

# Pinning Down Subjective Valuations: A Well-Being-Analysis Approach to Eminent Domain

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## INTRODUCTION

In 1999, Palm Beach County commissioners authorized an eminent domain action against John and Wendy Zamecnik,<sup>1</sup> taking the home that they had “fall[en] in love with” and “never wanted to leave” after twenty years of ownership<sup>2</sup> in return for its fair market value<sup>3</sup>—the amount someone less connected to the home would have been willing to pay. The purpose of the eminent domain action was to build a golf course in a county that “ha[d] more golf courses per capita than any county east of the Mississippi River.”<sup>4</sup> The low value of an additional golf course is reflected in the subsequent events: the land sat vacant as the county failed to follow through on the plan for a golf

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<sup>1</sup> Thomas R. Collins, *Evicted Homeowners Feel Betrayed over Failed Project*, Palm Beach Post 1A (Mar 15, 2005).

<sup>2</sup> Stephen Deere and Andy Reid, *College Pitches Hillcrest Plan: Apprehensive Residents Want to See Details* (S Fla Sun-Sentinel, Sept 19, 2005), archived at <http://perma.cc/AD5T-QYU5>.

<sup>3</sup> The jury was instructed to consider the fair market value of the property. Jury Instructions, *Palm Beach County v Craigmiles*, Civil Action No 99-3196, \*7–8 (Fla Cir filed Jan 25, 2002) (available on Westlaw at 2002 WL 34675392) (“The constitutional requirement of full compensation means that the landowner must be paid completely for the whole loss resulting from the taking. In most cases, it will be necessary and sufficient to full compensation that the award constitute the fair market value of the property.”). The Zamecniks were also given a small allocation for moving expenses of \$4,000. See generally Verdict for Parcel Nos. 283 & 329, *Palm Beach County v Craigmiles*, Civil Action No 99-3196 (Fla Cir filed Jan 25, 2002) (available on Westlaw at 2002 WL 34675377).

<sup>4</sup> Dana Berliner, *Public Power, Private Gain: A Five-Year, State-by-State Report Examining the Abuse of Eminent Domain* \*58 (Apr 2003), archived at <http://perma.cc/2SJE-7EUM>.

course,<sup>5</sup> and eventually, in 2006, the land was sold to a local university at a substantial loss.<sup>6</sup>

The wastefulness in this example highlights the potential value of an eminent domain compensation standard that, consistent with the indemnity principle, would make the owner whole. Were county officials to know and pay the Zamecniks' (presumably) high subjective value of their home, as opposed to the constitutionally required<sup>7</sup> compensation of its fair market value, adding a golf course may have seemed less justified.<sup>8</sup> However, determining exactly how much the Zamecniks valued their property is difficult,<sup>9</sup> and scholars have struggled to come up with practical estimates in such situations.<sup>10</sup> This Comment proposes using a well-being-analysis approach to estimating the subjective valuation of homes such as the Zamecniks'. Such an approach involves measuring the effects of eminent domain takings on reported life-satisfaction levels through surveying individuals, including people like the Zamecniks, who are involved in eminent domain.

The constitutional record in eminent domain jurisprudence expresses a commitment to making individuals such as the Zamecniks "whole"<sup>11</sup> as part of paying just compensation under the Fifth Amendment. However, federal law and the majority of states offer only fair market value, which generally undercompensates takees.<sup>12</sup> The Supreme Court has settled on fair market

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<sup>5</sup> See Collins, *Evicted Homeowners*, Palm Beach Post at 1A (cited in note 1).

<sup>6</sup> See *Palm Beach County, Florida: Single Audit Report; Fiscal Year Ended September 30, 2006* \*104 (Palm Beach County Office of Financial Management and Budget), archived at <http://perma.cc/4V3U-XELV>.

<sup>7</sup> See *Almota Farmers Elevator & Warehouse Co v United States*, 409 US 470, 473–74 (1973).

<sup>8</sup> See Part II.A.

<sup>9</sup> See Part II.B.

<sup>10</sup> For a discussion of scholarly attempts to estimate subjective valuation, see Part II.B. This Comment responds to a challenge in Professor Richard A. Epstein's canonical work on this topic, in which he defends the use of a 50 percent multiplier premium on fair market value in the context of private-to-private takings based on the New Hampshire Mill Act but concludes that "in these circumstances one should not demand perfect precision because there is no way to provide it." Richard A. Epstein, *Takings: Private Property and the Power of Eminent Domain* 174–75 (Harvard 1985).

<sup>11</sup> This is the concept of restoring an individual "to [her] original or rightful position," and it includes the individual's subjective value. Steven D. Smith, *The Critics and the "Crisis": A Reassessment of Current Conceptions of Tort Law*, 72 Cornell L Rev 765, 769–71 & nn 16, 22 (1987) (quotation marks omitted).

<sup>12</sup> For an early discussion of this issue, see generally W. Harold Bigham, "Fair Market Value," "Just Compensation," and the Constitution: A Critical View, 24 Vand L

compensation because revealed-preference approaches to estimating the subjective valuation of homes are generally problematic,<sup>13</sup> and approaches that ask individuals to value<sup>14</sup> their property subjectively provide incentives to lie. Courts use this second-best solution primarily due to the lack of a practical way to estimate subjective value.<sup>15</sup> In addition, only a small minority of states use adjustments to fair market value estimates to compensate for subjective value, and among those states there is disagreement about what the proper adjustment is.<sup>16</sup>

The lack of a true indemnity principle is implicated by current eminent domain controversies that focus on public use, and even members of the Supreme Court have questioned the fairness of this absence.<sup>17</sup> The strong public reaction<sup>18</sup> against the Court's decision in *Kelo v City of New London*<sup>19</sup> was notable, and at least one scholar has argued that the strong reaction to economic-development eminent domain is due in part to the "paltry compensation" to owners who are excluded from the "benefits of whatever renewal (if any) it accomplished."<sup>20</sup> In fact, several justices in the

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Rev 63 (1970) (examining how fair market value consistently undercompensates subjects of eminent domain, often engendering public discontent with the system).

<sup>13</sup> See Richard A. Epstein, *The Use and Limits of Self-Valuation Systems*, 81 U Chi L Rev 109, 125 (2014).

<sup>14</sup> As opposed to the value that an individual's property could sell for in a fair market (the fair market value), the subjective value—in monetary terms—is the minimum price that an individual would be willing to accept as compensation for the sale of her property. See Thomas J. Miceli, *The Economic Theory of Eminent Domain: Private Property, Public Use* 58 (Cambridge 2011) (discussing subjective value from a supply and demand perspective).

<sup>15</sup> See Part I.A.

<sup>16</sup> See Part I.B.

<sup>17</sup> See notes 124–25 and accompanying text.

<sup>18</sup> *The Economist* reported that the Supreme Court's decision in *Kelo v City of New London*, 545 US 469 (2005), "has set off a fierce backlash that may yet be as potent as the anti-abortion movement." *Hands Off Our Homes* (*The Economist*, Aug 18, 2005), archived at <http://perma.cc/BW83-4PV7>. The underlying sentiment persisted even several years later. In a 2009 survey on constitutional attitudes performed by Knowledge Networks for Harvard University and Columbia University, 83.5 percent of respondents indicated that they did not think eminent domain should be used to "transfer[ ] someone's property to private developers whose commercial projects could benefit the local economy." Stephen Ansolabehere and Nathaniel Persily, *Field Report: Constitutional Attitudes Survey* \*23, 61 (Knowledge Networks, July 14, 2010), archived at <http://perma.cc/S4MJ-LX82>.

<sup>19</sup> 545 US 469 (2005).

<sup>20</sup> Eduardo Peñalver, "*In Kind*" *Just Compensation* (Concurring Opinions, July 14, 2006), archived at <http://perma.cc/L683-CC7L>. This interpretation that the reaction is in part about the post-eminent domain distribution of surplus is consistent with the emphasis on the acquiring party's profit that is present in the executive order issued by President George W. Bush one year after the *Kelo* decision. The order committed to limit eminent domain to cases in which "the taking is for public use" and is "not merely for the

*Kelo* oral arguments were “bothered” by the undercompensation concern that arises from paying only fair market value, with one justice pointing out that such undercompensation occurs while a private party profits at the original owner’s expense.<sup>21</sup> Indeed, the opinion itself acknowledged the “importan[ce]” of “questions about the fairness of the [fair market value] measure of just compensation” raised in the amicus briefs,<sup>22</sup> indicating that the time may be right to push for a reevaluation of the standard. As such, among scholars, the *Kelo* decision has prompted calls for a renewed look at the accepted compensation approach.<sup>23</sup>

Despite the seriousness of this problem and the ripeness for a solution, there have been no proposals that workably estimate the difference between an owner’s subjective valuation of her property and the property’s fair market value based on similarly situated individuals’ valuations<sup>24</sup> (which this Comment refers to as the “subjective-value premium”). The lack of a solution means that, on average, two thousand (often underprivileged<sup>25</sup>) individuals per year in the United States are threatened with bearing the cost of this difference, and that is counting only “filed or

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purpose of advancing the economic interest of private parties to be given ownership.” Executive Order 13406, 3 CFR 235, 235.

<sup>21</sup> During oral arguments in *Kelo*, Justice David Souter, for example, said: “[W]hat bothered Justice Breyer I guess bothers a lot of us. And that is, is there a problem of making the homeowner or the property owner whole? But I suppose the answer to that is that goes to the measure of compensation which is not the issue here.” Transcript of Oral Argument, *Kelo v City of New London*, Docket No 04-108, \*49 (US Feb 22, 2005) (“*Kelo* Transcript”). In addition, Justice Stephen Breyer pointed out that the takees “want to be really not made a lot worse off, at least not made a lot worse off just so some other people can get a lot more money.” *Id.* at \*50.

<sup>22</sup> *Kelo*, 545 US at 489 n 21.

<sup>23</sup> See, for example, Katrina Miriam Wyman, *The Measure of Just Compensation*, 41 UC Davis L Rev 239, 241–42 (2007) (pointing to the “renewed discussion that [*Kelo*] has prompted about how much compensation governments should pay when they take people’s homes through eminent domain” and how it has prompted “many proposals to increase compensation for takings”).

<sup>24</sup> Part II.B discusses two proposals that are problematic. While one could be quickly calculated, it would require both a revamping of the tax system to be accurate and a significant reduction in taxes. The other falls prey to the endowment effect.

<sup>25</sup> See Sandra Phillips and Marion R. Sillah, *A House Is Not a Home: Effect of Eminent Domain Abuse on the Poor, African Americans, and the Elderly*, 36 Housing & Socy 115, 130 (2009) (reporting that “[t]he data show that the practice of taking private property for urban development and redevelopment abuses the rights of the most vulnerable citizens,” inflicting burdens on “the poor, African American and elderly citizens in our communities”).

threatened condemnations for private parties.”<sup>26</sup> This Comment argues that the Court’s acknowledgement of the problems with fair market value and its apparent concern about undercompensation are an invitation to create a practical measurement that is more accurate than fair market value. A well-being analysis, which uses hedonic psychology to measure and collect data on changes in people’s subjective well-being in response to various events, could be applied to provide the workable solution that Fifth Amendment jurisprudence requires. By using regressions on individuals’ assessments of their own levels of happiness in longitudinal surveys, hedonic psychology can assign a financial value to intangible losses.<sup>27</sup>

The advances that a well-being analysis offers in valuation techniques give courts an opportunity to deviate from the fair market value measure of compensation. Such analysis has the potential to render inapplicable the Supreme Court’s assumption underlying the current determination of fair market value as just compensation. Specifically, a well-being analysis would provide courts with an estimate of the hedonic costs of the owner’s displacement from a home for which she is paid only fair market value, and it would assign these costs a monetary value so that courts could add them to the fair market value of the taken property. In addition, this approach can be used to assess state laws that provide supra-fair market value compensation and to inform future laws with the same aim.

This Comment provides a justification for this approach and estimates the average subjective-value premium using the best data source available. Part I summarizes the current state of the law for increasing compensation above the fair market value at both the state and federal levels, and it shows that there is room in courts and state legislatures for a well-being-analysis approach to compensation. Part II situates a well-being-analysis approach in the theoretical debate about the costs and benefits of compensation above fair market value. It then shows how a

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<sup>26</sup> Berliner, *Public Power, Private Gain* at \*2 (cited in note 4) (finding over ten thousand documented “instance[s] of actual or threatened condemnation for private parties” within the five-year period from 1998 to 2002).

<sup>27</sup> See, for example, Irina D. Manta, *Hedonic Trademarks*, 74 Ohio St L J 241, 268–71 (2013) (proposing a calculation of the hedonic loss to consumers in terms of how they experience goods to inform when confusion in the trademark context should be actionable); Andrew J. Oswald and Nattavudh Powdthavee, *Death, Happiness, and the Calculation of Compensatory Damages*, 37 J Legal Stud S217, S218 (2008) (suggesting methods of bereavement valuation using hedonic psychology).

rigorous well-being-analysis approach addresses some of the concerns that have been raised, and it helps assign a nonarbitrary lower-bound value. Part III provides the empirical results of an estimate of the hedonic costs associated with being paid only the fair market value for one's home—results that are obtained by using data from the British Household Panel Survey (BHPS), an eighteen-year longitudinal survey that covers over eight thousand unique moves while surveying individuals about their happiness levels before and after each move. The results in Part III provide an example of a workable approach to estimating subjective value, providing empirical support for a multiplier of 22 percent that should be applied to the fair market value for compensation in eminent domain actions. As such, the results not only vindicate the more widespread adoption of state-level statutory multipliers but also suggest that courts may be able to adopt a well-being-analysis approach to valuation.

#### I. LEGAL BACKGROUND: JUST COMPENSATION AND WELL-BEING ANALYSIS UNDER CURRENT FEDERAL AND STATE LAW

The current approach to just compensation in eminent domain takings under US constitutional law avoids difficult calculations and errs on the side of undercompensation by using the independently verifiable standard of fair market value.<sup>28</sup> States, on the other hand, have been more willing to compensate owners above fair market value—but there is significant variation across states in their assessments of the proper way to do so.

##### A. “Just Compensation” as Fair Market Value: An Undercompensating Compromise Born out of Empirical Limitations

In *Olson v United States*,<sup>29</sup> the Court noted that the Takings Clause entitles the original property owner “to be put in as good a position pecuniarily as if his property had not been taken,” as “[h]e must be made whole.”<sup>30</sup> At the same time, the Supreme

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<sup>28</sup> See notes 12–16 and accompanying text.

<sup>29</sup> 292 US 246 (1934).

<sup>30</sup> *Id.* at 254–55. See also *United States v Miller*, 317 US 369, 373 (1943) (“The owner is to be put in as good position pecuniarily as he would have occupied if his property had not been taken.”). But see *Olson*, 292 US at 255–56 (stating that compensation “is the market value of the property at the time of the taking contemporaneously paid in money” and that “[c]onsiderations that may not reasonably be held to affect market value are excluded”).

Court has interpreted the just compensation requirement of the Fifth Amendment to mean that “the owner is entitled to the fair market value of his property at the time of the taking”<sup>31</sup>—though the Court has also admitted that “[t]he term ‘fair’ hardly adds anything to the phrase ‘market value.’”<sup>32</sup> Roughly speaking,<sup>33</sup> fair market value is “what a willing buyer would pay in cash to a willing seller.”<sup>34</sup> This is true even when the value of the property to the owner is based on elements that cannot be transferred:<sup>35</sup> in such cases, the court considers only the “value transferable from one owner to another.”<sup>36</sup>

These two commitments in the jurisprudence—to make individuals whole but also to compensate based only on fair market value—are in tension with each other. As Judge Richard Posner has pointed out, the fair market value shows only the value that the “marginal owner attaches to *his* property,” and because the property owner may be “intramarginal,” “[c]ompensation in the constitutional sense is therefore not full compensation.”<sup>37</sup> Indeed, a revealed-preferences argument shows that the fair market value will be below the subjective value in reasonably functioning real estate markets: an owner always has the option of selling her property for the fair market value, and the fact that she has not done so reveals that the value of the property combined with the value of not having to move exceeds the property’s fair market value.<sup>38</sup>

One justification for the fair market value standard that tracks the dicta in the cases is that the fair market value standard

<sup>31</sup> *Almota Farmers Elevator & Warehouse Co v United States*, 409 US 470, 474 (1973).

