERSON, *supra* note 22, at 3 (noting that payoffs are not necessarily measured in monetary value); L.C. THOMAS, GAMES, THEORY AND APPLICATIONS 18–19 (1984) (demonstrating the process of selecting payoffs to reflect preferences and utility).

134. *See* RASMUSEN, *supra* note 21, at 23 (describing information sets generally).

135. *See id.* at 45–49 (noting that when players move in sequence, the information structure becomes important because it affects players' choices).

136. *See id.* at 51 (defining asymmetric information as one in which at least one player has private knowledge not shared by the others).

137. *See* OSBORNE & RUBINSTEIN, *supra* note 132, at 101–02 (allowing for exogenous uncertainty by making "chance" a player); RASMUSEN, *supra* note 21, at 51 (noting that it is possible to eliminate "chance" as a player by discounting the payoffs in accordance with the probability of the outcome).

The price and valuation of the property by each party determines the respective payoffs. Furthermore, in a two-period model, it makes sense to factor in a loss from a delay in agreement, and the simplest way to capture that loss is to make it a fixed cost on the second round.[138] The loss from delay could be anything from a monetary penalty resulting from waiting (like losing a preferential interest rate), to the disutility of having to deal with the other party for a longer time. It is not important to specify the actual source of the cost; rather, it is only necessary to recognize a cost of delay as a factor in the payoff schedule.[139] If Owner accepts the first offer, Owner gets a payoff $(p_1 - v_O)$, which represents the price Owner receives (p_1) less her valuation (v_O) of the property. Developer receives $(v_D - p_1)$, which represents the value of the property to Developer (v_D) less the price he paid for it (p_1). If Owner rejects the first offer and Developer does nothing, the payoffs are 0 to Owner and -2 to Developer. Developer's negative payoff represents the cost of delay. If Owner accepts the second offer, the payoffs are $(p_2 - v_O)$ to Owner and $(v_D - p_2 - 2)$ to Developer. Even if Owner accepts the second offer, there has been a delay and Developer must still incur that cost. If Owner accepts no offer, then the payoff for Owner is 0, and the payoff for developer is -4, which represents an additional cost of delay.[140] Finally, the game ends after two rounds of bargaining because more rounds of bargaining unnecessarily complicates the analysis.[141] This Note will first examine the hold out problem. Then, in order to mimic eminent domain, the model will give Developer the ability to force the sale should bargaining fail.

A. The Hold Out Problem: Bargaining with a Low Valuation Owner

The hold out problem is one of the classic efficiency justifications for eminent domain.[142] Accordingly, for purposes of understanding whether

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138. *See* OSBORNE & RUBINSTEIN, *supra* note 132, at 137–38 (explaining the effect and necessity to discount games that occur over time). Using a discount rate would create a model more mathematically complex than is necessary for the purposes of this Note. This Note, therefore, will subtract a fixed cost if the first round of bargaining fails.

139. *See* RASMUSEN, *supra* note 21, at 361–62 (noting that a delay cost may be appropriate because bargaining occurs over real time).

140. *See id.* at 361 (describing the players' payoffs in a two-period bargaining game with incomplete information).

141. *See id.* at 362 (noting that adding another round of bargaining to the model makes the model more complex).

142. *See, e.g.*, POSNER, *supra* note 9, at 55 (stating that a good argument for eminent domain is as a solution to the hold out problem); Cohen, *supra* note 20, at 534 ("Without the power of eminent domain, thin markets may make the acquisition of property prohibitively

eminent domain is actually necessary, it is important to look at actors' incentives if eminent domain were not available. Because a hold out is distinct from someone with a high subjective value, in the hold out game, Owner will have a low valuation of her property.[143] Figure 1 depicts the hold out problem in the game tree form, starting at the left.

Figure 1
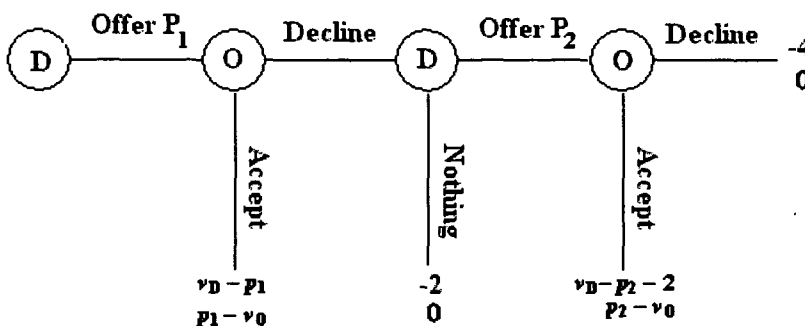
The final outcome ultimately depends on the Developer's valuation of the property. A low valuation Owner with no cost of delay will not accept any p_1. Owner will be willing to reject p_1 if she thinks that there exists any chance that Developer might increase the offer in the second period. Because Owner loses nothing by holding out, it is always in her best interest to hold out for a higher offer.[144]

Even if Developer offers Owner $p_1 > 100$, Owner still may expect Developer to go higher in Period 2, and Owner, therefore, has nothing to lose by waiting. The question for Developer is whether to offer the same price or a higher price in Period 2. Developer does not know Owner's valuation, and thus does not know if Owner rejected just because she is holding out or if she has a higher valuation than p_1. If Developer offers a higher price ($p_2 > p_1$), Owner is more likely to accept because Owner receives a payoff greater than the payoff from rejecting.

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expensive, because of monopoly pricing by the sellers who 'hold out' . . . .").

143. *See* Meidinger, *supra* note 28, at 49 ("[T]he [hold out] problem is defined as a seller holding out for a higher price from a buyer known to be 'assembling' properties for a particular configuration . . . than the seller would ask from a buyer not suspected of planning such an assembly.").

144. *Infra* Mathematical Appendix: Explanation 1 p. 1654; *see also* RASMUSEN, *supra* note 21, at 361 (describing the players' payoffs in a two-period bargaining game with incomplete information).

