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# The Use and Limits of Self-Valuation Systems

Richard A. Epstein†

## INTRODUCTION

Recent years have seen the growth of an extensive game-theoretical literature that has sought to harness a wide range of self-assessment mechanisms, especially in connection with real estate.<sup>1</sup> The motivation for this literature is both simple and powerful: people ordinarily have an incentive to conceal their true valuations of their various properties in a number of public functions, most notably real estate taxation on the one hand and land condemnations on the other.<sup>2</sup> This literature hopes to create a set of socially constructed incentives to induce property owners to make an honest estimation of their own reservation prices when governments wish to take or tax these properties. In some cases, the models are limited exclusively to interactions between the government and the property owner. In still other situations, typically with real estate taxation, these models allow any private person to acquire private property by bidding in at the self-assessment amount that property owners set for the property.

One minimum feature of viable self-assessment models is that they must bite both ways. It is not sufficient, for example, for the model to punish private owners who undervalue their

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<sup>1</sup> For the earliest exemplar, see generally Saul Levmore, *Self-Assessed Valuation Systems for Tort and Other Law*, 68 Va L Rev 771 (1982).

<sup>2</sup> Takings law is divided generally into two parts. The conceptual part asks what kinds of regulations should count as takings for which compensation is required. See *Lingle v Chevron USA Inc*, 544 US 528, 538–39 (2005). The second part asks how to value that property that the government takes by way of permanent or temporary occupation. See, for example, *United States v Pewee Coal Co*, 341 US 114, 117–18 (1951). This Article deals with only the second question.

property if they can overvalue it with impunity. The same arguments apply in reverse, so that the mechanisms will do no good if they penalize owners who overvalue their property, while giving a free pass to those who undervalue theirs, which can happen in self-assessed taxation schemes.<sup>3</sup> To make matters worse, the correct set of marginal incentives<sup>4</sup> must deal not only with the behavior of the private owner of the property but also with the party, private or public, that wishes to force the transfer of ownership at the stated valuation. It is far more difficult to get systems that can put effective constraints on both sides of the market simultaneously than it is for those schemes that deal with one side of the market only.

One key feature about this current debate is this discontinuity with social practice. The spirited academic interest in these self-revelation devices is not matched by any practical move to implement them, even on an experimental basis, in any active real estate market. That reluctance should not be attributable to any great public satisfaction with the current operations of the market for real estate taxation or eminent domain. Some thirty years ago, Professor Saul Levmore wrote an eerily insightful article that urged the operation of these self-assessment systems for real estate markets and pointed out the deficiencies with real estate assessment in terms that apply today.<sup>5</sup> On the other side of the picture, the many cases that deal with valuation under the current eminent domain rules also provoke extensive objections from those who think that the system is too stingy with the awards that it supplies and others who think that the compensation offered is sometimes too generous.<sup>6</sup>

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<sup>3</sup> For the Taiwanese experience, see Yun-chien Chang, *Self-Assessment of Takings Compensation: An Empirical Study*, 28 J L, Econ & Org 265, 275–76 (2010) (discussing a self-assessment system in which both property tax levels and compensation are based on property owners' self-assessments).

<sup>4</sup> For an extensive evaluation of all these schemes, see generally Florenz Plassmann and T. Nicolaus Tideman, *Marginal Cost Pricing and Eminent Domain* (working paper, 2011), online at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1911278](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1911278) (visited Mar 2, 2014).

<sup>5</sup> See Levmore, 68 Va L Rev at 774–77 (cited in note 1). See also Abraham Bell and Gideon Parchomovsky, *Taking Compensation Private*, 59 Stan L Rev 871, 885–90 (2007).

<sup>6</sup> Compare Bell and Parchomovsky, 59 Stan L Rev at 885–90 (cited in note 5) (arguing that the current eminent domain system systematically undercompensates property owners), with Yun-chien Chang, *An Empirical Study of Compensation Paid in Eminent Domain Settlements: New York City, 1990–2002*, 39 J Legal Stud 201, 226–33 (2010) (documenting eminent domain cases in which property owners received significantly more than fair market value).