<sup>32</sup> *Miller*, 317 US at 374.

<sup>33</sup> The nuances of how fair market value is calculated are outside the scope of this Comment.

<sup>34</sup> *Almota Farmers*, 409 US at 474, quoting *Miller*, 317 US at 374. See also *City of New York v Sage*, 239 US 57, 61 (1915) (“[W]hat the owner is entitled to is the value of the property taken, and that means what it fairly may be believed that a purchaser in fair market conditions would have given for it.”); David L. Callies and Shelley Ross Saxer, *Is Fair Market Value Just Compensation? An Underlying Issue Surfaced in Kelo*, in Dwight H. Merriam and Mary Massaron Ross, eds, *Eminent Domain Use and Abuse: Kelo in Context* 137, 137 (ABA 2006).

<sup>35</sup> For examples of nontransferables that are not included in fair market value—such as idiosyncratic customizations, neighborhood goodwill, or pleasant memories associated with the home—see Part II.A.1.

<sup>36</sup> *Kimball Laundry Co v United States*, 338 US 1, 5 (1949).

<sup>37</sup> *Coniston Corp v Village of Hoffman Estates*, 844 F2d 461, 464 (7th Cir 1988) (emphasis in original).

<sup>38</sup> Lee Anne Fennell, *Taking Eminent Domain Apart*, 2004 Mich St L Rev 957, 963 (“Most property owners value their property above fair market value; if they did not, they likely would have sold it already.”).

is a compromise acknowledging both the practical difficulty in ascertaining subjective valuations and the need for fairness.<sup>39</sup> A concern for practicality is evident even in the first case in which the Supreme Court used the fair market value standard, which the Court described as “readily estimated.”<sup>40</sup> Concerns for administrative ease again showed up in subsequent cases in which the Court defended the fair market value standard against claims that it was not “just compensation.”<sup>41</sup>

The case that most directly discusses the Court’s understanding of this tension and of how fair market value is a necessary compromise is *United States v 564.54 Acres of Land*,<sup>42</sup> in which the eminent domain takee was a nonprofit organization that operated summer camps. The takee demanded more than the fair market value of the property, asking to be paid the amount that it would cost to obtain “functionally equivalent substitute facilities at a new site.”<sup>43</sup> The Court rejected the argument that the takee must truly be made whole, on the ground that doing so would have been impractical:

In giving content to the just compensation requirement of the Fifth Amendment, this Court has sought to put the owner of condemned property “in as good a position pecuniarily as if his property had not been taken.” However, this principle of indemnity has not been given its full and literal force. Because of serious practical difficulties in assessing the worth an individual places on particular property at a given time, we have . . . employed the concept of fair market value to determine the condemnee’s loss. . . . [T]he Court has acknowledged that such an award does not necessarily

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<sup>39</sup> See Wyman, 41 UC Davis L Rev at 252–53 (cited in note 23) (discussing this apparent contradiction and noting that “the Court has suggested that subjective indifference is not a practical objective for takings compensation because it is nearly impossible for an outsider to accurately determine how much an owner subjectively values his or her losses”).

<sup>40</sup> *Boom Co v Patterson*, 98 US (8 Otto) 403, 408 (1878).

<sup>41</sup> *United States v Commodities Trading Corp*, 339 US 121, 124–26 (1950) (accepting a fair market value of the current ceiling price that was not adjusted to include a retention value, because “[a] persuasive reason against the general rule . . . is the highly speculative nature of proof to show possible future prices on which ‘retention value’ must depend”). See also, for example, *United States v Chandler-Dunbar Water Power Co*, 229 US 53, 80 (1913) (stating that the fact “[t]hat the property may have to the public a greater value than its fair market value affords no just criterion for estimating what the owner should receive,” and rejecting the additional value of the property—which the owner wanted to include—as “altogether speculative”).

<sup>42</sup> 441 US 506 (1979).

<sup>43</sup> *Id* at 508.

compensate for all values an owner may derive from his property.<sup>44</sup>

In contrast to the “serious practical difficulties” associated with estimating individual worth, the Court stated that the fair market value was “readily discernible.”<sup>45</sup> Indeed, one state supreme court justice interpreted this case and the Fifth Amendment jurisprudence of using fair market value “even when fair market value may not fully compensate the landowner” as an “attempt to achieve a workable rule.”<sup>46</sup>

In *Kimball Laundry Co v United States*,<sup>47</sup> Justice Felix Frankfurter rejected a valuation of property based on a subjective approach in favor of fair market valuation because

[a]s opposed to such personal and variant standards as value to the particular owner whose property has been taken, this transferable value has an external validity which makes it a fair measure of public obligation to compensate the loss incurred by an owner as a result of the taking of his property for public use.<sup>48</sup>

Here, the Court rooted its defense of the fair market value standard in its “external validity” and implicitly demonstrated a concern with the validity of standards that consider personal value to a particular owner. The fairness of the fair market value approach, therefore, is based on its greater “external validity” compared to other methods, rather than on its ability to make the individual owner whole.<sup>49</sup>

It is also worth noting that the Court has discussed exceptions to the general preference for using a fair market value approach. For example, in dicta, the Court has pointed to the fact that when a fair market value approach “would result in manifest injustice to owner or public, courts have fashioned and applied

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<sup>44</sup> Id at 510–11, quoting *Olson*, 292 US at 255 (citations omitted).

<sup>45</sup> *564.54 Acres of Land*, 441 US at 511, 514.

<sup>46</sup> *Religious of the Sacred Heart of Texas v City of Houston*, 836 SW2d 606, 618 (Tex 1992) (Cornyn concurring).

<sup>47</sup> 338 US 1 (1949).

<sup>48</sup> Id at 5.

<sup>49</sup> It is worth noting that, in the past, Canadian law included subjective valuation in its determination of just compensation. Up until 1970, Ontario and the federal government of Canada determined compensation based on “value to the owner,” but they eventually adopted a fair market value approach due in part to the difficulties in estimating subjective value. Jack L. Knetsch and Thomas E. Borcherting, *Expropriation of Private Property and the Basis for Compensation*, 29 U Toronto L J 237, 238–39 (1979).

other standards.”<sup>50</sup> The cases that the Court cited here, however, are largely consistent with fair market valuation, since they are flexible as to when the fair market value is determined by disregarding certain components of that value at the time of the taking rather than rejecting the fair market value approach entirely.<sup>51</sup> As such, the “manifest injustice” standard is best suited for reducing compensation from the fair market value at the time of the taking rather than justifying an increase due to high subjective valuation.

These cases demonstrate that the Court’s commitment to fair market valuation, despite its failure to leave the owner whole, is triggered by the lack of manageable approaches with “external validity”<sup>52</sup> that might be better in this respect. Especially in light of the Court’s concern about fair market value as expressed in *Kelo*, these cases create an opportunity for a superior method of estimating subjective value—one that is not highly “speculative.”<sup>53</sup> Such a method would disrupt the calculation underlying the fair market value compromise. As argued below, a well-being-analysis approach does exactly that: by offering a workable way to estimate subjective value with external validation,<sup>54</sup> it allows courts to come closer to making owners whole. It thus better coheres with the principles underlying just compensation jurisprudence without introducing significant accuracy costs.

## B. State Provisions for Supra-Fair Market Value Compensation

While the majority of states follow the federal approach and accept the fair market value as just compensation,<sup>55</sup> some states

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<sup>50</sup> *Commodities Trading Corp.*, 339 US at 123.

<sup>51</sup> See *Miller*, 317 US at 372–77 (finding that, although a declaration of taking was filed by the Government in December 1938, the jury instructions to consider “market value at the date of the taking, excluding therefrom any increment of value accruing after August 26, 1937,” were acceptable to avoid the Government’s paying for an “increase in value . . . aris[ing] from speculation”); *Olson*, 292 US at 253–55, 261 (disregarding “elements of value arising from the prospect that the Government would acquire the flowage easements,” and effectively moving back the time of assessment of market value, as “[u]nder the circumstances, intention to acquire was the equivalent of the formal designation of the property to be taken”).

<sup>52</sup> *Kimball Laundry*, 338 US at 5.

<sup>53</sup> *Chandler-Dunbar Water Power*, 229 US at 80.

<sup>54</sup> See Part II.C.

<sup>55</sup> See, for example, Ala Code § 18-1A-172 (“The fair market value . . . shall be defined as the price the property would bring when offered for sale by a willing seller who

require that individuals be paid more than the fair market value when eminent domain is pursued by state and local entities. In eminent domain actions initiated by state and local governments, compensation must meet the standard that applies under the Fifth Amendment—but these actions are also constrained by state and local statutes,<sup>56</sup> which occasionally provide additional just compensation requirements. In some states, supra-fair market value compensation is done through a fair market value multiplier. For example, in Indiana<sup>57</sup> and Rhode Island,<sup>58</sup> in addition to paying the fair market value, the purchaser must pay a 50 percent multiplier of that fair market value plus the costs related to the transfer of ownership and to relocation. Similarly, in Connecticut,<sup>59</sup> Michigan,<sup>60</sup> and Missouri,<sup>61</sup> the floor for compensation in a taking of an individual's principal residence is 125 percent of the property's fair market value. In the case of a property that has been in the owner's family for fifty years or longer, Missouri adds "heritage value," which is 50 percent of the fair market value, to the fair market value.<sup>62</sup> This variation raises the question of which state multiplier is more consistent with the average subjective-value premium.

The majority of states that authorize compensation in excess of fair market value focus on expenses that do not show up in fair market value but that seem easier to measure than subjective value. California,<sup>63</sup> Illinois,<sup>64</sup> Louisiana,<sup>65</sup> Maryland,<sup>66</sup>

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is not forced to sell and which is sought by a willing buyer who is not required to buy."); *State v Alaska Continental Development Corp.*, 630 P2d 977, 991 (Alaska 1980) (confirming that the law in Alaska on condemnation appraisals is that fair market value is the "appropriate measure" of just compensation).

<sup>56</sup> See Ilya Somin, *The Grasping Hand: Kelo v. City of New London and the Limits of Eminent Domain* 3 (Chicago 2015).

<sup>57</sup> Ind Code Ann § 32-24-4.5-8 (imposing a 150 percent multiplier for residential property, as well as a 125 percent multiplier for farmland).

<sup>58</sup> RI Gen Laws § 42-64.12-8.

<sup>59</sup> Conn Gen Stat Ann § 8-129(a)(2) (stating that "the compensation for any real property to be acquired by eminent domain . . . shall be one hundred twenty-five per cent" of the average of two independent appraisals of the land).

<sup>60</sup> Mich Const Art X, § 2.

<sup>61</sup> Mo Rev Stat §§ 523.001(3), 523.039.

<sup>62</sup> Mo Rev Stat §§ 523.001(2), 523.039.

<sup>63</sup> Cal Gov Code Ann § 7262.

<sup>64</sup> 735 ILCS 30/10-5-62.

<sup>65</sup> La Rev Stat Ann § 19:9. See also *City of Baton Rouge/Parish of East Baton Rouge v Broussard*, 834 S2d 665, 667–68 (La App 2002) (referring to the language in the Louisiana statute and finding that "the cost of relocation, inconvenience and loss of profits is compensable under this provision").

<sup>66</sup> MD Real Prop Code Ann § 12-205.

Massachusetts,<sup>67</sup> Mississippi,<sup>68</sup> Tennessee,<sup>69</sup> and West Virginia<sup>70</sup> require the payment of a takee's relocation expenses. Minnesota requires that just compensation for a person displaced by a taking be sufficient "to purchase a comparable property in the community," which under certain circumstances may significantly exceed the fair market value of the condemned property.<sup>71</sup> In Michigan, an individual can claim "compensation for damage caused by the taking, apart from the value of the property taken."<sup>72</sup> Connecticut law sets up a fund for relocation expenses.<sup>73</sup> In addition to these state laws, state and local projects that receive federal funds must comply with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970,<sup>74</sup> which requires them to provide relocation assistance in cases of eminent domain acquisitions.<sup>75</sup>

The variation in compensation levels across states is significant, and the more common approach of covering relocation expenses could be based on the same discomfort that the Court has exhibited with the fuzziness of estimating subjective value. A well-being analysis might encourage a state legislature eschewing a multiplier to reconsider this assessment, and it might help identify which of the existing state multipliers comes closest to making takees whole.

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<sup>67</sup> Mass Gen Laws Ann ch 79A, § 7.

<sup>68</sup> Miss Code § 43-39-7.

<sup>69</sup> Tenn Code Ann § 29-16-114.

<sup>70</sup> W Va Code § 54-3 (requiring that the federal coverage of relocation expenses provided under certain circumstances in the Surface Transportation and Uniform Relocation Assistance Act of 1987 apply in state eminent domain actions).

<sup>71</sup> Minn Stat § 117.187. See also *County of Dakota v Cameron*, 839 NW2d 700, 704–05, 712 (Minn 2013) (affirming the district court's award of damages in the amount of \$997,055.84 under Minn Stat § 117.187, even though the plaintiff's condemned property was appraised at no more than \$560,300).

<sup>72</sup> Mich Comp Laws § 213.55(5)(3)(a).

<sup>73</sup> Conn Gen Stat §§ 8-266 to -268; Conn Agencies Regs § 8-273-13. Moving costs are included as part of the value of the property. See *Stanley Works v New Britain Redevelopment Agency*, 230 A2d 9, 17–18 (Conn 1967) (finding that, for determining fair market value, "[o]ne factor which a trier may consider is the expense an owner is compelled to incur in moving machinery from the condemned property to another location," but not counting it under the circumstances because the plaintiff had completed the move prior to the taking and thus the "moving cost could not be considered as a factor affecting the property's value").

<sup>74</sup> Pub L No 91-646, 84 Stat 1894, codified as amended at 42 USC § 4601 et seq.

<sup>75</sup> 42 USC §§ 4621–38.

### C. Consistency of Well-Being Analysis with Other Areas of the Law

This Comment proposes the use of a well-being-analysis approach to respond to the Supreme Court's invitation for a rigorous estimation of subjective valuation. Thus, it is worth examining the extent to which such a well-being analysis, in which reports of subjective well-being are used to estimate damages, is similar to currently accepted valuation methods in legal analysis.

It is easier to understand what a well-being analysis would look like outside of the eminent domain context. Perhaps the clearest example of such an analysis is in the recent call for using "happiness regression" well-being analyses to calculate compensatory damages in wrongful death suits,<sup>76</sup> as well as in wrongful injury suits in response to injuries causing disability.<sup>77</sup> In the former setting, a longitudinal data set that included life-satisfaction metrics reflecting both how happy an individual was at a given point in time and factors that one would generally expect to influence happiness was the source for the well-being estimates.<sup>78</sup> Professors Andrew Oswald and Nattavudh Powdthavee calculated damages for the death of a loved one by using regressions of these factors and whether there was a death in the family against the reported happiness levels before and after the loss.<sup>79</sup> In the disability setting, a similar regression analysis on the same data set testing for how the loss of limbs affected happiness demonstrated that the happiness effects of disabilities are relevant to damages for pain and suffering in cases involving disabilities.<sup>80</sup> In both of these studies, the authors proposed that the traditional goal of tort law of making the plaintiff "whole" can be met by estimating the negative effect on happiness caused by the type of events in question and by then converting that effect into monetary terms.<sup>81</sup>

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<sup>76</sup> Oswald and Powdthavee, 37 J Legal Stud at S220 (cited in note 27).

<sup>77</sup> See Andrew J. Oswald and Nattavudh Powdthavee, *Does Happiness Adapt? A Longitudinal Study of Disability with Implications for Economists and Judges*, 92 J Pub Econ 1061, 1067 (2008).

<sup>78</sup> See Oswald and Powdthavee, 37 J Legal Stud at S223–26 (cited in note 27).

<sup>79</sup> *Id.* at S220.

<sup>80</sup> See Oswald and Powdthavee, 92 J Pub Econ at 1071 (cited in note 77) ("[T]he general idea remains one that may eventually have practical application for lawyers and judges: happiness equations potentially give a way of estimating the sums of money *required to compensate* people for bad life events.") (emphasis added).

<sup>81</sup> Oswald and Powdthavee, 37 J Legal Stud at S218, S220 (cited in note 27); Oswald and Powdthavee, 92 J Pub Econ at 1071 (cited in note 77).