Developer, on the other hand, gets a negative payoff if the deal fails, but a positive payoff if the deal succeeds. Developer will almost always offer a higher price in Period 2 even if Developer thinks he has a good chance that Owner might choose to accept the same price.[145] Knowing that Developer will offer a higher price in Period 2, Owner will always hold out in Period 1. Developer's signals as to whether he is more or less likely to offer a higher price for the property in Period 2 are not credible.[146] If Owner thinks that there is even a 1% chance that Developer will offer a higher price in Period 2, then Owner will hold out.

Two consequences follow from Owner's holding out: (1) Owner captures the welfare surplus from the Developer, and (2) the society, consisting of Developer and Owner, incurs a deadweight loss. For example, if $v_D = 175$, and the Owner accepts a first price of 100, the total surplus is 75. The surplus goes entirely to Developer. If Owner holds out and Developer offers $p_2 = 150$, then the parties share the total surplus. Owner gets 50, and Developer gets 23, but total welfare is reduced to 73. Although Owner is now better off, the result is Pareto-inefficient because she made Developer worse off and reduced the total welfare.[147]

This inefficiency compounds in a development situation in which Developer deals with several owners in a "thin market."[148] For example, suppose Developer wants to purchase ten adjacent lots owned by different

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145.   *Infra* Mathematical Appendix: Explanation 2 p. 1655.

146.   *See* BAIRD ET AL., *supra* note 23, at 130 (noting that in pooling equilibria in games of private non-verifiable information, actions do not convey any information); ROBERT GIBBONS, GAME THEORY FOR APPLIED ECONOMISTS 50–51 (1992) (describing credibility of threats). Developer does not have the ability to credibly signal to Owner that his valuation of the property (and therefore willingness to offer a higher price in Period 2) is low. Developer would never find it beneficial to signal to Owner that his valuation is high and that he is more likely to increase his offer in the second round. Such a signal would ensure that the bargaining reaches Period 2, resulting in the cost of delay. Thus, Owner will not be able to rely on any signals indicating a low v_D value, regardless of the accuracy of such signals. Similarly, Owner cannot signal to Developer how likely she is to accept an offer to which she is indifferent between accepting and rejecting. Owner would never signal that she has a high probability of accepting such an offer because it would discourage Developer from offering a higher offer in Period 2. Any signal to Developer that Owner would very rarely or never accept an offer of $p_2 = 100$ is therefore not credible.

147.   *See* Allen M. Feldman, *Pareto Optimality, in* THE NEW PALGRAVE DICTIONARY OF LAW AND ECONOMICS 5, 6 (Peter Newman ed., 1998) (defining Pareto-efficiency as the "point from which no move can be made that would increase the welfare of some individuals and make no one worse off").

148.   *See* Merill, *supra* note 8, at 76 (defining a "thin market" as one in which an owner's property is uniquely suited to the purposes of the developer and can extract economic rents through monopoly pricing).

Owners for his project. When Developer approaches the owner of the final lot, $Owner_{10}$, the market is incredibly thin, consisting of only one parcel. $Owner_{10}$ would be irrational not to hold out and extract as much of the surplus from Developer as possible. Using backwards induction, $Owner_9$, the owner Developer approached before $Owner_{10}$, realizes that $Owner_{10}$ would be able to hold out and get a higher price and also capture some of the surplus. $Owner_9$ likewise holds out. This remains true all the way to $Owner_2$, who sees that because Developer purchased $Owner_1$'s lot, Developer essentially locked himself in to the location. Furthermore, $Owner_1$ would have the same incentive to hold out that just a single Owner faced in the hold out game. The incentive to hold magnifies if the location of $Owner_1$'s property uniquely suits Developer's project. The entire project thus unravels, and because the owners of all ten lots are holding out and eating away at Developer's surplus, Developer no longer has an incentive to carry out his project.

B. Adding the Power of Eminent Domain to Solve the Hold Out Problem

In the hold out game, once the Developer makes an offer, both parties are stuck in the game, and they must either reach a bargain or incur losses.[149] In real bargaining situations, alternatives more attractive than incurring losses exist, and legal rules often shape those alternatives.[150] Eminent domain provides such an alternative because it allows the state to use police power to force the exchange for a public purpose.[151]

Once again there are two players, Developer and Owner, and Owner values her property at market price. Absent the power of eminent domain, Developer would face the possibility of a hold out. The order of play is the same as in the hold out game; however, Developer now has the option after Period 2 to force Owner to sell for some "just compensation" price C. Developer may not force the sale at price C until after Period 2 because many eminent domain statutes require the party seeking to use the power to first engage in good faith bargaining.[152] Price C is fair market price unless

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149. *See* BAIRD ET AL., *supra* note 23, at 224 ("In the simple . . . bargaining game, the players do not have any alternatives to striking a deal.").

150. *See id.* (describing how "many legal rules do not affect the bargaining, but rather the alternatives each party has to continuing negotiations").

151. *See* Munch, *supra* note 122, at 473 ("Eminent domain . . . is the legal right to acquire property by forced rather than [by] voluntary exchange.").

152. *Id.* at 473. Ms. Munch writes:

When a buyer seeking to acquire a property has the power of [eminent domain], he must first attempt to negotiate a voluntary sale. But if his highest offer is rejected,

otherwise noted.[153] The payoffs are the same as in the hold out problem, except that if Owner declines p_2, Developer has the option to force the sale at price C. If Developer does not exercise the option to force, then the deal fails and Developer receives a payoff of (-4) and Owner receives a payoff of 0. If Developer exercises the option to force the sale then both Developer and Owner must incur additional costs, denoted c_D for Developer and c_O for Owner.[154] Owner's payoff is $(C - v_O - c_O)$, and Developer's Payoff is $(v_D - C - c_D)$. The cost to Developer is 8, and the cost to Owner is 6. Figure 2 shows the game in the game tree form.