That dissatisfaction with the current state of affairs often brings forth anguished cries for discrete modification of the current system, so that it takes into account the loss of goodwill from the condemnation of business property or makes explicit allowances for moving expenses of persons who are forced out against their will.<sup>7</sup> But at no point are there practical proposals, such as those implemented one hundred years ago with the widespread adoption of a workmen's compensation law in place of the traditional tort system.<sup>8</sup> Why then the inertia on self-assessment systems?

In order to answer this question, I propose to proceed as follows. I will look at a number of clever devices that have been invoked over the years to make, or in many cases circumvent, difficult judgments on value in those cases in which market valuations are hard to come by. These are drawn from historical sources and include the following: the Roman rules of *mutuum* (that is, loan for use), confusion (the mixture of two identical elements by two or more parties), accession (dealing with the property of two owners joined together by innocent trespass), and, closest to the mark, the long-standing system of general-average contribution used to allocate maritime losses.

Once it becomes clear why these systems can work well, it makes it easier to explain the major hidden difficulties of applying any self-assessment system to real estate. The three reasons come to the fore: the systematic lack of knowledge about a person's own reservation prices; the interconnection of property, both legally and physically, to other properties; and the major transactional difficulties that must be overcome in order to transfer real estate.

#### I. SIMPLE SYSTEMS OF FORCED VALUATIONS IN PRIVATE LAW: THE ABSENCE OF REVELATION DEVICES IN COMPETITIVE MARKETS

It is widely agreed that no system of forced exchanges should be adopted for goods and services sold in competitive markets. The implicit assumption behind this conclusion is that since individuals on both sides of the market have a wide range of alternatives from which to choose, the bargaining range

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<sup>7</sup> For discussion, see Richard A. Epstein, *Takings: Private Property and the Power of Eminent Domain* 53–56, 80–86 (Harvard 1985).

<sup>8</sup> For one account, see Richard A. Epstein, *The Historical Origins and Economic Structure of Workers' Compensation Law*, 16 Ga L Rev 775, 797–800 (1982).

between any two parties shrinks toward zero, such that all buyers pay the same competitive price. It is important to recall that the operation of the competitive market tells us nothing about the distribution of the cooperative surplus in the trades between the two parties. Most buyers are inframarginal in that their reservation price is higher than market price, which is why overall shifts in price levels usually produce relatively small changes in aggregate demand, even though changes in price necessarily alter the fraction of surplus allocated to buyers and sellers in each case.<sup>9</sup> The same observation applies to the selling side of the market, where prices converge even though some sellers enjoy Ricardian rents by virtue of their lower costs of production.<sup>10</sup> The inability of either side to extract surplus in these markets does not count as a defect of this system, but as its major advantage, because the thicker the competition in the market, the lower the level of game playing that commonly dissipates resources and slows down the velocity of exchange.<sup>11</sup>

Even if competitive markets lower game playing, they do not eliminate it outside a zero-transaction-costs world. Nothing is more common than for routine commercial transactions to raise modest holdout problems. In landlord-tenant relationships, for example, the renewal of a lease may be subject to some negotiation as one or both of the sides have some site-specific advantage from the use of the site. The bargaining range therefore expands modestly, but, in most cases, the parties work out the renewal without extensive bargaining that would dissipate their joint surplus. It might well be possible to develop a revelation mechanism to achieve some ideal division of surplus in this setting, but the presence of many other devices to deal with this issue, including reference to external markers or business arbitration, may generate tacit support on both sides for the proposition that this game is just not worth the candle. Thus in lease situations, parties can negotiate about these issues in advance. They may resort to a number of different devices to deal with this issue. One approach is to set fixed or formula increases in rent. A second is to use a form of arbitration for setting rents. Both

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<sup>9</sup> See R. Preston McAfee and Tracy R. Lewis, *Introduction to Economic Analysis* \*180–81 (Feb 2009), online at <http://www.mcafee.cc/Introecon/IEA.pdf> (visited Mar 2, 2014).

<sup>10</sup> See *id.* at \*86–87.