The calls in these articles for the use of happiness regressions within legal cases have not resulted in actual damages calculations, but considering average hedonic impacts for the purpose of valuation is legally permissible. Perhaps the clearest case establishing this is *Sherrod v Berry*,<sup>82</sup> in which the court considered the admissibility of expert testimony that allowed a jury to consider the “hedonic value of a human life” in estimating damages related to the lost companionship between a father and a son upon the death of the son.<sup>83</sup> The court allowed testimony from an expert witness who cited a study showing that the hedonic value of a life could be calculated by applying a multiplier to the deceased individual’s expected earnings.<sup>84</sup> While the jury had the right to reject such evidence, this case establishes the potential value of hedonic approaches in helping to value goods that do not have a market value.

While the expert was not offering a happiness regression (the inference of value is from consumption decisions<sup>85</sup> and survey data about willingness to pay<sup>86</sup>), the method of analysis does have some similarities to a happiness regression. First of all, the article cited by the expert relied in part on surveys in which individuals needed to self-assess,<sup>87</sup> and thus the value was not simply inferred from individual actions. In addition, like well-being analyses, the potential multipliers that were provided attempted to assign a value to a good that did not have a market value. Finally, aggregate data from other individuals were used to infer the value for one individual that could be applied through a multiplier. In addition to the existence of these similarities, the calculation of emotional impacts is generally left to the jury’s discretion, with little guidance for valuation techniques.<sup>88</sup> Thus,

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<sup>82</sup> 629 F Supp 159 (ND Ill 1985), revd on other grounds, 856 F2d 802 (7th Cir 1988).

<sup>83</sup> *Sherrod*, 629 F Supp at 160.

<sup>84</sup> Id at 163 (discussing how the expert referenced fifteen economics studies discussing the value of life and also cited a metastudy finding that “there was a relationship somewhere in the dimension of three times up to 30 times their economic productive income” as an estimate of “the hedonic value of life”). The cited study surveys academic literature “estimat[ing] the theoretically relevant value of life which is one based on individual willingness to pay rather than some calculation of future earnings.” Glenn Blomquist, *The Value of Human Life: An Empirical Perspective*, 19 *Econ Inquiry* 157, 158–62 (1981).

<sup>85</sup> See Blomquist, 19 *Econ Inquiry* at 159 (cited in note 84).

<sup>86</sup> See id at 158–59.

<sup>87</sup> Id at 159–60 (describing the two studies involved as “seek[ing] to determine a value of life by asking people how much they will pay”).

<sup>88</sup> See Mark Geistfeld, *Placing a Price on Pain and Suffering: A Method for Helping Juries Determine Tort Damages for Nonmonetary Injuries*, 83 *Cal L Rev* 773, 777, 841

although no opinions have cited a well-being analysis for calculating damages, such evidence appears to be admissible given the substantial latitude within the law for hedonic approaches and given the estimate's similarity to the estimates provided in analyses of the hedonic value of life.

## II. WELL-BEING ANALYSIS AS AN ATTRACTIVE APPROACH TO JUST COMPENSATION

This Part establishes why a well-being analysis is a necessary and well-suited response to the tension between making an individual whole and the need for workable standards that inheres in the just compensation jurisprudence.

There are many reasons that an individual might value her home at more than its fair market value,<sup>89</sup> and scholars have argued that ignoring this difference leads to inefficiencies and injustices.<sup>90</sup> These reasons are discussed in Part II.A. Though the Court has provided only a sketch of alternative approaches to just compensation and the difficulties in their execution, there is a substantial body of literature specifically regarding eminent domain takings that aims to provide a basis for supra-fair market value compensation. Part II.B covers these approaches as well as some of their limitations. While these approaches fall prey to valuation concerns, a well-being analysis that uses individual happiness levels after a move in an attempt to estimate a subjective-value premium can take into account many of these concerns and still provide robust value estimates, consistent with the Court's compromise. Covering these benefits of a well-being analysis, Part II.C argues that such an approach can make compensation in the context of eminent domain actions more efficient and just.

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(1995) (noting that “[s]tudies have shown that jury awards for pain and suffering vary widely for injuries that appear to be equally severe” and that “[t]his lack of uniformity introduces an element of unpredictability into the tort system,” but also noting that, “[n]evertheless, jurors are not presently provided with the guidance that would help them to understand how injury severity should be translated into a monetary award”).

<sup>89</sup> See Fennell, 2004 Mich St L Rev at 963–64 (cited in note 38).

<sup>90</sup> See, for example, Abraham Bell and Gideon Parchomovsky, *Taking Compensation Private*, 59 Stan L Rev 871, 877–85, 890 (2007) (surveying “competing theories [that] have been proposed to explain [the] purpose and scope [of just compensation],” including “fairness-based justifications” and “efficiency-based justifications,” and concluding that “fairness and efficiency theories require payment of full compensation at the property owner’s value in those cases where compensation is warranted”).

A. Why Supra-Fair Market Value Compensation Is a Better Approach, and the Source of the Practical Problems

An owner's subjective valuation of her home is likely to exceed its fair market value due to customizations based on the homeowner's preferences, intangibles associated with the home that cannot be transferred (such as memories), and relocation costs. The fair market value standard thus invites allocative inefficiencies.<sup>91</sup> Part II.A.1 covers some of the nontransferable aspects of a home that can cause subjective valuation to be higher than the home's fair market value, and Part II.A.2 explains why these aspects matter.

1. Reasons why subjective value might exceed the fair market value.

It is a well-accepted fact that a homeowner may have a subjective value of her home that exceeds its fair market value.<sup>92</sup> There are many factors that might drive a wedge between the total value that an individual places on her home and her home's fair market value.

One source of this subjective value is the idiosyncratic customizations that individuals make to their homes. In the United States, home renovations represent a substantial cost to homeowners,<sup>93</sup> and many of these renovations will have much more value to the residents than they will ever have in resale value. On average, a homeowner will recoup less than \$0.67 for every \$1.00 she spends on home-improvement projects.<sup>94</sup> This makes sense because homeowners spend money on making their houses consistent with their individual preferences, and future buyers are likely to have different preferences and to either value the improvements less or make other renovations that are consistent with their own tastes. The combination of the large amount spent on improvement projects and their low market

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<sup>91</sup> The term "allocative inefficiencies" refers to the utility that is lost when property is transferred from higher-value to lower-value users.

<sup>92</sup> For an early statement of this idea, see Thomas W. Merrill, *The Economics of Public Use*, 72 Cornell L Rev 61, 83 (1986) (observing that owners may place on their properties "subjective premium[s]" that are above fair market value).

<sup>93</sup> See Kris Hudson, *Americans Boost Spending on Remodeling* (Wall St J, Feb 3, 2014), archived at <http://perma.cc/5E6G-8AUS> (citing data from the US Census Bureau indicating that in 2013, homeowners spent \$130 billion on remodeling projects).

<sup>94</sup> Erica Christoffer, *2013-14 Cost vs. Value: Remodeling Pays Off Big Time* (REALTOR Magazine, Jan 2014), archived at <http://perma.cc/7LKT-VSFF> (citing a "nationwide cost-value average of 66.1 percent" in a survey covering thirty-five projects).

value returns suggests that there is a large gap between the subjective value of homes and their fair market value.

Perhaps the most well-known source of the subjective value of a home that is not part of the fair market valuation is the memories that the owner associates with the home. Happy memories are an example of a component of subjective valuation that is much more difficult to value because they are intangible and inalienable. A divergence between the subjective and fair market values can occur because memories cannot be transferred to a buyer.<sup>95</sup> Professor Lee Fennell aptly compares the subjective valuation of a home to that of a used wedding ring: Even though there is a market for used wedding rings, created by some individuals who sell their rings to raise cash quickly, these individuals are likely not those with sentimental attachments to their rings. It would be incorrect to use the price at which they sell their rings to estimate the value that a more sentimental person—who has chosen not to sell—has when she puts on her wedding ring.<sup>96</sup> Another source is the lost goodwill that occurs when an individual moves out of her neighborhood.<sup>97</sup> Being forced to move means having to start all over again in establishing relationships with neighbors.

Finally, the relocation costs of moving to a new home are also part of an individual's subjective value of her home.<sup>98</sup> Moving has substantial costs<sup>99</sup> that may not be encapsulated in the fair market value of the property. A homeowner's value of her home includes her valuation of not having to move—indeed, some individuals may choose to buy a home rather than rent because they do not want to live subject to the whim of a landlord who can choose not to renew a lease. This value will not be priced into the

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<sup>95</sup> See Lee Anne Fennell, *Just Enough*, 113 Colum L Rev Sidebar 109, 112 (2013) (arguing that such characteristics are nontransferable and are unlikely to be included in the fair market value).

<sup>96</sup> *Id.* at 114.

<sup>97</sup> See Merrill, 72 Cornell L Rev at 83 (cited in note 92). Note that while the topic of lost business goodwill is relevant for eminent domain involving businesses, it is outside the scope of this Comment because happiness surveys cannot be administered to assess corporate well-being.

<sup>98</sup> *Id.*

<sup>99</sup> See generally, for example, Jeanne M. Brett, *Job Transfer and Well-Being*, 67 J Applied Psychology 450 (1982) (examining the strain that moving may place on relationships); Sally Ann Shumaker and Daniel Stokols, *Residential Mobility as a Social Issue and Research Topic*, 38 J Soc Issues 1 (Fall 1982) (offering an overview of mobility's impact on both family-specific and national well-being).

home,<sup>100</sup> and thus part of the subjective valuation of a home is the moving cost saved by staying there.

2. Arguments for including “something more,” and some responses.

As demonstrated in this Part, economic theory and distributive justice theory converge in establishing the relevance of subjective valuation for eminent domain takings. Economists point to the inefficiencies that result from the misallocation that can occur under eminent domain if undercompensation is systemic. Others reach the same conclusion about the need for subjective valuation by pointing to the deep dignitary harms present when one is paid only the fair market value for her property. Both approaches weigh in favor of considering subjective value.

The economic costs of using the fair market value standard occur when land moves to a lower-value user.<sup>101</sup> Allocative efficiency requires that no good be transferred from a user who values it more to a user who values it less. But fair market value compensation does not guarantee such a result. Under fair market value compensation, proposed eminent domain takings that meet the standard for public use will be incentivized if

$$\text{Value of Home to Taker} > \text{Fair Market Value.}$$

However, the fact that the individual has not moved implies that

$$\text{Value of Home to Owner} > \text{Fair Market Value,}$$

and there is no reason to infer that the owner’s value is lower than the taker’s value. Thus, there is no guarantee that the taker’s valuation is higher than the owner’s valuation of the property—while this may be true in some cases, it need not necessarily

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<sup>100</sup> This is because in well-behaved property markets, one would expect investment buyers to be the marginal purchasers. Such buyers may purchase in order to rent the property out to others, with the result that the premium for getting to avoid the inconvenience of moving costs will not be part of the housing price since the house is a rental. See Fennell, 2004 Mich St L Rev at 963 (cited in note 38) (considering “the out-of-pocket cost of moving to another place” to be a component of subjective value that “do[es] not enhance fair market value”).

<sup>101</sup> At times, this Comment discusses the possibility of eminent domain as if a private actor were using it to reach the property of another. This is because, at least in theory, private parties may be able to take advantage of eminent domain. See, for example, *Southwestern Illinois Development Authority v National City Environmental, LLC*, 768 NE2d 1, 10 (Ill 2002) (finding that the “condemnation clearly was intended to assist [a private entity] in accomplishing their goals in a swift, economical, and profitable manner”).

be true.<sup>102</sup> Here, the cost of the taking is not fully internalized by the taker because the taker pays less than the cost imposed to the owner by eminent domain.<sup>103</sup> Such a standard therefore invites allocative-efficiency concerns,<sup>104</sup> especially when one considers the municipal-finance incentives that may make it possible for a government to purchase property even when the property's value to the municipality is below its fair market value.<sup>105</sup>

This is not to say that a world where eminent domain takings are not allowed in the first place is more efficient: absent such takings, one must worry about strategic holdouts.<sup>106</sup> The economic literature has well established the fact that strategic holdouts can keep property from being transferred even when

Value of Home to Taker > Value of Home to Owner,

because the property owner will try to extract all the surplus that will come from the taker's use of the property.<sup>107</sup> An impasse could occur due to diverging estimates of each party's bargaining power and due to the strategic behavior of each party in trying to hold out to be the last seller and to extract the total value from the buyer. However, one cannot expect fair market

<sup>102</sup> For a similar discussion concluding that the use of eminent domain with a fair market value standard may lead to allocative inefficiencies, see Thomas S. Ulen, *The Public Use of Private Property: A Dual-Constraint Theory of Efficient Governmental Takings*, in Nicholas Mercurio, ed, *Taking Property and Just Compensation: Law and Economics Perspectives of the Takings Issue* 163, 169–71 (Kluwer Academic 1992).

<sup>103</sup> For an argument about the importance of internalizing costs and its centrality to the law, see Robert D. Cooter and Ariel Porat, *Getting Incentives Right: Improving Torts, Contracts, and Restitution* 61–68 (Princeton 2014).

<sup>104</sup> It is worth noting that at least one economist who has defended the fair market value approach argues that such distortions need to be weighed against the incremental distortions that would be caused by the increase in taxes required to fund the gap between fair market value and subjective value. See Richard Posner, *Economic Analysis of Law* 65 (Aspen 5th ed 1998) (“[A] requirement of paying just compensation implies higher taxes (or tax substitutes such as inflation or public debt) than if there were no such requirement; and taxes . . . create misallocative effects.”).

<sup>105</sup> See, for example, William A. Fischel, *The Political Economy of Public Use in Poletown: How Federal Grants Encourage Excessive Use of Eminent Domain*, 2004 Mich St L Rev 929, 953 (arguing that “[a]bove-market compensation [ ] did not address the essential problem of the *Poletown* takings”—namely, “that Detroit did not have to put up much of its own money (either from its own taxes or from fungible grant money) to do the *Poletown* project”).

<sup>106</sup> See Miceli, *The Economic Theory of Eminent Domain* at 27–35 (cited in note 14).

<sup>107</sup> See Thomas W. Merrill, Book Review, *Rent Seeking and the Compensation Principle*, 80 Nw U L Rev 1561, 1570 (1987) (noting that eminent domain “traditionally has been employed to promote a more efficient allocation of resources by overcoming holdouts and free riders”).

value compensation through eminent domain to always generate efficient allocations in resolving this holdout problem.

Scholars have reached the same conclusion by pointing to the inherent injustice of compensation that is for only the fair market value of the property in the context of eminent domain. This approach is apparent in Professor Epstein's classic work *Takings: Private Property and the Power of Eminent Domain*.<sup>108</sup> Another example of this approach is the argument advanced by Professor Rachel Godsil and attorney David Simunovich, who argue that the undercompensation engendered by fair market value means that some will not be able to purchase another home, leading to the "loss of one's status as a homeowner."<sup>109</sup> Finally, the concern about the fundamental injustice of takers getting wind-fall gains while owners are undercompensated can play an important role in arguments that compensation should reflect some of the surplus generated through eminent domain.<sup>110</sup>

One important response to both the efficiency and the fairness concerns is Professor Nicole Garnett's argument that takers may have incentives to avoid taking properties from owners with high subjective values and that potential takers may bargain to pay more than the eminent domain takings amount, meaning that the inefficiencies of the fair market value standard may be overstated.<sup>111</sup> Garnett argues that because of the political consequences, takers are likely to avoid seeking high-subjective-value properties that are "important to a cohesive community of politically powerful owners."<sup>112</sup> As she admits, however, this channel is unlikely to protect groups who are traditionally considered politically powerless, and thus undercompensation still remains a

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<sup>108</sup> Epstein, *Takings* at 182–84 (cited in note 10).

<sup>109</sup> Rachel D. Godsil and David Simunovich, *Just Compensation in an Ownership Society*, in Robin Paul Malloy, ed., *Private Property, Community Development, and Eminent Domain* 133, 134 (Ashgate 2008).

<sup>110</sup> See, for example, Michael Heller and Rick Hills, *Land Assembly Districts*, 121 Harv L Rev 1465, 1477–78, 1480 (2008) (discussing how the Supreme Court's approach to compensation is an "apparent injustice," as "failure to pay over some share of the assembly value to condemnees deprives them of value that landowners normally retain," while ultimately arguing that in the land-assembly context, "if different procedures could gauge subjective valuation more cheaply and effectively, there is little doubt that such procedures would be more just").