Figure 2
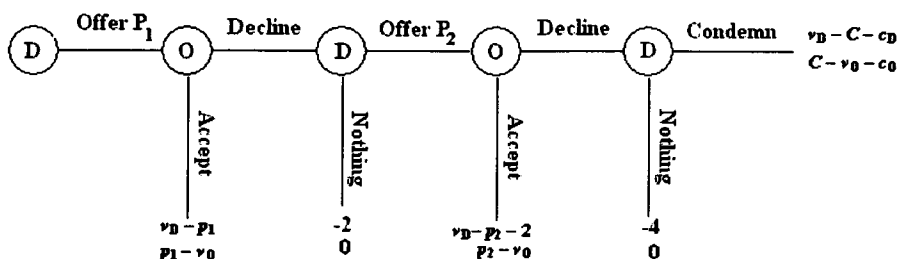
At this point it is useful to explain a game theoretic tool called "backwards induction." Backwards induction is a process of starting at the end of the game to determine what the players would do if they reached that point and using that answer to determine what the players would do at the point in the game immediately preceding, and so forth.[155] The tool relies on the presumption that players will look ahead to see what the other players are likely to do. Based on that information, each player will determine what his own best actions should be, both in response and anticipation.[156]

he may condemn the property, that is, obtain a forced sale at a price determined by a court of law.

Id.

153. *See* Lopez, *supra* note 27, at 280 ("[T]he amount that dispossessed owners have received in exchange for property has invariably equaled the value of the land taken for a public use.").

154. *See* Merrill, *supra* note 8, at 77–78 (describing the "due process costs" of eminent domain). This Note considers the costs higher for Developer than Owner because the due process costs are higher for the party trying to exercise eminent domain. *Id.* Owner's additional costs may involve either the defense against an eminent domain action or even just the disutility of losing.

155. *See* OSBORNE & RUBINSTEIN, *supra* note 132, at 99–100 (explaining the concepts of subgame perfection and backwards induction).

156. *See* GIBBONS, *supra* note 146, at 57–61 (demonstrating the logic behind backwards

When Developer faces a low valuation Owner, Owner values the property at the market rate. Assume that the market value of the property is 100, and thus $C = v_O = 100$.[157] Starting from the end, Developer will force the sale so long as his payoff from forcing is greater than giving up.[158] Owner will accept any price greater than 94 (which is the sum of $C - c_O$), because then Owner will save at least some of the cost of defending the action.[159] Developer's best strategy would be to offer $p_2 = 95$. If Owner always accepts $p_2 > C - c_O$, then Developer has no reason to offer a p_2 that is much greater than 94.

Recall that in the hold out game Owner was willing to reject p_1 if there was any chance that Developer would offer a higher price in Period 2.[160] In this game, however, Developer always offers $p_2 = 95$. Moving back to Period 1, Owner would have no reason to hold out unless Developer offered $p_1 < 95$. Developer gains nothing by trying to lowball in period one and offering 94 instead of 95, because Developer suffers the cost of delay.[161] Developer will therefore offer $p_1 = 95$. Developer knows that Owner will accept $p_2 > C - c_O$, but will not increase his offer beyond 95. Owner, knowing she will gain nothing by holding out, will accept the offer in Period 1. Allowing Developer to force the exchange anyway cures the inefficiencies presented by the hold out problem. The Owner, who has a low valuation of his property, is no longer able to capture Developer's surplus and create a deadweight loss; however, things are not as optimal if Developer faces a high valuation Owner.

If Owner has high valuation of her property, that valuation modifies Owner's payoffs, but not Developer's. The best that a high valuation Owner can do in the game is accept an offer of $p_1 = C - c_O$. If Developer can force the sale, Owner will not do better by rejecting p_1, and thus will accept Developer's offer in Period 1. Knowing that even a high valuation Owner will accept $p_1 = 95$, Developer will not increase his offer even if he suspects that Owner has a high valuation of the property. The property goes to Developer for a price less than market value, although Owner valued it above market

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induction).

157. *See* Boom Co. v. Patterson, 98 U.S. 403, 408 (1878) ("The inquiry in such cases must be what is the property worth on the market."); *see also* United States v. 563.54 Acres of Land, 441 U.S. 506, 511 (1979) ("The Court therefore has employed the concept of fair market value to determine the condemnee's loss."); Lopez, *supra* note 27, at 278–82 (noting that courts have consistently interpreted "just compensation" to be market value).

158. *Infra* Mathematical Appendix: Explanation 3 pp. 1655–56.

159. *Infra* Mathematical Appendix: Explanation 4 p. 1656.

160. *See supra* note 144 and accompanying text (demonstrating why an Owner would rationally hold out).

161. *Infra* Mathematical Appendix: Explanation 5 p. 1656.

value. Developer has captured part of Owner's surplus. Although there is no deadweight loss, many view this result as inequitable.[162]

C. Adding Uncertainty of Success to the Model

Developer may not always be able to use the power of eminent domain, and therefore, it is necessary to add a final element of uncertainty to the use of eminent domain.[163] θ represents the probability that Developer will be allowed to use eminent domain to force the transfer, and $(1 - \theta)$ represents the probability that Developer will not. Multiplying θ by the payoff from being able to force the sale discounts the payoff to account for the uncertainty of success. Similarly, multiplying the probability that Developer will not be allowed to use eminent domain, $(1 - \theta)$, by the cost of seeking the action yields the amount Developer can expect if the court rejects the use of eminent domain. Adding these two together results in the expected payoff to Developer for initiating condemnation proceedings and alters the final payoffs to be $\theta(v_D - C - c_D) + (1 - \theta)(-c_D)$ for Developer, if Developer chooses to force eminent domain. Moreover, Owner faces the same uncertainty if Developer initiates condemnation proceedings. Thus, Owner's payoff becomes $\theta(C - v_O - c_O) + (1 - \theta)(-c_O)$. Figure 3 illustrates the final game in extensive form.