<sup>11</sup> See Li Gan and Qinghua Zhang, *The Thick Market Effect on Housing Markets Transactions* \*3 (NBER Working Paper No 12134, Mar 2006), online at <http://www.nber.org/papers/w12134.pdf> (visited Mar 2, 2014).

these devices ease the path to renewal without adopting any self-revelation device that searches for the reservation price of either or both parties. There is, in other words, no effort to find ways to secure an even division of surplus.<sup>12</sup> Revelation devices are not costless. If we do not observe their use in congenial, consensual settings, it is highly unlikely that they will ever be deployed in dealings between strangers.

It is important therefore to take our cue from the limited role of revelation devices at use in voluntary markets that routinely face holdout and renegotiation problems. The question remains, what can we learn from the operation of private markets about the family of valuation devices that either avoid or resolve the revelation problem in simpler settings to get some clue about their broader uses? The first step on this journey is the early Roman law of first *mutuum* and then accession.

#### A. *Mutuum*

*Mutuum*, or a loan for consumption, is a gratuitous contract that arises only with the use of fungible products, that is, those that can be graded, weighed, or counted.<sup>13</sup> The key element for making this contract work—there are no similar contracts for real property—is that there is never any variation in the quality of the goods in question. The contract itself simply calls for a party who receives a given quantity of a given fungible product to return a like amount of that commodity in the near future. The contract has several built-in features that give it economic sense within its modest domain.

First, *mutuum* is a “real contract” that is not enforceable when agreement is reached—only when the fungible good is delivered.<sup>14</sup> For small transactions like this, it makes no sense to seek lost profits against the party who promises to make the loan, especially when the recipient is under no duty to accept the goods when offered. But once the commodity has been given and consumed, the stakes increase enough so that the enforceable obligation to return a like amount of the same commodity now is in order.

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<sup>12</sup> See, for example, Barbara L. Grossman and Jordan Hill, *Binding Arbitration Common in Determining Renewal Rent*, 30 *Legal Alert* 45, 45–46 (Sept 2011).

<sup>13</sup> See Gaius, *The Institutes of Gaius* bk III, § 90 at 179–81 (Clarendon 1946) (Francis de Zulueta, ed).

<sup>14</sup> William Smith, William Wayte, and G.E. Marindin, eds, 2 *A Dictionary of Greek and Roman Antiquities* 201 (William Clowes and Sons 3d ed 1891).

Second, *mutuum* carries no interest payment.<sup>15</sup> The simple explanation is twofold. First, the sums so lent are too small for the interest component to matter. Second, *mutuum* is a common informal arrangement, such that the party who makes the loan for consumption in one case often becomes the recipient in the second. Over time, the interest payments would thus cancel each other out, largely eliminating any net shift in wealth that might undermine the mutual gains of the parties. Even in larger groups, individuals are likely to appear on both sides of the transactions, with roughly the same frequency.

Third, the risk of loss falls with the borrower under the general maxim of *res perit domino*—all things perish for their owners.<sup>16</sup> Since the good is to be consumed, title transfers to the new owner the moment he takes possession, which is likely to minimize overall loss because it puts the risk on the party who is best able to control the thing in question.

The fourth point is for our purposes the most critical. The key to the success of *mutuum* is that it requires neither party at any point in the cycle to offer a valuation of the goods transferred, either at the time of the original transaction or at the time of return delivery. Stated otherwise, since the commodities here are fungible, the original borrower is always able to repay in time, which leaves it to him to determine when to enter the market to make the requisite purchase.

This point has a larger significance. The late Professor Ronald Coase in *The Nature of the Firm* was not thinking of these mundane situations when he observed that parties have to incur positive transaction costs to set the prices for voluntary exchanges in a spot market.<sup>17</sup> Wage contracts, for example, thus substitute for thousands of spot transactions in one payment for an extended period of work. But the parallels between the two situations are close. Get rid of the return requirement of *mutuum*, and someone has to figure out the price of the selected goods, either at the time of initial delivery or at some earlier or later time if need be. Those valuations are in fact difficult to make and always fall prey to error. The simple obligation to return something of like kind eliminates the vagaries of the price mechanism while assuring perfect parity between the parties at

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<sup>15</sup> Id.