<sup>111</sup> Nicole Stelle Garnett, *The Neglected Political Economy of Eminent Domain*, 105 Mich L Rev 101, 104–05 (2006).

<sup>112</sup> *Id.* at 118. See also *id.* at 114–15 (discussing how plans for a Chicago expressway were changed three times to avoid disrupting the parish boundaries of a particularly large Polish Catholic church).

concern.<sup>113</sup> In addition, Garnett argues that potential takers may wish to avoid the legal costs associated with the eminent domain process, providing an example of a 2000 economic-development project in South Bend, Indiana, in which the owners were paid by AM General, on average, 141 percent of the appraised value of their properties—an amount that included relocation assistance.<sup>114</sup>

While the point that sometimes individuals may receive more than fair market value compensation is well taken, the particular pressures in that situation—such as time pressure<sup>115</sup> and the desire to maintain good relations with the community<sup>116</sup>—may not always be present. As Garnett admits, “[her] case study does not, and cannot, demonstrate how the precondemnation bargaining process works in every case.”<sup>117</sup> One can find at least one example in which the *initial* compensation dynamics went in the opposite direction, and it occurred in what is arguably the most famous eminent domain case—*Kelo*. The developer in that case initially offered Susette Kelo, the named plaintiff, an amount less than the fair market value of her house, with the agent warning that the developer would take the house using eminent domain if Kelo did not accept the offer.<sup>118</sup> Similarly, in one of the more recent studies comparing compensation levels to the fair market value, Professor Yun-chien Chang found that the median compensation for residential properties was 88 percent of the estimated fair market value,<sup>119</sup> implying that overcompensation is not necessarily more likely than undercompensation. There may be reasons to be particularly concerned about homeowners with little bargaining power: as Garnett herself admits, “[o]wners

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<sup>113</sup> Id at 120–21 (discussing how, with the same expressway, the rerouting was at the expense of those with less power and concluding that “[t]his troubling history serves as a reminder that, while Taker-avoidance may minimize the overall undercompensation problem, the risk of undercompensation persists in individual cases, especially when the would-be targets lack political clout”).

<sup>114</sup> Id at 130–36.

<sup>115</sup> See Garnett, 105 Mich L Rev at 131 (cited in note 111).

<sup>116</sup> See id at 131–32.

<sup>117</sup> Id at 135.

<sup>118</sup> See Jeff Benedict, *Little Pink House: A True Story of Defiance and Courage* 67 (Grand Central 2009). Kelo had estimated the fair market value of her house to be at least \$70,000, stating at one point: “How many people with a \$70,000 house have a view like this?” But she was initially offered only \$68,000. Id at 131. While she ultimately received \$442,000 for her lot after the Supreme Court’s decision, this high amount was due to the desire of Connecticut officials to settle quickly and avoid further publicity. See id at 373–74; Somin, *The Grasping Hand* at 233 (cited in note 56).

<sup>119</sup> Yun-chien Chang, *Private Property and Takings Compensation: Theoretical Framework and Empirical Analysis* 111–12, 130 (Edward Elgar 2013).

have little incentive to ask for more than market value if they realize that they will not get it.”<sup>120</sup> Moreover, in the case that Garnett discusses, the higher compensation was part of a larger plan to cover relocation expenses, rather than having homeowners individually bargain for such coverage in the first place.<sup>121</sup> Thus, while these dynamics show that some factors can lessen the degree of undercompensation, they will not apply in all cases, and the resulting disparate impact may be particularly disturbing.

Even if the percentage of cases in which undercompensation occurs is low, the problems arising from undercompensation are exacerbated by the increased use of eminent domain for non-traditional public purposes. Epstein has written extensively about this problem. His concerns focus on narrow interests becoming richer through takings at the expense of a few landowners, which is why he has emphasized the importance of dispersing the benefits of takings.<sup>122</sup> As discussed above,<sup>123</sup> one can conceive of an eminent domain action as imposing an externality arising from the fact that the taker does not fully internalize eminent domain’s cost to the owner. Limits on the extent to which the benefits of such projects are concentrated can help reduce the externality problem by minimizing the difference between the benefits and the actual costs. Indeed, this tension between undercompensation and a broader definition of public use may be behind the strong public reaction against *Kelo*, as mentioned in the Introduction. Identifying one of the main issues in the oral arguments, Justice Breyer pushed against the government respondents, pointing out that the takees “want[ed] to be really not made a lot worse off, at least not made a lot worse off just so some other people [could] get a lot more money”;<sup>124</sup> and Justice Anthony Kennedy also showed an interest in this idea.<sup>125</sup>

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<sup>120</sup> Garnett, 105 Mich L Rev at 127–28 (cited in note 111).

<sup>121</sup> Id at 132 (noting that the company chose to cover relocation costs out of a desire for expediency, even though it did not believe that it was legally bound to do so).

<sup>122</sup> Epstein, *Takings* at 115, 163–64 (cited in note 10).

<sup>123</sup> See note 103 and accompanying text.

<sup>124</sup> *Kelo* Transcript at \*50 (cited in note 21).

<sup>125</sup> See id at \*22 (“Are there any writings or scholarship that indicates that when you have property being taken from one private person ultimately to go to another private person, that what we ought to do is to adjust the measure of compensation, so that the owner—the condemnee—can receive some sort of a premium for the development?”).

Owners may feel the injustices of the fair market value standard when their losses are other citizens' gains.<sup>126</sup>

### B. Difficulties in Attaining Honest Subjective Valuations

While there are potential inefficiencies and injustices that result from the payment of only the fair market value of taken property, the main issue, as alluded to in several court decisions, is that arriving at the subjective valuation is difficult. This is because an owner has an incentive to lie when asked directly about how much she values a particular piece of property, and devising clever mechanisms to avoid this problem requires making unrealistic assumptions.

The problem of lying in this context is so intuitive that scholars who discuss it rarely cite articles to support the claim.<sup>127</sup> Because an individual can always claim that her subjective value of a possession is arbitrarily high and can assert arbitrary preferences, she could employ a holdout strategy under the guise of claiming a high subjective valuation.<sup>128</sup>

Economists have attempted to develop sophisticated mechanisms to incentivize individuals to reveal their subjective valuations, but the assumptions required for these mechanisms to work are unrealistic. A creative method of incentivizing individuals to reveal their subjective valuations has been developed by Professors Florenz Plassmann and T. Nicolaus Tideman, who have argued that all homeowners would provide honest estimates of subjective valuations if governments tied property taxes to subjective valuations and if the probability of a loss from a

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<sup>126</sup> For example, the Director of the NAACP's Washington Bureau, Hilary Shelton, emphasized how "just compensation" was a "misnomer." In his congressional testimony about the *Kelo* decision, he argued that "[t]he fact that a particular property is identified and designated for economic development [ ] certainly means that the market is currently undervaluing that property or that the property has some trapped value that the market is not yet recognizing." In addition, when he was asked whether "adequate compensation" would address some of the disparate impacts of eminent domain on poor communities, he replied that "[i]t would begin the process." *The Kelo Decision: Investigating Takings of Homes and Other Private Property; Hearing before the Committee on the Judiciary, United States Senate, 109th Cong, 1st Sess 12, 13, 19 (2005)* (statement of Hilary O. Shelton, Director, Washington Bureau, National Association for the Advancement of Colored People, Washington, DC).

<sup>127</sup> See, for example, Miceli, *The Economic Theory of Eminent Domain* at 59 (cited in note 14) (discussing the "obvious question of why landowners cannot simply be asked how much they value the land and then be paid that amount in compensation," and arguing that "[t]he problem with this approach, of course, is that landowners would have an incentive to misrepresent their valuations").

<sup>128</sup> See *id.*

taking were equal to the valuation tax rate.<sup>129</sup> The problem with this approach is that there is no reason to expect that the tax rate will be equal to the probability of a taking,<sup>130</sup> especially because this probability is likely to vary across the different types of properties eligible for takings.<sup>131</sup> While Plassmann and Tideman do not provide estimates, the probability of a loss from a taking is so low that it is considered to be “near zero”<sup>132</sup> over the entire time that an individual owns a property. By contrast, most American individuals can expect to pay between 0.5 and 1 percent of their properties’ value as property taxes on an annual basis alone.<sup>133</sup> Thus, the percentage expected to be paid in property taxes over the time the property is owned is not also “near zero,” and the assumptions required by Plassmann and Tideman do not hold.

There also is a behavioral-economics critique of subjective valuation in the context of eminent domain takings that provides reason to be cautious about subjective valuation, even if homeowners were being honest in reporting it. To the extent that the subjective value of a home includes not having to move, people overestimate the harm they will feel from an injury.<sup>134</sup> This is related to the behavioral-economics finding that individuals may not do a good job of valuating nonmarket goods. For example, in the context of assessing the consequences of health changes, individuals focus more on what it is like to *become* unhealthy rather than to *be* unhealthy, resulting in “errors when estimating the sum that they feel will adequately compensate them.”<sup>135</sup> Another behavioral-economics concern with providing

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<sup>129</sup> Florenz Plassmann and T. Nicolaus Tideman, *Accurate Valuation in the Absence of Markets*, 36 Pub Fin Rev 334, 345–46 (2008).

<sup>130</sup> See Miceli, *The Economic Theory of Eminent Domain* at 65 (cited in note 14).

<sup>131</sup> One potential source for such variation is the fact that residences of owners with more political power are less likely to be subject to eminent domain. See note 113 and accompanying text.

<sup>132</sup> Thomas J. Miceli and Kathleen Segerson, *Takings*, in Boudewijn Bouckaert and Gerrit De Geest, eds, 4 *Encyclopedia of Law and Economics: The Economics of Public and Tax Law* 328, 334–35 (Edward Elgar 2000) (finding that “the probability of a physical taking is probably near zero for most landowners,” as “physical” contrasts with the more probable but intangible taking by restrictions on use through zoning or environmental regulation).

<sup>133</sup> Benjamin H. Harris and Brian David Moore, *Residential Property Taxes in the United States* \*2 (Urban-Brookings Tax Policy Center, Nov 18, 2013), archived at <http://perma.cc/FZJ5-KTHH>.

<sup>134</sup> See John Bronsteen, Christopher Buccafusco, and Jonathan S. Masur, *Hedonic Adaptation and the Settlement of Civil Lawsuits*, 108 Colum L Rev 1516, 1534–35 (2008).

<sup>135</sup> *Id.* at 1535.

compensation for an individual's estimate of her own subjective value is that the deviation between the fair market value and the indemnity value may be a consequence of an endowment effect. An endowment effect occurs when someone perceives the cost of losing a good she already owns (that is, the individual's "willingness to accept" for the good) to be larger than the benefits of gaining the same good assuming she did not own it (that is, the individual's "willingness to pay" for the good).<sup>136</sup>

Because of these two behavioral distortions, the proposal offered by Professors Jack Knetsch and Thomas Borcharding to estimate subjective value based on owner characteristics is problematic. Knetsch and Borcharding propose making "a series of apparently sincere bids" to determine owners' reservation prices for their properties.<sup>137</sup> These reservation prices are then modeled empirically to be a function of observable individual characteristics, and that function can be used to estimate subjective value in future eminent domain cases given the owners' characteristics.<sup>138</sup> However, when cognitive biases cause harms to be overestimated, an allocatively efficient taking might not occur because the owner's estimated (expected) subjective valuation is higher than the actual (expected) subjective value, the individual demands too much, and thus a higher-value taker does not engage in eminent domain.

With the standard overestimation arising from a focus on the change rather than on the final state, this bidding approach will generate welfare losses, as this sort of overestimation involves estimating a value that the owner would later regret.<sup>139</sup> The efficiency implications of endowment effects in the valuations generated by Knetsch and Borcharding's proposal, however, are more complicated. One could argue that the presence of an endowment effect does not create welfare problems, since allocative efficiency requires that goods be allocated to an individual whose willingness to accept exceeds all others' willingness to

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<sup>136</sup> See Christine Jolls, Cass R. Sunstein, and Richard Thaler, *A Behavioral Approach to Law and Economics*, 50 *Stan L Rev* 1471, 1483–84 (1998).

<sup>137</sup> Knetsch and Borcharding, 29 *U Toronto L J* at 247 (cited in note 49).

<sup>138</sup> *Id.*

<sup>139</sup> For example, this method would lead to estimates of the required just compensation that would be too high; properties that the individual (in retrospect) would wish had been taken would, in fact, not be taken, as a result of the heightened compensation requirement and the owner's biases in the negotiation process.

pay, regardless of the existence of endowment effects.<sup>140</sup> Thus, a subjective valuation that includes an endowment effect is still the correct standard for the amount that a taker's value should exceed. However, as Professor Russell Korobkin argues, this standard is only sometimes appropriate. When the gap is caused by resource constraints—which is to say, “differences in ability to back up preferences with dollars that result from different levels of wealth”—the estimate that includes the endowment effect (the higher willingness to accept) is proper for determining whether the good has been allocated to the highest-value user.<sup>141</sup> But when the endowment effect is due to wealth effects, it is not obvious that this is correct;<sup>142</sup> when the endowment effect is due to “regret-avoidance behavior or the disutility caused by selling,” the lower willingness-to-pay standard is the correct one for welfare analyses.<sup>143</sup> Thus, the presence of endowment effects in Knetsch and Borchering's estimates could generate efficiency losses if certain potential sources of the endowment effect cause the gap, as the endowment effect could prevent efficient eminent domain takings from occurring due to regret avoidance or to the disutility of selling.

In the academic context, Judge Posner has raised another problem with subjective valuations for takings—one that, in theory, would persist even if an accurate estimation of these valuations were possible. Posner argues that taking subjective value into account can incentivize overinvestment in property so that the owner can make money due to the subjective valuation exceeding the fair market value.<sup>144</sup> Although he makes the comment in passing, Posner seems concerned that owners who foresee the possibility of a taking will purchase property that they would not otherwise have purchased but for supra-fair market value compensation to earn the premium between their subjective valuations and what they actually paid. However, it is not clear that there is an inefficiency here: the individual purchases

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<sup>140</sup> For this argument, see Herbert Hovenkamp, *Legal Policy and the Endowment Effect*, 20 J Legal Stud 225, 226–29 (1991).

<sup>141</sup> Russell Korobkin, *The Endowment Effect and Legal Analysis*, 97 Nw U L Rev 1227, 1249, 1257 (2003).

<sup>142</sup> See *id.* at 1248, 1257–59 (illustrating that all the other types of factors driving an endowment effect that the author mentions are covered under the categories in which willingness to accept or willingness to pay is clearly relevant).

<sup>143</sup> *Id.* at 1258.

<sup>144</sup> Posner, *Economic Analysis of Law* at 64–65 (cited in note 104) (arguing that the law's attempt to address this concern by prohibiting compensation for property enhancements made after the announcement of government projects is insufficient).

goods that she values at an amount that is higher than the purchase price. Thus, an inefficiency will occur only if an individual is able to lie about her subjective valuation.

Perhaps Posner is concerned that strategic purchasing takes resources away from goods that provide more utility but that are less likely to be the target of eminent domain actions. However, this will be a problem only if the probability of a taking is very high, as the expected profits (the difference between the amount paid and the subjective value, multiplied by the probability of being subject to eminent domain) go down when eminent domain is unlikely. Therefore, as the probability of takings decreases, these expected profits decrease—perhaps failing to justify the transaction costs of purchasing—and the probability of being stuck with a property that was not as good as the alternative rises. Thus, the low probability of the use of eminent domain discussed earlier<sup>145</sup> makes the harms that Posner identifies likely to be small. As a result, a well-being-analysis approach that provides a good measure of subjective valuation need not address this particular concern.<sup>146</sup>

### C. Well-Being Analysis as a Solution to the Problems Inherent in Subjective Valuation

A well-being analysis attempts to trace an indifference curve between different states of the world and income levels, allowing us to infer what level of income would make an individual just as well off as if an event did not occur.<sup>147</sup> This is done by asking respondents “only simple questions rating their current level of happiness,” which, as opposed to some of the questions outlined in Part II.B, “do not require them to value nonmarket goods.”<sup>148</sup> The individual reports of happiness levels are compared to the different events that those individuals are experiencing and, ideally, the reports follow a set of individuals to control for individual “fixed effects” for happiness—that is, an individual’s average measured happiness level.<sup>149</sup> Given the potential for cognitive

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<sup>145</sup> See note 132 and accompanying text.