Figure 3

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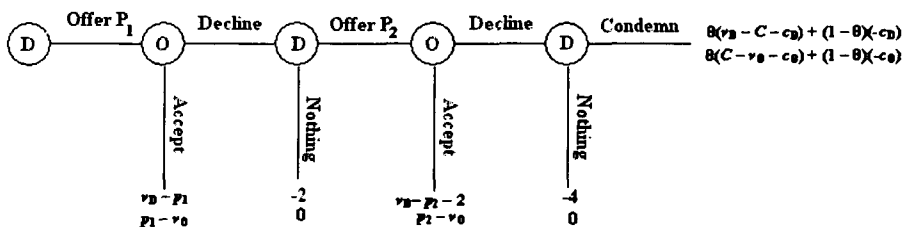
162.   *See generally* GREENHUT, *supra* note 16 (arguing that the use of eminent domain for private-to-private transfers is an abuse of government power).

163.   *See* City of Norwood v. Horney, 853 N.E.2d 1115, 1123 (Ohio 2006) (finding that facilitating economic development is an improper use of eminent domain); *but see* Talley v. Housing Auth. of Columbus, 630 S.E.2d 550, 552–53 (Ga. Ct. App. 2006) (upholding summary judgment in favor of a condemnor in an action challenging the use of eminent domain for a private-to-private transfer).

*IV. Analysis of the Post-*Kelo *Proposals*

Using the model developed in Part III, this Note now examines the proposals set forth in Part II to determine which proposal provides the best outcome. The dilemma to be considered is that although the use of eminent domain solves the hold out problem and encourages development, it also calls property rights into question and can be inequitably abused.[164] This Part first considers the restrictions based on purpose by setting the value of θ, Developer's chance of success, at 25%, which represents a very restrictive interpretation of public use, as opposed to the 100% success rate analyzed in Part III.B. This Note then examines the effect of switching the costs associated with defending against condemnation from Owner to Developer. Finally, this Part examines the effects of adjusting the value of C to be higher than market value.

A. Restrictions Based on Purpose

Banning economic development takings entirely, as did several proposals,[165] eliminates the possibility of eminent domain and would result in the hold out problem examined in Part III.A.[166] Governments may, however, restrict the use of eminent domain in the development context by requiring heightened scrutiny of the public use requirement. Such heightened scrutiny would reduce the probability that courts would allow Developer to exercise the power of eminent domain. Setting θ to a low probability of 25% would simulate a narrow interpretation of public use, and accordingly, a court would be less likely to allow Developer to use eminent domain.

1. Narrow Interpretation with a Low Valuation Owner

Assume initially that Owner has a low valuation equal to fair market price ($v_O = 100$) and that the compensation rules require Developer to pay fair market

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164. *See, e.g.*, Somin, *supra* note 14, at 1021–23 (expressing the concern that the "nearly limitless scope" and "severely constrained electoral accountability" of economic development takings leads to a danger that special interests will be able to capture property).

165. *See, e.g.*, H.R. 1141, 65th Gen. Assem., 2d Reg. Sess. (Colo. 2006) (enacted) (stipulating that economic development does not constitute sufficient public use); Legis. Doc. 1870, 122d Leg., 2d Reg. Sess. (Me. 2006) (enacted) (banning the use of eminent domain for the purpose of economic development and providing an exception for the elimination of blight).

166. *See supra* note 144 and accompanying text (analyzing the hold out problem).

price ($C = 100$). Assume also that the costs of bringing an eminent domain action are substantial but not prohibitive for Developer ($c_D = 8$). Finally, assume that Owner suffers no cost of delay from merely rejecting the offers but does bear the cost of her defense against condemnation ($c_O = 6$).

Developer will only initiate condemnation proceedings if his expected gains from initiating outweigh his expected gains from not initiating. For this condition to be satisfied, v_D must be high enough not only to allow Developer to pay C and cover c_D but also high enough to make Developer take the risk of losing in court. Given a cost of condemnation of 8 and a 25% chance of success, Developer is willing to risk losing in court if v_D exceeds C by 16, meaning that $v_D > 116$.[167] Because Developer values the property at 175, this condition is satisfied.

Owner will hold out in Period 1 if she believes there is any possibility that Developer will offer a higher price in Period 2. Developer, however, will be willing to make a higher offer in Period 2 in order to avoid the cost of condemnation. Developer will be willing to offer anything less than 162.25.[168] Developer will increase his offer in Period 2 because he wants to avoid the cost of condemnation and the uncertainty of losing. Developer also knows that whether Owner will accept a price below C depends on Owner's belief about Developer's likelihood of condemning. Although Owner will never accept p_2 < 94, the more she believes that Developer will condemn, the smaller a p_2 she will accept.[169]

Developer cannot influence this belief himself because his statements about his own likelihood of success are not credible. Developer gains by exaggerating the possibility, so Owner will assume that he is exaggerating. Furthermore, Developer cannot ascertain Owner's belief because it is in Owner's best interest to lie and say that she believes Developer's probability of success to be lower than it actually is. Developer knows that Owner will always accept $p_2 = C$, because such an offer would save her the entire cost of her defense.

Knowing that Owner will reject the first offer anyway, Developer will lowball the first offer. Because $p_2 = 100$ is the lowest price that Developer knows Owner will accept, his first offer will be below 100. Owner will offer in Period 2 a price equal to C to avoid the costs of condemnation. Thus, a hold out problem is still present because a probability exists that Developer will not be successful. The hold out problem creates the deadweight loss because

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167. *Infra* Mathematical Appendix: Explanation 6 pp. 1656–57.
168. *Infra* Mathematical Appendix: Explanation 7 p. 1657.
169. *Infra* Mathematical Appendix: Explanation 8 p. 1657.

Developer loses the cost of delay by his inability to close the deal in the first round.