<sup>16</sup> See Gaius, *Elements of Roman Law* bk III, § 91 at 367 (Clarendon 1875) (Edward Poste, ed).

<sup>17</sup> See R.H. Coase, *The Nature of the Firm*, 4 *Economica* 386, 390–91 (1937).

very low cost. The contract in question is likely to have limited commercial use, if only because in most cases of delivery, what is desired in a transaction between, say, a wholesaler and a retailer, is money and not a return of goods. A price mechanism is thus required to overcome the inherent difficulties of barter, which were well understood by the Romans.<sup>18</sup> But a device of limited utility is not a device of no utility: be thankful for small transactions that make sense.

### B. *Confusio*

Using fungible goods to avoid pricing difficulties is common in voluntary situations. One such arrangement is *confusio*, or the mixing together (rather than just mistaking) of fungible goods owned by different parties in a common-storage situation.<sup>19</sup> The best modern illustration involves a silo in which many different farmers economize on storage costs (which reflect temperature, rodents, theft, and other risks) in a common facility. This process works only if all the parties to the transaction commit to store exclusively grain of uniform quality, when both grading and inspection mechanisms are already in place. Once that is done, then farmers can easily store any given quantity of grain and withdraw any fraction of that amount at will down the road, paying fees based on the amount of grain stored and its storage time. These storage contracts work a forced exchange of discrete bits of grain that works as well for any number of parties. No person has or wants an entitlement to the same granules of grain that he put in, but only to a like quantity of the product of uniform quality. This forced exchange generates no special advantages for any party based on the time that he puts his grain into the silo or the time that he withdraws it, thereby eliminating all game playing in making or removing grain.<sup>20</sup>

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<sup>18</sup> See Theodor Mommsen, Paul Krueger, and Alan Watson, eds, 2 *The Digest of Justinian* 18.1.1 at 514 (Pennsylvania 1985).

<sup>19</sup> See William Smith, William Wayte, and G.E. Marindin, eds, 1 *A Dictionary of Greek and Roman Antiquities* 527 (William Clowes and Sons 3d ed 1890).

<sup>20</sup> This element of temporal independence is found in other complex arrangements as well. The standard planned-unit development (PUD) features a complex set of covenants that have to bind and benefit each member of the PUD against all others. The way that these covenants are structured is that each member signs on to a master agreement, whereby she agrees to bind and be bound to all individuals who came before her or come after her. The stability of this system means that sales and purchases do not have to take into account the time that anyone joins this arrangement, which thus eliminates one element of uncertainty and the gaming that could go with it. See Patrick J. Rohan, 6



Nor, most critically, is it ever necessary to figure out the value of the grain stored in the silo at the time it is put in or taken out of storage. Given the defined quantities, each person rides the market prices up and down just as if he had not resorted to a common facility for storage. This institutional arrangement does not force any revelation of value. Indeed, it goes one better: it allows people to cooperate in a common venture without having to make any shared valuation at all.

One sign of the strength of this voluntary arrangement is that it forms a template for mixture done by mistake and not design. In these cases, if the fungible condition is met, the exact same arrangements can apply to dictate the division of grain among the parties in the pool. In some of these common-pool situations, the mistaken mixture could be of grain of uneven quality. That heterogeneity makes the valuation problem more difficult, and the Roman texts in Justinian explicitly allow for quality adjustments to be made in separating out parts from the whole. Those adjustments are necessarily imperfect, and the method is used only because no better alternative is available. But the troubles in making these valuations useful explain why voluntary arrangements insist *ex ante* that all the grain in any given silo be of uniform quality. For grains of different quality, it is best to use different storage systems. Like *mutuum*, a powerful mechanism fills only a limited niche.