<sup>146</sup> For further criticisms of the overinvestment concern, see Chang, *Private Property and Takings Compensation* at 28–29 (cited in note 119) (pointing to risk aversion as one reason that individuals may choose not to overinvest).

<sup>147</sup> See Oswald and Powdthavee, 37 *J Legal Stud* at S220 (cited in note 27).

<sup>148</sup> John Bronsteen, Christopher Buccafusco, and Jonathan S. Masur, *Happiness and the Law* 88 (Chicago 2015) (“[T]he techniques used by [well-being analysis] avoid a number of [ ] methodological problems.”).

<sup>149</sup> Formally, this is done using the following regression specification:

biases, this approach is especially useful when there are no “price tags attached” to the valuable item in question,<sup>150</sup> as is the case for the subjective valuation of a home.

The success of a well-being analysis in the context of establishing the subjective value of a property is a function of the data set available. The ideal data set would be a sample that involved individuals who were subject to eminent domain, were forced to move, and were paid only the fair market value of their properties; it would also include a control group that was not subject to eminent domain. All individuals would be followed for a few years after the act of eminent domain occurred, and they would be asked questions about their levels of well-being.<sup>151</sup> By looking at the effects of being exogenously treated as the target of eminent domain actions (that is, of being randomly chosen to have their properties taken) on the happiness levels of the takers, the well-being analysis would show exactly how much, on average, individuals would need to be paid on top of the fair market value to be left indifferent about having their property taken and being forced to move. This value would include compensation for moving costs as well as the subjective-value premium of the homes. These costs can be encapsulated in how much less happy individuals are if they move and are not compensated for that move plus their subjective-value premium, compared to the control individuals who were not subject to eminent domain.

Even with less ideal data sets in which the individuals were not subject to forced moves, the well-being effects of moving can be estimated by looking at the effects on happiness of selling and moving away from a property that one owned, controlling for the

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$$LS_{i,t} = \alpha_1 + \alpha_2 D_{i,t-1} + \alpha_3 D_{i,t-2} + \alpha_4 D_{i,t-3} + X'_{i,t} \gamma + \beta(y_i) + \theta_i.$$

In this equation,  $D_{i,t}$  captures whether a bad life event happened in period  $t$ ,  $\gamma$  is the individual's characteristics,  $y_i$  is the level of income of individual  $i$ , and  $\theta_i$  is a fixed effect for individual  $i$ . The sum of  $\alpha_2 + \alpha_3 + \alpha_4$  is the calculated impact of the bad life event on life-satisfaction measures ( $LS_{i,t}$ ). Thus, because  $\beta$  translates between life-satisfaction levels and income, the damages amount would be  $s = (\alpha_2 + \alpha_3 + \alpha_4)/\beta$ .

<sup>150</sup> Oswald and Powdthavee, 37 *J Legal Stud* at S218 (cited in note 27). See also generally John Bronsteen, Christopher Buccafusco, and Jonathan S. Masur, *Well-Being Analysis vs. Cost-Benefit Analysis*, 62 *Duke L J* 1603 (2013) (arguing for the validity of a well-being-analysis approach as opposed to a cost-benefit approach in evaluating particular policies, and pointing to the virtue of a well-being-analysis approach in cases in which opportunities to quantify revealed preferences are limited).

<sup>151</sup> Note that there are many alternative measurements of well-being. For an overview of the most common alternatives, see Ed Diener, et al, *Well-Being for Public Policy* 11–19 (Oxford 2009).

fact that the individual chose to move in the first place. This Comment follows that approach in attempting to control for the effects of the act of moving (from either owned or rented residences) on happiness, using the BHPS data. This approach is necessary because the reasons the individual *chose* to move could be related to happiness, and thus any estimation of the effect of giving up one's home for only fair market value could be skewed by the same happiness-influencing life events that provoked the decision to relocate in the first place. For example, one could move because one receives a job that one likes better but that does not pay more (an improvement in quality of life that would be unobserved in the data), and thus the observed effect on happiness of the move might be positive. However, the effect of giving up one's house for only its fair market value might still be negative, even though the net effect of the move is positive. Thus, simply looking at the effect on happiness of moving from a house that one owns is likely to be biased.

This approach measures different effects than would be expected with a data set surveying takeees (since moving is controlled for, the impact of moving on happiness is not estimated). With a survey of takeees, there is no need to control for the decision to move, because the decision was not chosen by the individuals and thus there is no reason to believe that this decision is correlated with unobserved life events separate from moving that affect happiness. Thus, the data from takeees would encapsulate the cost of being subject to eminent domain and being paid only fair market value compensation. However, because with the BHPS data it is necessary to control for the choice to move in order to attempt to estimate the effects of the different motivations for moving, the effect on happiness of having to uproot is left out of the estimate. To improve the data, the estimate could be supplemented with tax data on the costs of moving in order to arrive at a similar estimate. These data are easily accessible, because individuals report their costs of moving to the federal government in order to get tax deductions for those moves.<sup>152</sup> By incorporating the financial cost of moving based on tax data, the well-being results from survey data involving individuals who were not the targets of eminent domain can still be helpful in establishing what takeees would need to be paid in order to be "made whole."

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<sup>152</sup> See 26 USC § 217.

Such an approach would address some of the problems discussed above in establishing subjective value. First, there would be no incentive for individuals to lie. In the ideal study, an individual would already have been compensated for the taking of her property, and thus she would have no reason to believe that the answers she gave about her happiness levels would influence her compensation. Moreover, results from a well-being analysis would not be sensitive to the estimation problems mentioned above.<sup>153</sup> The fact that individuals adapt to new conditions better than expected would be captured in the well-being levels that are reported. Further, the owner would never have to estimate her subjective valuation of her house (which prevents inflation due to endowment effects caused by estimation distortions), but she would still have to recognize any disutility of selling that is part of an endowment effect and that should be counted.<sup>154</sup> Thus, such an approach is likely to provide a better estimate of subjective value than the best honest guess an individual could provide *ex ante*.<sup>155</sup>

In addition, to the extent that one can reasonably expect adaptation,<sup>156</sup> a well-being analysis helps capture variation in the way that individuals adapt.<sup>157</sup> Well-being analysis provides data about who is most likely to adapt to losing their homes under eminent domain. As a result, using the results of such an analysis to determine compensation for eminent domain takings can help make eminent domain more efficient in the Kaldor-Hicks sense (that is, in a way that maximizes total welfare and could leave all individuals as well or better off with adequate lump-sum transfers).<sup>158</sup> With a sufficiently large data set, this analysis could provide support for laws like the Missouri law mentioned above, in which the “heritage value” premium for

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<sup>153</sup> See Part II.B.

<sup>154</sup> See notes 141–43 and accompanying text.

<sup>155</sup> See Bronsteen, Buccafusco, and Masur, 62 *Duke L J* at 1620 (cited in note 150) (discussing how quickly an individual’s happiness returns to pre-accident levels after losing a limb, and suggesting that “[s]tudies of people who have lost limbs provide fairly accurate information on the hedonic loss associated with losing an arm”).

<sup>156</sup> This is not something that should be taken for granted, as well-being analyses show that adaptability varies significantly across different types of events. See Diener, et al, *Well-Being for Public Policy* at 106 (cited in note 151) (contrasting the adaptability to marriage with the adaptability to widowhood).

<sup>157</sup> See *id.* (finding that in well-being analyses about adaptability to life events, “a pattern that emerged in all the analyses [ ] conducted was that adaptation effects varied considerably among the individuals that [were] examined”).

<sup>158</sup> See Nicholas Kaldor, *Welfare Propositions of Economics and Interpersonal Comparisons of Utility*, 49 *Econ J* 549, 550–52 (1939); J.R. Hicks, *The Foundations of Welfare Economics*, 49 *Econ J* 696, 711–12 (1939).

taking a property from someone who has lived there for an unusually long period makes the taking more expensive for the taker.<sup>159</sup> A well-being-analysis approach would help establish whether the wedge between the fair market value and the subjective value is larger for individuals who have stayed in their homes for longer. If so, then this approach could establish a basis for more states to implement laws like Missouri's or for courts to apply a variable multiplier. Potential takers would then internalize the losses that they imposed on individuals who have stayed in their homes for a long time, and they would thus accomplish the public goals in a cheaper way by seeking out individuals for whom moving is less costly.

A well-being-analysis approach responds to the pragmatic compromise seen in the federal constitutional cases, because well-being analyses can be highly reliable if done rigorously and with large samples.<sup>160</sup> There is likely to be some measurement error, but because this error is in the dependent variable, the effect in the regression process is on the error terms rather than on the regression coefficients themselves, and the ordinary least squares (OLS) regression still works in large samples as long as that error is not correlated with explanatory variables.<sup>161</sup> The large sample size can help compensate for any problems in reliability within individual-level data providing measures of well-being.<sup>162</sup>

Although one's initial reaction might be to suppose that emotions are not part of law, "nothing in conventional welfare economics implies that preferences in an emotion state should be discounted."<sup>163</sup> Other critics, especially mainstream economists, object to a well-being-analysis approach from a consistency standpoint, worrying about the "interpersonal comparability of

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<sup>159</sup> See note 62 and accompanying text.

<sup>160</sup> See Bronsteen, Buccafusco, and Masur, 62 Duke L J at 1624 (cited in note 150) ("Meta-analyses of different well-being tools have found high levels of reliability for both life satisfaction and experience sampling methods.").

<sup>161</sup> See Jeffrey M. Wooldridge, *Econometric Analysis of Cross Section and Panel Data* 76–78 (MIT 2d ed 2010) (demonstrating that in the case of random measurement error in the dependent variable, "the larger error variance violates none of the assumptions needed for OLS estimation to have its desirable large-sample properties," and stating that when "the measurement error is uncorrelated with the explanatory variables, OLS is perfectly appropriate").

<sup>162</sup> See Diener, et al, *Well-Being for Public Policy* at 69–70 (cited in note 151) (discussing how "large sample sizes compensate for low reliability" in large-scale surveys).

<sup>163</sup> Eric A. Posner, *Law and the Emotions* \*28 (John M. Olin Law & Economics Working Paper Series), archived at <http://perma.cc/27UF-CZB9>.

well-being.”<sup>164</sup> But a well-being-analysis approach fits in well with accepted assumptions of psychology, sociology, and health economics.<sup>165</sup> Even the well-respected traditional neoclassical economist Professor Gary Becker admitted the relevance of well-being analyses to economic questions.<sup>166</sup> Moreover, emotional effects play an important role in intentional tort law, as damages are allowed for the intentional infliction of emotional distress;<sup>167</sup> thus, eminent domain’s similarity to an intentional tort as a deliberate action makes particularly relevant the emotional component of the subjective value that a well-being analysis may capture.

Some scholars might argue that a well-being analysis, as estimated by looking at movers’ subjective valuations, does not go far enough. Fennell has argued that subjective value is just one part of the undercompensation that occurs in the context of eminent domain:

The uncompensated increment is made up of three distinct components: (1) the increment by which the property owner’s subjective value exceeds fair market value; (2) the chance of reaping a surplus from trade (that is, of obtaining an amount larger than one’s own true subjective valuation); and (3) the autonomy of choosing for oneself when to sell.<sup>168</sup>

A well-being analysis of movers would capture only the first of these components, and a well-being analysis of individuals who were actually displaced by eminent domain projects would capture only the happiness costs of losing the first and the last components. However, it is not clear that the second component fits in with the make-whole standard that the Court requires:<sup>169</sup> in breaking a contract, there is no obligation to share some of

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<sup>164</sup> Bernard M.S. van Praag and Barbara E. Baarsma, *Using Happiness Surveys to Value Intangibles: The Case of Airport Noise*, 115 *Econ J* 224, 236 (2005).

<sup>165</sup> See *id.*

<sup>166</sup> Luis Rayo and Gary S. Becker, *Evolutionary Efficiency and Happiness*, 115 *J Polit Econ* 302, 327–28 (2007) (modeling “happiness as a biological measurement instrument that guides the agent’s decisions,” and concluding that “when viewed from an economic perspective, happiness appears to have multiple signs of statistical inference”).

<sup>167</sup> See Restatement (Second) of Torts § 46 (1965).

<sup>168</sup> Fennell, 2004 *Mich St L Rev* at 958–59 (cited in note 38) (citations omitted). See also Wyman, 41 *UC Davis L Rev* at 260 (cited in note 23) (discussing how eminent domain deprives takees of opportunities to bargain for shares of surplus from economic-development projects).

<sup>169</sup> See Part I.A.

the surplus once the breached-against party is made just as well off as if the breach did not occur.<sup>170</sup>

While some will argue that a well-being-analysis approach applied to eminent domain takings does not go far enough, it at least provides a rigorous way to estimate the subjective-value premium that can exist for many reasons. In doing so, it workably achieves an estimate that other methods have failed to reliably yield. It makes progress on preventing some of the inefficiencies associated with undercompensation, and it addresses concerns about the justice of the fair market value compromise. The next Part provides an example of what this helpful analysis might look like in practice.

### III. AN ESTIMATE OF THE WELL-BEING-ANALYSIS MULTIPLIER FOR JUST COMPENSATION

This Part provides an example of how a well-being analysis—based on a longitudinal study following residents of Great Britain—can establish a basis for providing supra-fair market value compensation in eminent domain cases. Using a well-being-analysis approach, this Part shows that moving from a home that one owned in the previous three years correlates with a statistically significant decline in well-being. The data also show that this negative effect is higher for groups of individuals whom one would expect to have higher subjective property valuations. Part III.A summarizes the data and explains why they are well-suited for a well-being analysis, and Part III.B describes the methodology and the assumptions behind such an analysis in this context. The estimated negative cost of giving up a property that one owns for only the fair market value is discussed in Part III.C, and the implications of such a significant estimate are discussed in Part III.D.

#### A. Summary of the Data

The ideal data for a thorough well-being analysis are survey data that include measures of overall well-being and that follow

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<sup>170</sup> See Posner, *Economic Analysis of Law* at 131 (cited in note 104), citing Oliver Wendell Holmes, *The Path of the Law*, 10 Harv L Rev 457, 462 (1897) (“[I]t is not the policy of the law to compel adherence to contracts but only to require each party to choose between performing in accordance with the contract and compensating the other party for any injury resulting from a failure to perform.”). See also Holmes, 10 Harv L Rev at 462 (cited in note 170) (“The duty to keep a contract at common law means a prediction that you must pay damages if you do not keep it—and nothing else.”).

a group of individuals for multiple time periods; the BHPS data set that this Part uses is one of the best examples of such a data set.<sup>171</sup> Paid for by the British government, this survey has been conducted annually since 1991 with substantial efforts made to follow up with previous respondents.<sup>172</sup> Respondents are interviewed in successive waves: when an entire household moves, the household members are followed to their new residence; when an individual moves from the original household, the adult members of her new household are also interviewed. The BHPS data set provides a “nationally representative sample of households,”<sup>173</sup> and it surveys over forty thousand individuals above the age of fifteen.<sup>174</sup> Because the individuals who are compensated in eminent domain cases are owners,<sup>175</sup> the sample used in this Comment is restricted to individuals who are currently listed as primary homeowners or primary renters, as the household survey identifies up to two individuals in each category.<sup>176</sup> The subset of individuals interviewed in the BHPS data set were interviewed later with similar questions in the Understanding Society data set<sup>177</sup> in waves B through E, and these four waves are also included in the regression analyses.

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<sup>171</sup> The attractiveness of this data set for well-being analyses is reflected in the variety of articles using it to value factors that are not subject to market pricing. See, for example, Oswald and Powdthavee, 37 *J Legal Stud* at S220 (cited in note 27) (using the BHPS data set for “regression equations in which a measure of happiness is the dependent variable” to “sketch an alternative . . . in the setting of emotional damages”); R. Layard, S. Nickell, and G. Mayraz, *The Marginal Utility of Income*, 92 *J Pub Econ* 1846, 1847, 1856 (2008) (using a “measurement of experienced happiness in six major surveys,” including the BHPS, to estimate “the elasticity [ ] of the marginal utility of income with respect to the level of income”).

<sup>172</sup> *British Household Panel Survey, Waves 1-18, 1991-2009: Secure Access, National Grid Reference (Easting, Northing, OSGRDIND)* (UK Data Service, Jan 16, 2014), archived at <http://perma.cc/9RHK-9ZZ2>.