2. Narrow Interpretation with a High Valuation Owner

If Owner has a high subjective premium ($v_O = 200$), but Developer's valuation of the property is still only 175, then Developer's valuation is still sufficient to make Developer risk losing in his condemnation proceeding. Owner's expected payoff, should Developer initiate the proceeding, is (-31) and 0 if Developer does not.[170] If Owner accepts $p_2 = 100$, her payoff is (-100). This payoff is far below the expected payoff of rejecting the offer in Period 2. Although she may lose more by rejecting p_2 than had she accepted, the low probability of Developer's success discounts that loss. The fact that there is a sufficient probability that Owner will get to keep her property is enough to offset the risk. A high valuation Owner therefore also has an incentive to hold out in Period 1. Developer gets an expected payoff of 10.75.[171] As a result, total societal welfare after the game is (-17.5) when $v_D = 175$ and $v_O = 200$.

If, however, some rule dictated that Developer must pay the Owner's cost of defending against condemnation, Owner will reject any price less than or equal to the compensation rate.[172] Owner would be indifferent between accepting and rejecting. Developer must offer $p_2 > C$ before Owner would accept. Moving to Period 1, Owner still will reject p_1 if she thinks there is a possibility of getting a higher offer in Period 2. If Owner has no cost of rejecting, she still has an incentive to hold out.

B. Compensation Above Market Value

Rather than merely adjusting the meaning of public use, some proposals take a more nuts and bolts approach by legislatively adjusting the meaning of just compensation.[173] Such plans are better at addressing the hold out problem if not coupled with a narrow interpretation of public use. For ease of analysis, this subpart will consider a proposal increasing the value of C to a set

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170. *Infra* Mathematical Appendix: Explanation 9 pp. 1657–58.

171. *Infra* Mathematical Appendix: Explanation 10 p. 1658.

172. *Infra* Mathematical Appendix: Explanation 11 p. 1658.

173. *See, e.g.*, H.R. 1010, 114th Gen. Assem., 2d Reg. Sess. (Ind. 2006) (enacted) (requiring compensation of greater than market value at varying rates depending on the current use of the land); S. 323, 81st Legis. Assem. 2006 Reg. Sess. (Kan. 2006) (enacted) (setting compensation at greater than market value).

percentage above market value. Analysis of a "gain-based compensation" approach, such as that proposed by Krier and Serkin,[174] would require creating a complicated function for C, which is unlikely to provide any new insights. The purpose of such a compensation model is to increase the amount of surplus given to the condemnee; however, it is also important not to destroy completely the incentives of developers.[175] For the purposes of the following sections, this Note assumes that $\theta = 1$, meaning that as long as Developer complies with the compensation requirements, Developer will be allowed to force the transfer. The costs of a condemnation action to Developer are the same as in the preceding section $(c_D = 8)$. The increased cost, rather than court fees, are attributable to the cost of appraising the property, which in many proposals is borne by the condemnor.[176] Owner, not having to (or being able to) defend against the condemnation of her property ordinarily would not have any cost of condemnation, but to remove it would create doubt as to whether the effects arise from the compensation rule or the lack of cost. Moreover, it may be appropriate to think of Owner's cost of condemnation as representing the disutility of dealing with the condemnation generally.

If Developer seeks condemnation, then Developer must abide by the statutory compensation structure. This section assumes a compensation structure such that for the type of property held by Owner, compensation would be 150% of the fair market value appraisal $(C = 150)$. Developer will continue to value the property at 175, but neither player will know the other's valuation of the property. This subpart first examines the interaction between a low valuation Owner $(v_O = 100)$ to determine whether it addresses the hold out problem. It then examine the interaction between Developer and an owner with a higher valuation $(v_O = 200)$ to highlight the regime's effects on total surplus.

1. Compensation Above Market Value with a Low Valuation Owner

Developer prefers condemnation so long as his valuation of the property covers not only the increased compensation but also the costs of complying. Using the parameters set forth, Developer prefers condemnation to doing

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174. *See* Krier & Serkin, *supra* note 119, at 871 (advocating a model in which compensation is based on the proportion of the condemned parcel to the value of the project at large).

175. *See id.* ("Changing the rule so as to distribute some or all of the surplus to condemnees would create more robust protection against questionable projects.").

176. *See, e.g.*, S. 2750, 84th Leg., 2006 Reg. Sess. § 5 (Minn. 2006) (enacted) ("Before commencing an eminent domain proceeding under this chapter, the acquiring authority must obtain at least one appraisal for the property proposed to be acquired.").

nothing if Owner rejects p_2.[177] Owner should, therefore, be willing to accept any $p_2 > C - c_O$.[178] The highest Owner could hope for from condemnation is a payoff of 44, which is the compensation amount (150) less the costs of defending (6) less Owner's valuation of the property (100). If Developer offers $p_2 < C - c_O$, Owner may nevertheless hold out, thus forcing the Developer to condemn.[179] Owner may hold out because she would get a better price if Developer condemns.

Developer prefers for Owner to accept his offer than to go through the condemnation process. In Period 2, however, Developer is aware that Owner knows the compensation rule and that Owner can expect a payoff of 44 if she holds out in Period 2. If Owner has rejected any price less than $C - c_O$, Developer will be better off offering $p_2 = C - c_O$, which is $p_2 = 144$. If Owner believes there is a chance that Developer might not condemn, that possibility discounts Owner's payoff from rejecting $p_2 = 144$. Owner will prefer the sure payoff of 44 by accepting $p_2 = 144$, than the uncertain payoff of 44 from rejecting $p_2 = 144$.[180] As before, however, Developer does not know if Owner believes that Developer might not condemn, and Developer cannot credibly convey that information. Developer does know that Owner will always accept $p_2 > C - c_O$, which is $p_2 > 144$. Developer will then offer $p_2 = 145$.