### C. Partnerships, Sales, and Accession

The confusion cases ideally involve the pooling of perfectly fungible uses. But schemes for coordinating activity can also be applied fruitfully to cases with two kinds of inputs, one fungible and the other not. These situations often happen in voluntary transactions, in which the combination of these two efforts can take place in one of two forms. First, it is possible (again since Roman times)<sup>21</sup> to devise these transactions either as sales or as partnerships. In the latter scenario, each of the two (or more) partners has an equity stake in the transaction. The usual focal point conditions apply, so that if there is no stated agreement of the division of gains and losses, it will be presumed to be 50/50 for two parties precisely to avoid the valuation problem. Similarly,

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*Real Estate Transactions: Home Owner Associations and Planned Unit Developments—Law and Practice: Forms* § 3.02[2][a] at 3-28 to -33 (Bender 2013).

<sup>21</sup> See Gaius, *The Institutes of Gaius* bk III, §§ 141–51 at 197–201 (cited in note 13).

if there is a variation from that ratio in dividing the gain, losses will be divided in the same proportion in the absence of some indication to the contrary.<sup>22</sup>

The key institutional obligation in these partnerships is that each party must act in good faith toward the other, which carries the same meaning here as elsewhere. As an effort to control the agency-cost problem, each party is required to afford the same weight to his partner's interest as he does to his own. Of course that counsel of perfection is not easy to follow, which is one reason why partnerships are organized voluntarily (often within families) to reduce the pressures on the legal rules: social sanctions and personal sentiments help ease the conflicts.

In working these partnership agreements, the choice of a compensation system can be critical to the overall success. More specifically, modern partnership arrangements typically use one of two types of compensation systems. The first is lock-step progression for all partners within the same band, where band membership is determined by a feature such as seniority. The second rests on some assessment of perceived differences in merit (that is, the ability to gain and service business).

Both of these basic systems are found in practice, which means that there is no dominant solution to this measurement problem. But nonetheless it appears that the iron distinction between heterogeneous systems that require valuation and homogenous systems that avoid it holds. First, fixed-compensation firms must weed out more individuals both before and after making partner. Without that vigorous culling process, dangerous cross subsidies get embedded in the system. These can be avoided by taking the second route, which allows compensation to vary with ability to avoid that cross subsidy problem. But that variation requires someone to make explicit differentiation in ability levels, which can often be contested. It also makes it more difficult to organize sharing and cooperative arrangements because it now becomes necessary to set up internal transfer prices when one partner does work for another. On a smaller scale, exactly this same tension arises in a department store in deciding whether to compensate a sales force by fixed salary, by commission, or by some combination thereof.

Alternatively, when those preconditions for trust are not present, a simple sale or loan arrangement becomes preferable.

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<sup>22</sup> See *id.* at §§ 148–50 at 201.

A sale is an outright transfer in which all good faith duties (on title and physical condition) can be observed and checked on a single occasion, without long-term connections. A loan gives one person a priority with respect to proceeds over the other person, which in turn allows the borrower to end the relationship unilaterally by paying off the loan, again reducing the pressure on fiduciary duties. These extreme cases can be varied by contract through complex hybrid arrangements. But the basic permutations we face in the law of partnerships for the joinder of capital and labor, or some combination of the two, are still with us today.<sup>23</sup>

The more difficult analytical questions arise when the merger of inputs from two or more parties comes not by common design, but by innocent mistake. The “innocence” here is not meant to deny that there is some tort, be it of encroachment of land or conversion of chattel, in which the actor believes in good faith that the asset that he uses or improves is his own. This so-called question of the bona fide improver receives extensive attention in ancient systems and continues to have its importance today in modern settings, such as intellectual property.<sup>24</sup> Its resolution depends critically on the role that fungibility plays in avoiding problems of valuation. In a typical case, A carves a statue out of a block of marble that he thinks he owns. But that block has been transferred to A, the nonowner, by an innocent mistake. Normally that simple transfer generates an obligation to return the thing in question, for which actions in restitution are offered. But that cannot be done because the mistake was not detected in time—that is, before the nonowner undertook work to “improve” the block. In this case, the returns from joint investments are not allocated by contract. Nor is it a bad-faith conversion of B’s property by A. The use of A’s labor on B’s block of marble creates a situation similar to that faced by modern writers seeking to develop self-revelation mechanisms.