<sup>173</sup> Oswald and Powdthavee, 37 *J Legal Stud* at S224 (cited in note 27).

<sup>174</sup> This number is calculated by counting unique identifiers in the pid variable that occur in any wave. The subset that occurs in multiple waves and provides complete survey responses is much smaller, as is reflected in the number of observations in Table 3. See *British Household Panel Survey: Waves 1-18, 1991-2009* (UK Data Service, 2010) (“BHPS Data”), online at <http://discover.ukdataservice.ac.uk/catalogue/?sn=5151> (visited Apr 5, 2016) (Perma archive unavailable).

<sup>175</sup> See *Kelo*, 545 US at 496.

<sup>176</sup> For example, consider the variables AHSOWR1 and ARENTP1. See *BHPS Documentation and Questionnaires* (University of Essex Institute for Social and Economic Research), archived at <http://perma.cc/2MPQ-VYD7>.

<sup>177</sup> Individuals in the BHPS data set can be linked to those in the Understanding Society data using the variable pidp, which has the corresponding identification in the BHPS data set for all individuals who were surveyed in both. See *Understanding Society: Waves 1-5, 2009-2014* (UK Data Service, Nov 19, 2015) (“Understanding Society Data”),

This data set is useful for this Comment because survey respondents were asked about their life-satisfaction<sup>178</sup> levels in the majority of the waves. In addition to these indicators of happiness levels, the data include information about whether the individual moved from a home that someone in the household owned (each year, this describes around 5 percent of the sample), the distance that the individual moved, and the individual's preferences with respect to moving in the previous years. The data set also allows for nearly all the controls used by Professors Oswald and Powdthavee in their aforementioned works;<sup>179</sup> Oswald and Powdthavee have pioneered the use of this data set for legal valuation issues by estimating the effects of a death in the family or of a disability on happiness for the calculation of damages.<sup>180</sup> In addition, the data set has information about whether the individual wished to stay in a particular location, her reasons for moving, and her tenure at the home she owned. The last variable in particular allows a well-being analysis to determine whether the costs of giving up one's home increase the longer one has been there.

While this study is helpful for deriving a lower bound for the cost of displacement from an owned property on life-satisfaction measures (that is, the actual value is likely higher), it is not the ideal data set for a well-being-analysis estimate of subjective valuation. One problem with the data is that they mostly involve people who made the choice to move rather than people who were forced by the government to sell their properties.<sup>181</sup> This is because people who move typically *choose* to move, and thus there may be a selection effect due to these individuals' relatively lower costs of moving (that is, the individuals who move have, on average, lower costs and lower subjective valuations than

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online at <http://discover.ukdataservice.ac.uk/catalogue/?sn=6614> (visited Apr 9, 2016) (Perma archive unavailable).

<sup>178</sup> In the data, this variable is wLFSATO, where w denotes the wave letter, which is the round of surveying and represents a year range during which individuals were surveyed. This variable is available for all survey years since 1997, except for 2002. The surveyor asks the respondent to reply, on a scale of 1–7, to the question: “Using the same scale how dissatisfied or satisfied are you with your life overall?” *Living in Britain - Wave 6 Coversheet \*7* (UK Data Service) (“Wave 6 Questionnaire”), archived at <http://perma.cc/M4YB-MH6K> (emphasis omitted).

<sup>179</sup> See notes 76–81 and accompanying text.

<sup>180</sup> See Part I.C.

<sup>181</sup> While it is possible that some of the individuals in the data set moved due to eminent domain actions on the part of the British government, there is no way to identify such individuals given the questions that were asked.

those who stay).<sup>182</sup> However, this implies that the result is a lower bound on the hedonic cost of moving, since one would expect an individual targeted by a taking to have a higher cost of moving or a higher subjective value than a seller, due to the selection effects of choosing to sell and what this choice signals about the extent to which an owner is sentimental about her residence.

Another difficulty in using this data set is that it generates an estimate for the costs of moving on the well-being of British residents rather than of American residents. Thus, this data set is helpful only if it is reasonable to expect that the effects on happiness of being paid only fair market value are similar in both countries. The first question that this raises is whether one would expect estimates across countries based on happiness regressions to be similar in general. Professors John Bronsteen, Christopher Buccafusco, and Jonathan Masur acknowledge the difficulties of using well-being survey results from other countries, but they believe the data are still comparable enough to be relevant.<sup>183</sup> For example, studies have shown that, across countries, the effect of income on happiness is consistent,<sup>184</sup> which implies some similarities in the sources of happiness across countries and counsels in favor of accepting the conversion between happiness and dollars that the well-being analysis does based on British data, and in favor of applying it in the American context. Moreover, an article that focused on reported levels of happiness in Great Britain and the United States found that “data from

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<sup>182</sup> See Fennell, 113 Colum L Rev Sidebar at 112 (cited in note 95) (“[D]ramatic downward shifts [in subjective valuation] may occur due to changes in employment, household configuration, health, and other factors. People who have experienced these downward shifts are likely to be overrepresented among sellers, along with those who never formed strong attachments to the home in the first place.”) (citation omitted).

<sup>183</sup> Bronsteen, Buccafusco, and Masur, 62 Duke L J at 1626 n 110 (cited in note 150) (arguing that “[e]mpirical studies have found [ ] that similarly situated individuals in different countries have similar levels of life satisfaction . . . [which] suggests that subjective well-being measures may even be comparable across countries”).

<sup>184</sup> See Betsey Stevenson and Justin Wolfers, *Economic Growth and Subjective Well-Being: Reassessing the Easterlin Paradox* \*9 (NBER Working Paper Series, Aug 2008), archived at <http://perma.cc/R9GA-SQPQ> (arguing that Gallup World Poll data “yield a particularly close relationship between subjective well-being and the log of GDP per capita,” as “the correlation exceeds 0.8” for the 131 countries with “usable” GDP estimates); Diener, et al, *Well-Being for Public Policy* at 198 (cited in note 151) (“The high degree of cross-country correlation between average incomes and life satisfaction has convinced some previous skeptics to take life satisfaction data more seriously as genuine measures of well-being.”).

Great Britain give noticeably similar results” to what was found in the American context.<sup>185</sup>

The second question is whether it is reasonable to expect British and American citizens to have similar attitudes about property that would affect their subjective valuations. It is worth noting that the United Kingdom and the United States received nearly identical scores in a Property Rights Index constructed by the Property Rights Alliance,<sup>186</sup> and the similar respect for property provides some evidence for a similar attachment. Although scholars have not yet produced studies that show that British and American residents value homeownership identically, the homeownership rates across the countries are remarkably similar.<sup>187</sup> Finally, one weak indicator that Americans may value homeownership more than the British and thus have a higher subjective valuation than the British is the fact that the percentage of British renters who wish to own is lower than the percentage of American renters who wish to own.<sup>188</sup> Renters often eventually do become homeowners; given that the two countries have similar rates of homeownership—and assuming that this attitude was held by renters in the past—this provides some evidence that the British may attach less value to their homes. As such, the estimate would be similar or might be a lower bound.

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<sup>185</sup> David G. Blanchflower and Andrew J. Oswald, *Well-Being over Time in Britain and the USA*, 88 *J Pub Econ* 1359, 1367 (2004).

<sup>186</sup> *The International Property Rights Index 2014* (Property Rights Alliance, 2014), archived at <http://perma.cc/C56V-KPW7> (assigning the United Kingdom a score of 7.8 and the United States a score of 7.7). Because no other country had the exact same score as the United States, this means that no country was closer to the United States than the United Kingdom was in terms of the protection of property rights.

<sup>187</sup> See Drew DeSilver, *Around the World, Governments Promote Home Ownership* (Pew Research Center, Aug 6, 2013), archived at <http://perma.cc/2TKK-ZD8C> (showing that in 2011, 65.0 percent and 67.9 percent of US and UK adults, respectively, were homeowners); Dan Andrews and Aida Caldera Sánchez, *The Evolution of Homeownership Rates in Selected OECD Countries: Demographic and Public Policy Influences*, 2011 *OECD J: Econ Stud* 207, 212 (showing that in the 1990s, 66.2 percent and 67.5 percent of US and UK adults, respectively, were homeowners, and that in 2004, 68.69 percent and 70.70 percent of US and UK adults, respectively, were homeowners).

<sup>188</sup> While results from the British Social Attitudes Survey show that 45 to 46 percent of renters would rather own, 84 percent of Americans intend to buy. Compare Alison Wallace, *Public Attitudes to Housing* \*9 (University of York, Sept 2010), archived at <http://perma.cc/38DV-9M2C>, with *Study Finds 84 Percent of Renters Intend on Buying a Home* (National Mortgage Professional Magazine, May 21, 2012), archived at <http://perma.cc/38WR-PHMS>.

## B. Methodology

This Section describes the estimation strategy. Part III.B.1 presents a more formal regression model and explains how it relates to the individual choices present in the data set. Part III.B.2 describes how the estimation works and its relation to previous well-being analyses, clarifying why the assumptions in the formal model are important.

### 1. The formal model.

The happiness regression analysis assumes that an individual has a separable utility function (that is, each aspect of an individual's life influences her utility independently from other aspects, and the effect of each aspect can be isolated). The utility that the individual maximizes is a function of several factors, including work-related income, other income, and behaviors such as the choice to sell one's home at fair market value.

Formally, the individual faces the following maximization problem, in which she maximizes utility by choosing certain actions ( $a$ ) and by choosing whether to move from her home:

$$\text{maximize } u = \begin{cases} u(y + i - C_{\text{move}}, a) - D * I\{\text{Own}\} + u(M_i) & \text{if move} \\ u(y + i, a) & \text{if no move} \end{cases}$$

where  $y$  is the individual's income level,  $i$  is the individual's nonlabor income,  $a$  is a general vector of actions that the individual can choose (such as consumption decisions),  $C_{\text{move}}$  is the cost of moving, and  $D$  is the utility cost of giving up an owned home net of the payments that one receives when selling it. This cost is experienced only by individuals who move from homes they own, since  $I\{\text{Own}\}$  is equal to 1 if an individual moves from a home that she owns. Moreover, the model assumes that  $u(M_i)$ , which represents the benefits of moving given the reasons that were specified, is independent of whether one owns. That is, these benefits are constant across owners and renters; so, for example, if a person moves because of a better job opportunity, her utility level will be the same regardless of whether she owns or rents.<sup>189</sup> Note that each individual made the choice of whether to own a home in the previous period. This means the choice to

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<sup>189</sup> This is a strong assumption, but one reason to make it is that the movers in the regression sample are restricted to include only moving individuals who expected to stay in their homes. Thus, the decision to own or rent was not conditioned on expectations that the utility from moving would be high enough to choose to move.

own the home from which one is considering moving is not part of the individual's current-period utility-maximization problem.<sup>190</sup>

If an individual chooses to move, the increase in utility due to moving minus the utility cost of selling one's home and being paid only fair market value is greater than the value of staying. That is,

$$u(y + i - C_{move}, a) - D * I\{Own\} + u(M_i) > u(y + i, a).$$

In other words, if the data show individuals moving, this is because the utility associated with moving—which includes the cost of giving up one's home and receiving only fair market value in return—exceeds the utility of staying.

The parameter to be estimated (as described below) is the sum of money,  $s$ , such that the moving individual is compensated for having to give up the home she owned while being paid only the fair market value. That is,  $s$  is the value that makes the following equation hold:

$$u(y + i - C_{move} + s, a) - D * I\{Own\} + u(M_i) = u(y + i - C_{move}, a) + u(M_i).$$

This equation simplifies to:

$$u(y + i - C_{move} + s, a) - D * I\{Own\} = u(y + i - C_{move}, a).$$

This estimated value  $s$  can then be interpreted as the make-whole amount: the amount that leaves an individual indifferent between (1) moving from a home that she owned and being paid only fair market value, and (2) moving but not having to bear the subjective-valuation wedge.<sup>191</sup> That is, it is the amount necessary to compensate the owner for any additional loss of goodwill in the neighborhood and memories associated with her residence compared to the average renter, and for all the idiosyncratic investments she made in the property that were not fully reflected in its fair market value.<sup>192</sup> *This is equivalent to trying to find the amount of money that would make the utility levels of the individuals who sold their homes equal to the utility*

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<sup>190</sup> A more complicated model would reflect the fact that if one chooses to move, one has to make a decision as to whether to own or rent the new residence—but for simplicity, this model assumes that the choice is the same for owners and renters. Later regressions do not make this assumption, as they control for current-period ownership status.

<sup>191</sup> For a similar setup but with the death of a loved one represented by  $D$ , see Oswald and Powdthavee, 37 *J Legal Stud* at S222–23 (cited in note 27).

<sup>192</sup> See Part II.A.1.

levels of those who moved but did not have to sell a home to do so (that is, who rented rather than owned).

To estimate  $s$ , the empirical strategy follows the methodology used by Oswald and Powdthavee in their works using happiness regressions to estimate compensation. In their articles, the regressions “trace out a form of indifference curve between income and any kind of life event.”<sup>193</sup> This curve is then used to establish the amount that an individual would need to be paid to be just as well off in a state in which she was paid that amount and the event happened, as compared to the counterfactual state in which the event did not happen at all. Oswald and Powdthavee do this using the BHPS data set to estimate the cost of the death of a loved one<sup>194</sup> and to estimate the cost of an event causing disability.<sup>195</sup>

Specifically, Table 3 in this Comment reflects an adjusted regression specification similar to that of Oswald and Powdthavee,<sup>196</sup> in which

$$LS_{i,t} = \alpha_i + \beta_1 I\{Move_{i,t}\} + \beta_2 I\{Move_{i,t}, Own_{i,t-1}\} + \gamma_1 I\{Move_{i,t-1}\} \\ + \gamma_2 I\{Move_{i,t-1}, Own_{i,t-2}\} + \delta_1 I\{Move_{i,t-2}\} \\ + \delta_2 I\{Move_{i,t-2}, Own_{i,t-3}\} + X'_{i,t} \zeta + \varepsilon_{i,t}.$$

In this specification,  $LS_{i,t}$  is the life-satisfaction value reported by individual  $i$  at time period  $t$ ;  $\alpha_i$  is the individual's average level of happiness in the data;  $I\{Move_{i,t}, Own_{i,t-1}\}$  takes a value of 1 if the individual moved in period  $t$  and owned the residence prior to that move;  $I\{Move_{i,t}\}$  takes a value of 1 if the individual moved in period  $t$ , regardless of whether she owned the residence she moved from;  $X'_{i,t}$  is a vector of individual-level controls, including personal and household characteristics that could affect life satisfaction and that might be correlated with the variable of interest (most notably, income); and  $\varepsilon_{i,t}$  is the error term in the regression.<sup>197</sup> The coefficients of special interest

<sup>193</sup> Oswald and Powdthavee, 37 J Legal Stud at S220 (cited in note 27).

<sup>194</sup> Id at S217.

<sup>195</sup> See generally Oswald and Powdthavee, 92 J Pub Econ 1061 (cited in note 77). Although a similar equation is not provided in the article on bereavement, Tables 3 and 4 in that article reflect a similar regression specification. Oswald and Powdthavee, 37 J Legal Stud at S234–37 (cited in note 27).

<sup>196</sup> Oswald and Powdthavee, 92 J Pub Econ at 1067 (cited in note 77).

<sup>197</sup> Id at 1067–69. Specifically, this vector includes sex; age; age squared divided by 100; log of real household income per capita; and dummy variables for relationship status, employment status, student status, education level and achievement, homeownership status, number of children, and household size.

here are  $\beta_2$ ,  $\gamma_2$ , and  $\delta_2$ , which capture the effect on an individual's happiness of moving from a home she owns in the first year, second year, and third year after the move, respectively, controlling for the general effects of moving on happiness in those years. Thus, the coefficients  $\beta_2$ ,  $\gamma_2$ , and  $\delta_2$  are the cost in terms of life satisfaction of giving up a home one owned and of being paid only its fair market value. As in Oswald and Powdthavee's calculation of compensation for the death of a family member, these coefficients of special interest can be used to estimate  $s$  by using the coefficient on income to convert the effect of moving on happiness into monetary terms.<sup>198</sup>

2. Discussion of the assumptions behind the model and their validity.

Oswald and Powdthavee lay out the following identification assumptions (that is, the assumptions about the data that must hold for the inferences to be valid) that are necessary for such an approach in order to estimate  $s$ . In this Comment,  $s$  is the make-whole amount that leaves the individual indifferent between (1) moving from a home that she owned and being paid only fair market value, and (2) moving but without bearing the subjective-valuation wedge. But in Oswald and Powdthavee's articles,  $s$  is the compensation amount that leaves the individual indifferent between a death in the family with compensation and the family member living without the compensation (and similarly indifferent in the context of losing a limb) in terms of happiness levels.<sup>199</sup> The assumptions are:

1. Individuals in a sample must be followed over a reasonably long period, so that information on them is available before and after [the event.]
2. The bad life event must be exogenous.
3. There needs to be a control group of individuals unaffected by the event.
4. The sample should be reasonably representative of the adult population.