Moving back to Period 1, if Developer offers $p_1 = 145$, Owner will accept because she will not be able to do any better by holding out. Owner will always decline $p_1 \leq 144$ because Developer will offer $p_2 > 144$. The cost of delay makes it in Developer's best interest to finish the bargain as soon as possible. Developer will not offer a lowball price, because Owner will reject and Developer's costs will increase. Therefore, Developer will offer $p_1 = 145$ and Owner will accept. Developer gets a payoff of 30; Owner gets a payoff of 45; welfare surplus is 75. Owner does not have an incentive to hold out and there is no deadweight loss; the exchange is Pareto-efficient.[181]

2. *Compensation Above Market Value with a High Valuation Owner*

Suppose then, that Owner has a high "subjective premium" and values the property at 200 ($v_O = 200$). Developer still values the property at 175 ($v_D = 175$); the market value of the property is 100; the compensation rule is 150% of market

177. *Infra* Mathematical Appendix: Explanation 12 pp. 1658–59.
178. *Infra* Mathematical Appendix: Explanation 13 p. 1659.
179. *Infra* Mathematical Appendix: Explanation 14 pp. 1659–60.
180. *Infra* Mathematical Appendix: Explanation 15 p. 1660.
181. *See* Feldman, *supra* note 147, at 6 (defining Pareto-efficiency).

value ($C = 150$). The cost of delay is 4 to Developer and 0 to Owner, and the cost of condemnation is 8 to Developer and 6 to Owner. This game reaches the same outcome: Developer will offer $p_1 = 145$, and Owner will accept. Developer knows that even an owner with a low valuation would reject $p_1 \le 144$. Rather than deal with the condemnation procedures, Developer will offer a $p_1 = 145$. Owner, knowing that she will not get her full valuation anyway, will accept rather than incur the costs of having Developer force condemnation. Developer's payoff is 30, but Owner's payoff is (-55), and societal welfare is (-25). The outcome is certainly inefficient because due to Owner's high subjective premium the player who has a lower valuation of the property gets it. The only mitigating factor might be the downstream economic benefits created by Developer.[182] This suggests that it is unlikely that the concerns of both efficiency and fairness will be fully satisfied.

It is possible that Owner will get some utility from aggravating Developer and forcing him to incur the cost of condemnation. Such a situation will adjust Owner's payoff for condemnation from ($C - v_O - c_O$) to ($C - v_O + u$), indicating the utility of annoying the opponent. Doing so will make it more advantageous for Owner to reject Developer's offer of p_1 and p_2. Developer knows that no rational player will accept an offer below the $C - c_O$, so $p_1 = 145$ regardless. If Owner rejects p_1, and if Developer may offer a slightly higher p_2, then Developer will offer $p_2 < 154$.[183] If the utility of annoying the opponent is high enough, Owner will hold out and force Developer to incur the costs of condemnation.[184]

V. Conclusion

At this point, it is necessary to make some policy considerations. How much subjective premium should be enough to halt development? Two hundred percent? Two Thousand Percent? Although a higher than market value compensation structure will protect against the more questionable

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182. *See* County of Wayne v. Hathcock, 684 N.W.2d 765, 775–76 (Mich. 2004) (describing the purposes of the condemnation). The court stated:

> Wayne County has condemned the defendants' real properties for the following purposes: "(1) the creation of jobs for its citizens, (2) the stimulation of private investment and redevelopment in the county to insure a healthy and growing tax base . . . , (3) stemming the tide of disinvestment and population loss, and (4) supporting development opportunities that would otherwise remain unrealized."

Id. (citation omitted).

183. *Infra* Mathematical Appendix: Explanation 16 p. 1660.

184. *Infra* Mathematical Appendix: Explanation 17 p. 1661.

development,[185] no compensation rule will be able to compensate fully owners with extraordinarily high subjective premiums. Because of the inability to credibly signal the other players in these bargaining situations,[186] it is impossible to determine reliably Owner's subjective premium.[187] Banning economic development takings will, as discussed at the beginning of Part IV.A, result in returning to the hold out scenario described in Part III.B. Legislatures must then balance the equity of allowing the condemnee to receive at least a portion of her "subjective premium," the inefficiency of not fully compensating those Owners with very high "subjective premiums," and the important societal benefits of allowing and encouraging economic development.

The game theoretic analysis suggests that alternative compensation models would be able to address, to some extent, the problem of subjective premium, as well as solve the hold out problem. The less likely that Developer will prevail in a condemnation proceeding, the more likely that Owner will see a chance to gain surplus by holding out. Although a stricter interpretation of public use makes it less likely that high valuation Owners will lose their subjective premium, those that fail at the condemnation proceeding will lose it entirely unless there is an above market price compensation model. Compensation structures therefore more equitably split the baby. They prevent Owner from capturing all of Developer's surplus, but also make sure Owner receives at least part of her subjective valuation of the property above simple market rate.

How a proper takings statute should look is beyond the scope of this Note and requires careful consideration of the policy objectives listed above. A legislature must make a determination as to how much compensation should be above market value, what constitutes market value, how to allocate costs, and whether there are differing rates for different types of property, among a host of other questions. What the analysis suggests is that simply modifying the definition of public use will not solve the problems attendant to eminent

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185. *See* Krier & Serkin, *supra* note 119, at 871 ("Changing the rule so as to distribute some or all of the surplus to condemnees would create a more robust protection against questionable projects.").

186. *See supra* note 146 and accompanying text (describing the credibility of signals).

187. *See* THOMAS, *supra* note 133, at 200, 213–14 (noting that in an auction where the highest bidder wins but pays only the second highest bid, the best strategy is to bid your entire valuation rather than to shade). Although such an auction would reveal subjective valuations in the context of eminent domain it would require condemning a property, giving Owner market price, and auctioning it to both Developer and Owner. The only way to make sure Owner credibly reveals her valuation would be to make Owner pay out of pocket to Developer the amount of her subjective premium. Although efficient, it is unlikely that many would consider such a regime to be equitable.

domain. Legislatures must critically examine the nuts and bolts of condemnation procedures to more equitably address the concerns raised by *Kelo v. City of New London.*

VI. Mathematical Appendix

For ease of reference, this Appendix will list explanations by number corresponding to the order with which they relate to the text.