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<sup>23</sup> See Richard A. Epstein, *Inside the Coasean Firm: Why Variations in Competence and Taste Matter*, 54 J L & Econ S41, S45–S48 (2011) (noting how taste, temperament, and competence influence choice of partnership structures).

<sup>24</sup> See Peter Lee, *The Accession Insight and Patent Infringement Remedies*, 110 Mich L Rev 175, 195–202 (2011) (explicitly mentioning Roman law antecedents). For a more systematic discussion, see Thomas W. Merrill, *Accession and Original Ownership*, 1 J Legal Analysis 459, 466–67 (2009) (dealing with commingled goods). I have also addressed the problem in Richard A. Epstein, *Simple Rules for a Complex World* 116–18 (Harvard 1995).

Once the work on the marble precludes a return to the status quo ante, some other adjustment has to be made. One possibility is to transfer the completed statue back to B. That solution counts as an uncompensated transfer of labor from A unless some compensation is supplied in exchange. In addition, the block is now in the wrong hands because the changes to its distinctive features, as crafted by A, are of far greater value to A than to B. Hence the correct solution is to allow A to keep the marble, so as to avoid ticklish issues of the valuation of his labor. But A must also be required to return to B a like block of marble as a substitute for B's original block. In essence, the law of *accessio* first decides who gets to keep the thing and who gets compensation.<sup>25</sup> The return of the block of marble separates the contributions of both sides without resort to any valuation techniques for either the labor or the block of marble. The techniques of *mutuum* and confusion carry over to accession.

#### D. General-Average Contribution

Finally, closest to the situation at hand is a well-established system of self-valuation widely used in a maritime context: the system of general-average contribution. General-average contribution is used to allocate the loss of cargo and hull to the perils of the sea. Overall, the scheme runs as follows. First, the process has no relevance if the entire ship and cargo are lost. But to avoid that risk, a captain must make vital decisions to lighten the ship by jettisoning some of the cargo in order to save the rest. The decisive inquiry is which cargo to save and which to heave overboard. That choice requires advance planning. The public facts about the size, shape, and weight of cargo are well known. But the question of value is not. If, for example, two loads of cargo have the same size, shape, and weight, it is better for all concerned that the less valuable cargo be jettisoned and the more valuable cargo be saved. In bald terms, the goods of one have to be sacrificed to secure a greater good to the other, in order to ensure a Kaldor-Hicks improvement. This approach will turn out to be politically unstable, as each party will argue that the cargo of the other owner should go. The situation gets only worse as the number of owners increases. But in both the two-party and *n*-party case, the bargaining dynamics will change for the better if all owners know that the losses will be shared pro

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<sup>25</sup> See Epstein, *Simple Rules for a Complex World* at 116–18 (cited in note 24).

rata (as in the Roman partnership) no matter what cargo is thrown overboard. At this point, *ceteris paribus*, it is better to throw over a load worth 100 in order to save another twice that value. The pro rata improvement in the two-party case comes when the second owner must pay the first owner 66.7, so that each side loses exactly one-third its original value.<sup>26</sup> But how does one determine value?

The genius of general-average contribution is that it relies successfully on self-assessment. In the simple two-party case, each party may attach whatever value it thinks appropriate to its cargo. But now it is bound both ways. Thus in the example given, it pays neither party to misstate its own value if the other party states its true value. Thus if the first owner attaches a value of 125 to his cargo, he may well find that his property will be saved rather than ditched, at which point he will be assessed for the losses incurred by others based on his own inflated valuation. He thus pays a price for error by having to pay more in compensation to others than he would for a true valuation. Likewise, if he understates value, he increases the likelihood that his cargo will be jettisoned, for which he will be undercompensated. The great advantage of this mechanism is that it pools losses for a large number of parties, which makes it less likely for any party to find a deceptive strategy that will work with a large number of other players when he has no knowledge of who these other parties are, what their property is, or how much it is worth. To this non-game-theoretical person, it is hard to see an incentive for any party systematically to overstate or understate his cargo's value in an effort to take advantage of the strategic judgments of others, which is probably why the system has remained in place so long when the peril of loss at sea was a pervasive worry.<sup>27</sup>

For these purposes, it is vital to stress the limiting conditions that make a regime of general-average contribution work. First, it deals only with *goods* that are normally held for sale to customers in the ordinary course of business,<sup>28</sup> so owners have already assigned their value for other purposes. Excluded from the system are personal injury or death and the loss of such

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<sup>26</sup> See F.D. Rose, *General Average: Law and Practice* §§ 1.1–1.13 at 1–6 (LLP 2d ed 2005).