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<sup>198</sup> See Oswald and Powdthavee, 37 *J Legal Stud* at S231 (cited in note 27) (using the "coefficient on real household income" to "work out how much income would be required to offset the distress from an event such as bereavement").

<sup>199</sup> *Id* at S223; Oswald and Powdthavee, 92 *J Pub Econ* at 1062 (cited in note 77) (using the name  $c^*$  rather than  $s$  to denote the same parameter of interest).

5. A set of control variables, including income, should be available in the data set, so that confounding influences can be differenced out.<sup>200</sup>

The methodology and the data set used in this Comment meet most of these criteria. The sample is over an eighteen-year period, which is a greater time period than those used by most of the articles in this literature. Similarly, the sample includes a control group of individuals who did not move. As mentioned above, the creators of the data set took steps to ensure that it was representative of the adult British population,<sup>201</sup> and the vast number of questions asked—including a 259-page questionnaire in one wave<sup>202</sup>—allows for the construction of a set of reasonable control variables.

The more tenuous part of the approach has to do with the inapplicability of the second identification assumption regarding exogeneity in a well-being analysis of moving: because the individual makes a choice to move away from a home that she owns, the move from an owned home is not exogenous. That is, when the sample of movers is not restricted to individuals who have been subject to eminent domain, one can reasonably expect those who move to be responding to life events—such as becoming dissatisfied with their communities—that are generally unobserved and that are highly correlated with happiness. This creates an endogeneity problem. That is, the choice to move is related to unobserved events or conditions that are highly related to happiness levels, and thus the econometrician cannot disentangle the effects on happiness due to moving from the effects on happiness due to those events that she does not observe. For this reason, a well-being analysis would ideally be performed using a data set that involved individuals who were subject to eminent domain. In such a data set, the fact that individuals were forced to move would mean that unobservable events motivating individuals to move would no longer be a problem.<sup>203</sup>

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<sup>200</sup> Oswald and Powdthavee, 37 *J Legal Stud* at S223 (cited in note 27).

<sup>201</sup> See *id.* at S224.

<sup>202</sup> See *Wave 6 Questionnaire* (cited in note 178) (presenting one of the shorter questionnaires).

<sup>203</sup> That is, although the population subject to eminent domain may be different from the population that is not (as discussed above, potentially due to race), by controlling for individual characteristics, the analysis would be consistent with Oswald and Powdthavee's approach. It could also isolate the effects of experiencing eminent domain, because going through eminent domain (and receiving fair market value compensation) is itself more like a death in the family or a lost limb in that it is not chosen in response

While the event of moving from an owned home is not exogenous in the BHPS data set, the above regression specification aims to control for any influences on happiness that are correlated with the decision to move from an owned home. The goal of doing this is to identify the particular effect of the process of receiving fair market value for one's home when selling it. First, the regressions include controls for the different life events that can motivate a move by making use of the reasons provided for the move. By including these in the regressions, the relationship between those events and happiness is estimated and controlled for. Moreover, to the extent that a move is an action taken to improve one's happiness level (recall that an individual moves only because she expects to be happier moving rather than staying), the regression equations also control for this general effect of moving. Finally, the regressions include a control for whether the individual upgraded to another owned home that was worth more in value, as this is another potential source of happiness. After these sources of variation in happiness are controlled for, what remains is the effect of being paid the fair market value for one's home. Thus, even though this event is not exogenous, its effect can be estimated. Moreover, the timing supports an inference of causation, as the decision to move was made prior to the observed level of happiness.<sup>204</sup>

The individuals who move but do not give up owned homes help to separately identify the effects of ownership because of the relationship between the move itself and the underlying rationale for the move on happiness levels. As long as the events underlying the rationales for moving are related to happiness in the same way for renting movers as they are for owning movers, the residual effect of giving up one's home for fair market value can be estimated.

For the identification strategy to work, it must be the case that there is a decent number of renters moving for the same reasons that owners move, such that the effect of that rationale on happiness can be separately estimated. As Table 1 shows, owners who move typically have reasons for moving that are

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to factors that the econometrician cannot observe, but instead it simply (and unfortunately) happens to the individuals.

<sup>204</sup> Of course, the move could be in response to a particular trend in the individual's happiness level, and thus the change in happiness could precede the move. For example, a relationship with a family member could have disintegrated, and the move was away from a family member. This would have affected the individual's happiness level before and after the move. Controlling for the reasons helps to address this.

similar to those of renters who move, and thus identification will not be a problem.

TABLE 1. REPORTED REASONS FOR MOVING AMONG MOVERS IN THE REGRESSION SAMPLE

| Reason                          | Moving Renters | Moving Owners |
|---------------------------------|----------------|---------------|
| Move In with Partner            | 43             | 66            |
| Split from Partner              | 44             | 159           |
| Move In with Family             | 8              | 9             |
| Move from Family                | 3              | 4             |
| Move In with Friend             | 4              | 0             |
| Closer to Family or Friend      | 41             | 60            |
| Move to College                 | 20             | 7             |
| Left College                    | 8              | 0             |
| Job Reason, Self                | 76             | 108           |
| Job Reason, Other               | 10             | 36            |
| Retirement                      | 2              | 7             |
| Evicted or Repossessed          | 96             | 27            |
| Larger Accommodation            | 72             | 213           |
| Smaller Accommodation           | 62             | 111           |
| Own Accommodation               | 11             | 14            |
| Buy Accommodation               | 56             | 11            |
| Health Reasons                  | 35             | 28            |
| No Stairs                       | 25             | 24            |
| Another Type                    | 5              | 3             |
| Other Accommodation Aspects     | 17             | 37            |
| Disliked Previous Accommodation | 6              | 1             |
| Better Accommodation            | 35             | 23            |
| Privacy                         | 3              | 4             |
| Wants Change                    | 12             | 13            |
| Disliked Isolation              | 3              | 19            |
| Move to Rural Environment       | 3              | 10            |
| Move from Rural Environment     | 0              | 0             |
| Traffic                         | 1              | 1             |
| Area Unsafe                     | 10             | 3             |
| Noise                           | 6              | 10            |

|                     |    |     |
|---------------------|----|-----|
| Area Unfriendly     | 20 | 8   |
| To a Specific Place | 8  | 15  |
| Disliked Area       | 18 | 32  |
| Other               | 77 | 176 |

Source: *BHPS Data* (cited in note 174); *Understanding Society Data* (cited in note 177).

Not only are there owners and renters in each category, but the numbers are quite similar across the broader categories. While there are fewer owners who move due to eviction or foreclosure, there are no categories in which there are many owners who move but too few renters to be able to estimate the effects.

Finally, all movers (both renters and owners) who intended to move are dropped from the data set. That is, the indicator for whether someone moved from a certain place is 1 only if she indicated that she wished to stay in the previous residence in the period before moving. This is important because it helps support the assumption that the benefit of moving for a given specified reason is constant whether or not the individual owned the home. If the reason for a move was expected, the value of that reason might be reflected in the housing-tenure choice (renters might, on average, expect more of a reason to move). This restriction also has the benefit of making the moving population here more like takees, since takees also indicate a desire not to move or sell. After limiting the moving population to individuals who are designated as “primary renters” or “primary owners,” there are still 841 renting movers and 1306 owning movers. Table 2 shows the distribution of these movers over the years in terms of the first year in which the effects of the moves are observed.

TABLE 2. DISTRIBUTION OF MOVERS IN THE REGRESSION SAMPLE

| Year after Move | Total Observations | Renters Who Moved | Owners Who Moved |
|-----------------|--------------------|-------------------|------------------|
| 1997            | 6,603              | 47                | 44               |
| 1998            | 6,622              | 44                | 65               |
| 1999            | 7,962              | 44                | 74               |
| 2000            | 7,641              | 51                | 77               |
| 2001            | 11,106             | 82                | 105              |
| 2003            | 11,825             | 66                | 112              |
| 2004            | 11,497             | 73                | 136              |
| 2005            | 10,992             | 59                | 123              |
| 2006            | 11,013             | 62                | 80               |
| 2007            | 10,916             | 64                | 124              |
| 2008            | 10,668             | 56                | 118              |
| 2009            | 10,190             | 62                | 70               |
| 2010            | 6,562              | 48                | 77               |
| 2011            | 6,245              | 31                | 34               |
| 2012            | 5,770              | 20                | 35               |
| 2013            | 5,573              | 32                | 32               |

Source: *BHPS Data* (cited in note 174); *Understanding Society Data* (cited in note 177).

Note that there are no observations for the year 2002, as the life-satisfaction question was not asked during that wave of the survey.<sup>205</sup>

### C. Results

After controlling for the effect of moving, the regression results demonstrate a clear negative effect from moving from a home that one owns. The coefficients imply a multiplier that is about 22 percent for compensation that does not include moving expenses. Table 3 presents the results when the dependent variable is the life-satisfaction variable.

<sup>205</sup> *BHPS Documentation - Subject Category Index* (University of Essex Institute for Social and Economic Research), archived at <http://perma.cc/3HUY-6VDD> (showing that the variable wLFSATO, which is “Satisfaction with: life overall,” is not available in wave K of the survey).

TABLE 3. IMPACT OF MOVING ON LIFE-SATISFACTION VALUES

| Variables                        | Model 1                   | Model 2                 | Model 3                 | Model 4                   |
|----------------------------------|---------------------------|-------------------------|-------------------------|---------------------------|
| Moved Two Years Ago              | 0.0419<br>(0.0545)        | -0.0269<br>(0.0450)     | -0.0267<br>(0.0450)     | 0.0203<br>(0.0580)        |
| Moved One Year Ago               | 0.176***<br>(0.0562)      | 0.00268<br>(0.0473)     | 0.00289<br>(0.0473)     | 0.175**<br>(0.0589)       |
| Moved in Previous Year           | 0.253***<br>(0.0584)      | 0.0795*<br>(0.0483)     | 0.0797*<br>(0.0483)     | 0.198***<br>(0.0626)      |
| Owned and Moved Two Years Ago    | 0.0634<br>(0.0642)        | 0.0117<br>(0.0538)      | -0.165<br>(0.254)       | 0.104<br>(0.679)          |
| Owned and Moved One Year Ago     | -0.0206<br>(0.0635)       | 0.00847<br>(0.0543)     | -0.168<br>(0.254)       | -0.0245<br>(0.0667)       |
| Owned and Moved in Previous Year | -0.136**<br>(0.0661)      | -0.0958*<br>(0.0550)    | -0.0996*<br>(0.0563)    | -0.0848<br>(0.0705)       |
| Household Income                 | 2.02e-06***<br>(1.46e-07) | 2.43e-07<br>(1.69e-07)  | 2.43e-07<br>(1.69e-07)  | 2.90e-06***<br>(2.16e-07) |
| Household Size                   | -0.0229***<br>(0.00428)   | -0.0283***<br>(0.00616) | -0.0283***<br>(0.00616) | -0.0339***<br>(0.00486)   |
| Homeowner                        | 0.177***<br>(0.0206)      | -0.0602*<br>(0.0320)    | -0.0604*<br>(0.0320)    | 0.166***<br>(0.0219)      |
| Primary Owner                    | -0.0536***<br>(0.0134)    | -0.0249<br>(0.0178)     | -0.0248<br>(0.0178)     | -0.0681***<br>(0.0142)    |
| Primary Renter                   | -0.124***<br>(0.0219)     | -0.0916***<br>(0.0279)  | -0.0916***<br>(0.0279)  | -0.134***<br>(0.0234)     |
| Longtime Homeowner               |                           |                         | 0.176<br>(0.248)        |                           |
| House Value                      |                           |                         | 0.00417<br>(0.0508)     |                           |
| Sex                              | 0.0170**<br>(0.00727)     | 0.657<br>(0.458)        | 0.657<br>(0.458)        | 0.0251***<br>(0.00769)    |
| Age                              | -0.0356***<br>(0.00158)   | 0.0142***<br>(0.00379)  | 0.0142***<br>(0.00379)  | -0.0306***<br>(0.00165)   |
| Unemployed                       | -0.360***<br>(0.0114)     | -0.121***<br>(0.0125)   | -0.121***<br>(0.0125)   | -0.354***<br>(0.0123)     |
| University Graduate              | -0.0349***<br>(0.00753)   | 0.0573<br>(0.0534)      | 0.0573<br>(0.0535)      | -0.0832***<br>(0.00810)   |
| Current Student                  | 0.536**<br>(0.255)        | 0.800**<br>(0.378)      | 0.800**<br>(0.378)      | 0.376<br>(0.259)          |
| Retired                          | 0.127***<br>(0.0164)      | 0.0972***<br>(0.0177)   | 0.0971***<br>(0.0177)   | -0.156***<br>(0.0179)     |
| Number of Children               | -0.0130**<br>(0.00553)    | 0.00337<br>(0.00712)    | 0.00336<br>(0.00712)    | -0.0119*<br>(0.00608)     |
| Constant                         | 5.837***<br>(0.0528)      | 3.770***<br>(0.724)     | 3.770***<br>(0.724)     | 5.575***<br>(0.0547)      |
| Observations                     | 131,821                   | 131,821                 | 131,821                 | 107,682                   |
| R-Squared                        | 0.060                     | 0.013                   | 0.013                   | 0.065                     |

|                                  |     |        |        |     |
|----------------------------------|-----|--------|--------|-----|
| Individual Fixed Effects         | NO  | YES    | YES    | NO  |
| Year Fixed Effects               | YES | YES    | YES    | YES |
| Region Fixed Effects             | YES | YES    | YES    | YES |
| Move Reason Fixed Effects        | YES | YES    | YES    | YES |
| Instrumental Variable for Income | NO  | NO     | NO     | YES |
| Number of pid                    |     | 21,078 | 21,078 |     |

Note: Robust standard errors are indicated in parentheses.

\*\*\* =  $p < 0.01$ , \*\* =  $p < 0.05$ , \* =  $p < 0.1$

Model 1 is a simple regression that leaves out individual fixed effects—that is, the individual’s identity is not used in the regression. Although the individual’s survey responses from previous years were used to determine whether she moved and for what reasons, the regression treats the happiness results from an individual in one year and the next as if they were from separate people. Models 2 and 3 both include fixed effects—that is, the information on an individual’s happiness levels in previous and later years is used in the regressions. Model 3 is different from Model 2 in that the former includes indicators for whether the individual moved from a house she had lived in for a long time (more than fifteen years), and it also tests for the effect of controlling for moves from especially expensive homes. One important caveat about the Long Housing Tenure variable is that it includes only a subset of moves from houses in which there was a long housing tenure, as the date at which ownership was initiated was often not available in the data set.<sup>206</sup> As such, the dummy variable for this variable is 1 when it is known that the owner lived there for more than fifteen years; when the dummy variable is 0, however, it is also possible that the owner lived there for more than fifteen years, and there may simply be insufficient data to determine the length of the tenure. Model 4 instruments for household income using income from the past period and whether the interviewer was able to verify the survey respondent’s claimed income using a pay slip; income may be endogenous to life satisfaction because, for example, someone may be more able to make money when her psychological well-being is greater.<sup>207</sup>

<sup>206</sup> See notes 174, 177 (presenting data that omit relevant information about the date of initial ownership).

<sup>207</sup> For an example of this step being taken in a similar context, see Oswald and Powdthavee, 37 *J Legal Stud* at S231, S238 (cited in note 27) (proposing “income measured at  $t - 1$ ” and “whether or not the interviewer sees the paycheck,” among other potential instruments).