Part III.B. The Hold out Problem: Bargaining with a Low Valuation Owner

Explanation 1: If $p_1 = 100$, Owner will reason that there is a possibility δ that Developer will offer $p_2 > 100$, and if δ is sufficiently high, the low valuation Owner would be better off waiting for the higher offer. If a player is willing to mix strategies, his expected payoff from each strategy must be equal to his expected payoff for every other strategy.[188] We can determine this threshold δ by equating the expected benefits from accepting $p_1 = 100$ to rejecting $p_1 = 100$.[189]

If Owner values the property at market value and accepts p_1, his payoff function is

$$(p_1 - v_O) = (100 - 100) = 0,$$

and if Owner rejects p_1, his expected payoff is

$$\delta(p_2 - v_O) + (1 - \delta)(p_1 - v_O),$$

where δ represents the probability that $p_2 > p_1$. Setting the expected payoff of rejecting p_1 to the payoff from accepting p_1 gives the equation

$$\delta(p_2 - v_O) + (1 - \delta)(p_1 - v_O) = (p_1 - v_O).$$

Solving for δ yields

$$\delta = 0 / (p_2 - p_1).$$

This means that if there is any chance greater than zero percent of Developer offering $p_2 > p_1$, then Owner will prefer to wait for the second offer.

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188. *See* BAIRD ET AL., *supra* note 23, at 37 ("A player will be willing to randomize between two strategies only if that player is indifferent as to which strategy is played.").

189. *See* RASMUSEN, *supra* note 21, at 74 (describing the "payoff equating" method of determining mixed strategies).

Explanation 2: Developer's payoff depends on the probability ψ that Owner will accept an offer of $p_2 = 100$ despite being indifferent between accepting and rejecting such an offer. Developer's payoff from offering Owner $p_2 = p_1$ is

$$\psi(v_D - p_1 - 2) + (1 - \psi)(-4).$$

By equating this with Developer's payoff from offering $p_2 > p_1$, it is possible to solve for the threshold value of ψ.[190]

$$(v_D - p_2 - 2) = \psi(v_D - p_1 - 2) + (1 - \psi)(-4).$$

If p_2 is greater than p_1, then $p_2 = p_1 + x$, where x represents some positive amount, the equation can be written as

$$(v_D - p_1 - x - 2) = \psi(v_D - p_1 - 2) + (1 - \psi)(-4).$$

Solving for ψ yields

$$\psi = [(v_D - p_1 + 2) - x] / (v_D - p_1 + 2) = 1 - [x / (v_D - p_1 + 2)].$$

This indicates that the threshold value of ψ depends on several factors. Note that the denominator of the second term is made up of the value of Developer's valuation over the first price offered and the additional cost of the second round of bargaining. For any x, as the Developer's valuation increases, or as the cost of bargaining increases, the value of ψ gets closer to one. The same is true as x, an amount that Developer determines, gets smaller. As ψ gets closer to one it means that Developer needs more certainty that Owner will accept an offer of $p_2 = p_1$ although Owner is indifferent between accepting and rejecting.

Even if Developer's valuation and costs are small, Developer will offer $p_1 = p_2$ (which means that $x = 0$) only if $\psi = 1$. In other words, Developer will offer a price in Period 2 that is greater than the offer in Period 1 unless he believes that Owner will always accept the offer even though she is indifferent to accepting or rejecting.

Part III.B. Adding the Power of Eminent Domain to Solve the Hold
            Out Problem

Explanation 3: Developer will condemn if

$$(v_D - C - 8) > (-4),$$

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190.   *See* OSBORNE & RUBINSTEIN, *supra* note 132, at 214–15 (demonstrating the payoff equating method).

which simplifies to

$$(v_D - C) > 4.$$

If $C = 100$, then Developer will force the sale so long as $v_D > 104$. Since $v_D = 175$, Developer will force the sale.

Explanation 4: Rejecting $p_2 \geq 100$ would net Owner an expected payoff of $\gamma(C - v_O - 6)$, where γ is the probability that Developer will condemn. The payoff from rejecting could never be greater than $(p_2 - v_O)$ if $p \geq C$.

Explanation 5: Developer's expected payoff of offering $p_1 = 94$ and $p_2 = 94 + x$, where $x > 0$ is

$$\delta(v_D - 94) + (1 - \delta)(v_D - 94 - 2 + x),$$

where δ represents the probability that Owner will accept the offer of 94 although she is indifferent between accepting or rejecting. Setting this expected payoff greater than Developer's payoff of offering $p_1 = 94 + x$ and solving will determine when Developer would prefer to offer $p_1 = 94$. The inequality is

$$\delta(v_D - 94) + (1 - \delta)(v_D - 94 - 2 + x) > (v_D - 94 + x).$$

Inserting $v_D = 175$ gives

$$\delta(81) + (1 - \delta)(79 + x) > (81 + x).$$

Solving for δ gives

$$\delta = 2 / (2 - x).$$

If $x > 0$, then δ is greater than 1. That means that Developer would always prefer for Owner to accept the higher value in Period 1. However, note that as x gets closer to 2, δ gets closer to infinity; this indicates that Developer would never offer a $p_1 = 96$. The advantage of offering $p_1 > 94$ is that Developer saves his cost of delay, but $p_1 = 96$ does not save Developer anything.

Part IV.A.2. Narrow Interpretation with a Low Valuation Owner

Explanation 6: Using the payoff equating method between bringing a condemnation action and not bring the action yields

$$\theta(v_D - C - c_D) + (1 - \theta)(-c_D) = -4,$$

then solving for v_D yields

$$v_D = (\theta C + c_D - 4) / \theta,$$

which simplifies to

$$v_D = C + (c_D - 4) / \theta.$$

Substituting the values assumed by the problem yields $v_D = 116$.

Explanation 7: If Developer must condemn, then his payoff function is

$$(0.25)(v_D - C - 8) + (0.75)(-8),$$

and substituting the given parameters and solving gives

$$(0.25)(175 - 100 - 8) + (0.75)(-8) = 10.75.$$

In Period 2, Developer will offer a p_2 such that

$$(v_D - p_2 - 2) > 10.75.$$

Solving for p_2 yields

$$p_2 < v_D - 12.75,$$

and substituting 175 for v_D gives

$$p_2 < 162.25.$$

Explanation 8: Owner will never accept $p_2 < 94$, because she will do better defending against condemnation. Owner's payoff if Developer condemns is

$$(0.25)(100 - 100 - 6) + (0.75)(-6),$$

which simplifies to (-6). If Developer offers $p_2 > 94$, whether Owner will accept depends on how likely she thinks it is that Developer will condemn.
So Owner's expected payoff from rejecting $p_2 > 94$ is

$$(1 - \gamma)(0) + \gamma(-6),$$

where γ represents the probability that Developer will bring a condemnation action. Setting the expected payoff of rejecting equal to that of accepting gives the equation

$$(1 - \gamma)(0) + \gamma(-6) = -6 + x,$$

and solving for γ yields $\gamma = 1 - (x / 6)$. This means that as γ gets larger, Owner will accept a $p_2 = 94 + x$ such that x is smaller.

Part IV.A.2. Narrow Interpretation with a High Valuation Owner

Explanation 9: Owner's payoff function, should Developer condemn the property, is

$$\theta(C - v_O - c_O) + (1 - \theta)(-c_O),$$

and substituting the set values gives

$$(0.25)(100 - 200 - 6) + (0.75)(-6),$$

which simplifies to -31.

Explanation 10: Developer's payoff function if Developer chooses to condemn is

$$\theta(v_D - C - c_D) + (1 - \theta)(-c_D),$$

and substituting in the values, the function becomes

$$(0.25)(175 - 100 - 8) + (0.75)(-8) = 10.75.$$

Explanation 11: If Developer paid Owner's defense costs, then Owner's payoff function from rejecting p_2 is

$$\gamma[(0.25)(C - v_O - c_O) + (0.75)(c_O)],$$

where γ is the probability that Developer will condemn. Substituting the parameters given and solving yields

$$\gamma(0.25)(100 - 100 - 0) + (0.75)(0) = 0.$$

In Period 2, Owner will accept a p_2 such that

$$(p_2 - v_O) > 0.$$

Solving for p_2 yields

$$p_2 > v_O,$$

and because $v_O = C,$

$$p_2 > C.$$

Part IV.B.1.   Compensation Above Market Value with a Low
               Valuation Owner

Explanation 12: Because $\theta = 1$, Developer's payoff function if he seeks condemnation is $(v_D - C - c_D)$. Developer will seek compensation if his payoff for condemning is greater than that of not:

$$(v_D - C - c_D) > -4.$$

Solving for v_D, it becomes apparent that Developer will condemn if

$$v_D > C + c_D - 4.$$

Filling in the values set for the game ($v_D = 175$; $C = 150$; $c_D = 8$) yields the statement

$$175 > 150 + 8 - 4,$$

which is a true statement, and Developer will therefore prefer to condemn rather than let the deal fail.

Explanation 13: Owner's expected payoff from rejecting p_2 is

$$\theta(C - v_O - c_O) + (1 - \theta)(-c_O),$$

and substituting the given parameter and solving yields

$$(0.25)(100 - 100 - 6) + (0.75)(-6) = -6.$$

In Period 2, Owner will accept a p_2 such that

$$(p_2 - v_O) > -6.$$

Solving for p_2 yields

$$p_2 > v_O - 6,$$

and substituting 100 for v_O gives

$$p_2 > 94.$$

Explanation 14: Consider a situation in which Developer offers a price greater than market value but less than $C - c_O$ ($v_O < p_2 < C - c_O$). Owner's Payoff function for accepting p_2 is

$$(p_2 - v_O),$$

which is a positive payoff. If owner rejects p_2 her payoff function is

$$\gamma(0) + (1 - \gamma)(C - v_O - c_O),$$

where γ represents the probability that Developer will not condemn. The term ($C - c_O$) can be rewritten as ($p_2 + x$), where $x > 0$. Setting this payoff of rejecting p_2 equal to the payoff of accepting yields

$$(1 - \gamma)(p_2 + x - v_O) = (p_2 - v_O).$$

Solving for γ gives

$$\gamma = x / (p_2 + x - v_O),$$

which can be rewritten as

$$\gamma = x / (C - c_0 - v_0),$$

or substituting the known numbers

$$\gamma = x / (44).$$

This means that as x gets closer to 44, then Owner will accept p_2 only if the probability that Developer will not condemn gets larger. This makes sense because x represents the difference between $C - c_0$ and p_2, and as it gets larger, it means that p_2 is getting smaller. For a small p_2, Owner will only accept if the probability that Developer will not condemn is large, and the more likely that Owner will end up with a payoff of 0. Because Developer does not know what Owner believes γ to be, Developer cannot estimate an x that Owner would accept, and thus Developer would not offer a price below $C - c_0$.

Explanation 15: Owner's payoff from accepting p_2 is

$$(p_2 - v_0),$$

and if $p_2 = 144$ and $v_0 = 100$, the payoff is a total of 44. Owner's payoff from rejecting p_2 is

$$\gamma(0) + (1 - \gamma)(C - v_0 - c_0),$$

and if $\gamma > 0$ then the payoff is

$$(1 - \gamma)(44),$$

which is less than the payoff of 44.

Part IV.B.2. Compensation Above Market Value with a High
               Valuation Owner

Explanation 16: If Developer must condemn, then his payoff is

$$(v_D - C - 8) = (175 - 150 - 8) = 17.$$

In Period 2, Developer will offer a p_2 such that

$$(v_D - p_2 - 4) > 17.$$

Solving for p_2 yields

$$p_2 < v_D - 21,$$

and substituting 175 for v_D gives

$$p_2 < 154.$$

Explanation 17: For example, if Developer offers $p_2 = 153$, then Owner's payoff from accepting is

$$(p_2 - v_O) = (153 - 200) = (-47).$$

If Owner rejects $p_2 = 153$, her payoff is

$$(C - v_O - u) = (150 - 200 + u) = (u - 50).$$

If $u > 3$, then $(u - 50) > -47$, and Owner will reject p_2 and force Developer to incur the costs of condemnation.