A fixed-effects model is the equivalent of including a dummy variable for each individual person—that is, the regression estimates an average level of happiness for each person in the data set.<sup>208</sup> This helps to make the coefficients in front of the changing regressor variables more precise to the extent that one would expect those regressor variables to interact with unobserved individual characteristics that do not change over time (as one might expect when the outcome variable is happiness).<sup>209</sup> For this reason, the estimates in Models 2 and 3 are better than those in Model 1, as they make better use of the information in the data set.

For Models 2 and 3, the coefficients on the control variables are generally in the proper direction that the theory would predict in cases in which they are significant. For example, unemployment is negatively correlated with higher individual happiness levels, and when income is significant, it is positively correlated with life-satisfaction levels. After controlling for the general effect of moving, these results imply that moving from a home that one owns has a negative impact on happiness in the year after the move.

While the Long Housing Tenure variable that was included in Model 3 is not statistically significant, this is perhaps due to too few instances of long housing tenure (as discussed above) or simply to a small sample, as homeownership has become more popular in recent years in Britain<sup>210</sup> and, thus, people are less likely to move from homes that they have been in for a while.<sup>211</sup> Similarly, the Top Quintile Home Value variable captures whether the value of the home is in the top 20 percent of moving individuals who wanted to stay in their homes. These variables were included to check whether some owners are more hurt by being paid only fair market compensation and to make sure that the coefficients on the variables of interest are not being driven by outliers. Neither of these points in the direction that one would expect, but that may be because the assumptions about

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<sup>208</sup> See Joshua D. Angrist and Jörn-Steffen Pischke, *Mostly Harmless Econometrics: An Empiricist's Companion* 223 (Princeton 2009).

<sup>209</sup> For example, some individuals may be more optimistic about their futures because they know something about themselves that the econometrician does not—such as particular skills that are not measured—that would make their happiness levels higher. Fixed effects can control for these general, unchanging characteristics.

<sup>210</sup> Indeed, from 1971 to 2011, rates of homeownership in Britain increased from 50 to 64 percent. *A Century of Home Ownership and Renting in England and Wales* (Office for National Statistics, Apr 19, 2013), archived at <http://perma.cc/5KJG-4EQH>.

<sup>211</sup> See René Böheim and Mark P. Taylor, *Tied Down or Room to Move? Investigating the Relationships between Housing Tenure, Employment Status and Residential Mobility in Britain*, 49 *Scottish J Polit Econ* 369, 383 (2002).

similar reasons for moving break down in the case of longtime homeowners compared to renters, and the longtime homeowners may be moving to especially good opportunities given that they chose to leave houses in which they had spent so much time.<sup>212</sup>

#### D. Legal Implications

The results derived from the BHPS data set provide support for states adopting multipliers and for courts analyzing eminent domain issues to consider a multiplier as consistent with the Supreme Court's guidance on just compensation.

##### 1. Justifying a fair market value multiplier.

These results can be used to support an appropriate multiplier for the housing value that reflects the effect of an eminent domain action on happiness. The more-conservative results found in Model 2 imply that moving leads to, on average, a 0.0958 decrease in a homeowner's well-being in the year after the move relative to a renter's well-being (on a scale from 1 to 7, where the average life-satisfaction level is 5.21). Because Model 4 implies that, on average, the payment of an additional pound increases happiness by 0.00000290 life-satisfaction points,<sup>213</sup> an individual would need to be compensated by £33,034 to be truly "made whole." After throwing out outliers at the bottom 5 percent and top 5 percent, the average value for owned housing in the BHPS data set (reported by respondents as the price for which they would expect to sell their home) is around £150,000. Thus, moving from a home one owns relative to moving from a home one rents implies an average decrease in happiness costing 22 percent of the estimated fair market value of the average individual's property in monetary terms.

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<sup>212</sup> Two other robustness checks that are not reflected in the above table were performed. The above table uses measurements of move effects for only three years, because when a fourth move variable was added—which would have shown the effects on happiness for four years from the date of the move—there was not a significant coefficient on that term. Because Stata drops observations when there are missing values, adding that extra year meant that the data set was smaller. Thus, this Comment reports the estimates for only three years' worth of effects on happiness with the appropriate lags. A lag of three years is consistent with what Oswald and Powdthavee use in measuring the effects of disability. Oswald and Powdthavee, 92 *J Pub Econ* at 1068 (cited in note 77). In addition, the time of year at which the person took the survey did not change the estimates on the variables of interest, so indicators for this variable have been left out of the regression.

<sup>213</sup> This is the most conservative estimate, and it is also likely the most reliable one because it begins to address the endogeneity problems associated with income.

What are the implications of an accurate multiplier for the current fair market value that is provided in the eminent domain context? Again, while the above results must be caveated with the caution that strict assumptions have been made to allow identification, these results imply that the average person subject to eminent domain is undercompensated by 22 percent of the value of her property.

These results provide support for states that have adopted nonzero multipliers. The estimate using the income coefficient in the data implies that the states discussed in Part I.B with 25 percent multipliers—Connecticut and Michigan, as well as Missouri (for “nonheritage homes”)—are in the right range given the more conservative estimate, especially considering that the 22 percent multiplier does not yet include moving costs,<sup>214</sup> which can be reasonably estimated as exceeding an additional 3 percent.<sup>215</sup> While Indiana, Missouri (for “heritage homes”), and Rhode Island employ multipliers that exceed the 22 percent estimate, this estimate is a lower bound. Thus, it is possible that higher multipliers offer compensation that is closer to the actual average subjective valuation. This analysis provides support for other states that have recognized the undercompensatory nature of the fair market value standard by compensating relocation expenses, but that as of yet have been unwilling to use a multiplier.

In addition, this analysis provides an additional alternative to the fair market value standard for courts that wish to follow the Supreme Court’s requirements that an individual be “made whole.”<sup>216</sup> The Supreme Court endorsed a fair market value standard because of its workability, on the assumption that no other workable standards existed.<sup>217</sup> However, a 22 percent multiplier based on this well-being analysis provides an estimate for the

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<sup>214</sup> See Part I.B.

<sup>215</sup> An interstate household move alone has been estimated to cost \$9,000, with closing costs on a new-home purchase estimated to be as high as “3 [percent] of the purchase price” and survey evidence implying an average total transaction cost of 12 percent. John M. Quigley, *Transactions Costs and Housing Markets*, in Tony O’Sullivan and Kenneth Gibb, eds, *Housing Economics and Public Policy* 56, 59–60 (Blackwell Science 2003). This is in addition to the possibility that minorities pay extra search costs in this process—one scholar has estimated that minorities may face a “discrimination tax” of approximately \$3,000. Camille Zubrinsky Charles, *The Dynamics of Racial Residential Segregation*, in J. Rosie Tighe and Elizabeth J. Mueller, eds, *The Affordable Housing Reader* 499, 519 (Routledge 2013), citing John Yinger, *Closed Doors, Opportunities Lost: The Continuing Costs of Housing Discrimination* 95–103 (Russell Sage 1995).

<sup>216</sup> *Olson*, 292 US at 255. See also Part III.A–B.

<sup>217</sup> See notes 39–41 and accompanying text.

amount that needs to be paid to an individual—an amount that can be “readily estimated”<sup>218</sup> and that “has an external validity which makes it a fair measure of public obligation to compensate.”<sup>219</sup> For these reasons, it meets the workability criteria of fair market value by estimating an owner’s subjective value of her property. However, it has the extra benefit of, on average, getting the subjective valuation correct in terms of meeting the Supreme Court’s requirement of making the individual whole, as opposed to the fair market value standard, which is guaranteed to undercompensate when legally applied.<sup>220</sup> Thus, the conservative approach taken in calculating this multiplier provides a basis for courts to begin compensating individuals with the fair market value plus an additional 22 percent of that value to satisfy the Fifth Amendment.

## 2. Addressing objections.

All multipliers, even ones that are rigorously pegged to an average valuation, raise the concern of overcompensation, and there are many authors who have rejected multipliers in part due to such concerns.<sup>221</sup> While the fair market value guarantees that all individuals are undercompensated, a well-being-analysis approach allows individuals with below-average subjective valuations to be overcompensated while still allowing individuals with above-average subjective valuations to be undercompensated (just less so than the fair market value standard would have allowed).<sup>222</sup> Moreover, this raises the concern that individuals with below-average valuations will actively lobby for their

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<sup>218</sup> *Boom Co v Patterson*, 98 US (8 Otto) 403, 408 (1878).

<sup>219</sup> *Kimball Laundry*, 338 US at 5.

<sup>220</sup> See Parts I.A, II.A.1.

<sup>221</sup> See, for example, Somin, *The Grasping Hand* at 207 (cited in note 56) (noting that under a supra-fair market value approach, owners “might actually be overcompensated”); Fennell, 2004 Mich St L Rev at 993–94 (cited in note 38) (pointing out perverse incentives when percentage bonuses exceed subjective valuations).

<sup>222</sup> While the fact that some individuals are still undercompensated is also a criticism of the multiplier approach, these individuals are undercompensated less than they would be under the fair market value standard, and thus a multiplier based on a well-being-analysis approach is an improvement in this respect. Absent a better alternative that can meet the Court’s call for a workable estimate, this improvement supports adopting a multiplier based on a well-being-analysis approach.

properties to be taken using eminent domain, as they will benefit from the overestimation that occurs with a multiplier.<sup>223</sup>

Neither of these criticisms is fatal to the use of a multiplier derived from a well-being analysis. First, the fact that there is some overcompensation is not necessarily worse than the status quo, in which the legal standard leads *ex ante* to undercompensation. A true commitment to “making the individual whole” requires being willing to occasionally overcompensate in order to come closer to adequate compensation and, as demonstrated in Part II.A.2, overcompensation can also encourage rent-seeking. Assuming that individuals are symmetrically distributed around the average subjective value for a given good with the same fair market value, the expected error (that is to say, the deviation from making the individual whole, either through over- or undercompensation) is minimized by using the average value rather than the fair market value given the choice between the two, and the disparity between these standards increases the more that individuals are clumped closer together.<sup>224</sup> Thus, while there are deviations from the estimate of the economic value, a well-estimated multiplier comes closer to getting individuals to the make-whole amount required by the courts under certain

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<sup>223</sup> See Somin, *The Grasping Hand* at 207–09 (cited in note 56), citing *Hawaii Housing Authority v Midkiff*, 467 US 229, 233 (1984) (suggesting that this problem has occurred even with the fair market value standard).

<sup>224</sup> This can also be shown mathematically. Assume that there are individuals with four subjective valuations of properties with the same fair market values. Those subjective valuations are denoted by  $a$ ,  $b$ ,  $c$ , and  $d$ , and an individual with a valuation of  $i$  will be denoted as Person  $i$ . Without loss of generality, let  $a \leq b \leq c \leq d$ . The multiplier, if correctly estimated, will lead to a payment to each individual of  $(a + b + c + d) / 4$ , since that is the average subjective value and the properties have the same fair market values. This means that the error associated with individual  $a$  using the multiplier is  $(a + b + c + d) / 4 - a$ : since Person  $a$  has a lower-than-average subjective valuation, she is overpaid to the extent that the average subjective valuation is greater than her own. Similarly, the error associated with Person  $b$  is  $(a + b + c + d) / 4 - b$ . Both Person  $c$  and Person  $d$  are underpaid under the multiplier approach, and thus the errors associated with their payments will be the extent to which their subjective valuations exceed the payments they receive, which is  $c - (a + b + c + d) / 4$  and  $d - (a + b + c + d) / 4$ , respectively. The sum of all of these individual errors is  $c + d - a - b$ , which is the total error associated with the multiplier. Although the error associated with the fair market value standard cannot be estimated without knowledge of the fair market value, a lower bound for it can be calculated. The fair market value has to be less than or equal to  $a$ —otherwise Person  $a$  would have sold. This means that the lower bound on the error associated with the fair market value is  $(b - a) + (c - a) + (d - a) + (a - a) = b + c + d - 3a$ . Note that we can rewrite the error associated with the multiplier as  $c + d - a - b = b + c + d - a - 2b$  in order to compare the lower bound of the fair market value standard with the multiplier. Because  $2a \leq 2b$ , the multiplier must always do at least as well as the fair market value standard and will do better as long as there is enough variation in the subjective values.

distributions. Of course, with a rich data set, a well-being analysis has the potential to verify these distributions through quintile regressions, and thus its methodology can also be used to determine precisely how much a proposed multiplier reduces error.

Second, courts have two tools to protect against potential abuses in response to overcompensation, and they can use these doctrines to downwardly adjust the estimates in response to cases in which individuals lobby for their properties to be taken. The first is the courts' ability to adjust practical estimates when doing so is required to avoid "manifest injustice."<sup>225</sup> When the Fifth Amendment standard of fair market value "would result in manifest injustice to owner or public, courts have fashioned and applied other standards."<sup>226</sup> Because these standards can be invoked to protect the public,<sup>227</sup> courts could police such lobbying on the ground that it is part of a "manifest injustice" against taxpayers, and they could revert to the fair market value standard in the case of individuals' abuse of the higher standard. In addition, there is currently a significant body of case law requiring that the government engage in good faith bargaining,<sup>228</sup> and this obligation could be imposed on property owners if a risk of overcompensation were introduced. For example, because lobbying for eminent domain action makes rejections of fair market value offers no longer credible (the individual is actively seeking a buyer), this adapted requirement could be used to deny individuals supra-fair market value compensation through the eminent domain process.

Finally, a richer data set for a well-being analysis and its more complex estimates would help mitigate the overcompensation

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<sup>225</sup> *United States v Commodities Trading Corp.*, 339 US 121, 123 (1950).

<sup>226</sup> *Id.*

<sup>227</sup> Although they preceded the term "manifest injustice," *Olson* as well as *United States v Miller*, 317 US 369 (1943), are later cited as examples in which courts prevented "manifest injustice" by adjusting fair market value at the time of the takings in order to protect the purchaser. See notes 30, 44, and accompanying text. For an example of a court actually invoking this standard to protect the purchaser, see *Toledo, Peoria & Western Railway v Surface Transportation Board*, 462 F3d 734, 747 (7th Cir 2006) (accepting an averaged price for compensation, because "the inflated prices of steel on the date of final sale and on the date of appropriation meant that market value on those dates . . . did not represent the fair market value of [Toledo, Peoria & Western Railway's] assets and would result in 'manifest injustice' to the purchaser").

<sup>228</sup> See, for example, Garnett, 105 Mich L Rev at 129 & n 170 (cited in note 111); *Krupicka v Village of Dorchester*, 804 NW2d 37, 49 (Neb App 2011) (upholding the trial court's finding that the condemnor had met the Nebraska statute's good faith negotiation requirement); *Valleybrook Developers, Inc v Gulf Power Co*, 272 S2d 167, 169 (Fla App 1973) (reversing the district court's finding that there was insufficient evidence of good faith estimation in a taking).

concern. Such a data set would provide an opportunity to tailor the estimate to individual characteristics by interacting individual characteristics with the variable indicating that the individual was subject to an eminent domain action. For example, the analysis could provide a separate multiplier for individuals who have lived in homes for five years in comparison to ten years, and it could provide a separate multiplier for individuals with small families in comparison to large ones. This requires answering difficult questions about the role of statistical analyses in treating individuals differently; however, as these estimates become more accurate, it will become more difficult for individuals to get an adjusted compensation that is actually above the economic value compensation. In addition, these estimates allow governments to target those who have lower subjective valuations, helping to alleviate allocative-efficiency concerns.

#### CONCLUSION

This Comment provides an argument for applying a well-being-analysis approach to eminent domain compensation, discussing the inefficiencies that result from compensating individuals with only the fair market value of their properties and arguing that a well-being-analysis approach provides a way out of the practical compromises made in eminent domain jurisprudence. Although happiness regressions do not demonstrate the exact valuation that an individual has of her property, using a multiplier that reflects the average subjective premium generated by a happiness regression is consistent with value-of-life evidence, which uses information about others to estimate an average multiplier that ensures more-accurate damages.

This Comment demonstrates that the BHPS data set, along with certain assumptions about why individuals move, implies that a wedge exists between the subjective valuation of an owned property and its fair market value. Not only does this wedge exist but it measures somewhere around or above 22 percent of fair market value. Given such a potentially large effect, this Comment aims to inspire future survey work with respect to individuals who are required to move. Such survey data would measure changes in happiness when the move—since it is due to eminent domain—is exogenous. For this reason, regression analyses based on such moves will provide even more-accurate estimates for the average under-compensation that occurs when individuals are paid only the fair market value of their properties in the context of eminent domain.