<sup>27</sup> See *id.* at §§ 1.14–1.20 at 6–8.

<sup>28</sup> See *id.* at §§ 2.3–2.4 at 17–18.

personal items as jewelry and valuable papers.<sup>29</sup> That last omission is critical because weight-to-value ratios make no sense with these items. Nor would any owner want to commit these personal items to the scheme, for it would mean parting with the possession of items that could easily be lost or stolen on uneventful journeys. Second, these goods have a single owner, and they are not subject to the divided interests, such as leases and life estates, commonly found in land. Indeed many legal systems do not allow the creation of future interests in these goods, in large measure because there is so little demand for their creation.<sup>30</sup> Third, goods that are shipped for resale do not normally have any subjective value to their owners, so that any perceived difference between willingness to pay and willingness to accept largely drops out. Fourth, the outcomes of the jettisoning process are strictly binary. Either a package is saved or it is thrown overboard. Fifth, the only purpose for which the valuation is made is to tote up gains and losses. No one has to make, as in the cases above, subsequent transfers of property. Sixth, these goods are not beset by any spatial externalities that create interactions with third persons. The goods subject to general-average contribution form a random assemblage with no crossover features. Accordingly, the correct mode of valuation for A is independent of the correct valuation for B. As the next Part makes clear, *none* of these properties are found in the self-assessment systems that are used in real estate. Goods are one thing. Real estate is quite another.

## II. REVELATION SYSTEMS AND REAL ESTATE

The previous discussion helps explain why self-revelation mechanisms cannot work well in complex real property settings. In this Part, I shall reiterate these explanations in greater detail, taking care when appropriate to distinguish between self-assessment for real estate taxation and self-assessment for eminent domain. The first objection relates to the difficulty and necessity of requiring that individuals know their own reservation prices. The second objection relates to the ability to isolate the property taken from its larger physical and institutional setting.

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<sup>29</sup> See *id.* at §§ 2.4–2.6 at 18–20.

<sup>30</sup> See John Chipman Gray, *Future Interests in Personal Property*, 14 Harv L Rev 397, 407–18 (1901).

The third relates to the complex mechanics needed to transfer title to interests in real estate.

A. Knowledge of One's Own Reservation Price

The initial gambit in working through the self-assessed systems starts with the innocent-sounding proposition that ordinary individuals are typically best placed to make judgments about the value of what they own, certainly as against the government and even as against outsiders. Thus Professors Plassmann and Tideman make the categorical assertion that "only the owner knows his reservation price," so that the only way that others can learn about that price is to ask him.<sup>31</sup> On balance, I think that this claim is strongly overstated. Even if people have a *better* sense of their own reservation prices, in most settings they don't know what their reservation price is and have no reason to determine what that price is. If asked to give a numerical answer, they will be forced to make serious inquiries about the attributes of their own property in order to narrow down that range.

The analytical case for this proposition runs as follows. In the ordinary state of the world, most people own many assets with different values. Typically, they are not faced with any question of whether to keep or dispose of any particular asset. These assets were not randomly acquired, but were usually obtained by purchase. Knowing that they at some point valued the asset above its market price gives them a rough lower bound on value: after all, once people know that the price is below what they are willing to pay, they do not have to calculate *how much* below in order to decide on the purchase. But once they own a piece of property, most nonmerchant parties do not put that property up for resale. Once they know that its value in use exceeds their value in exchange, it is a waste of time and effort for them to determine their exact consumer surplus from continued ownership and use of that asset in its present form. Since these owners face no immediate decision, they do not invest effort in deciding what that reservation price is.

To be sure, people will invest in discovering their own reservation price at critical transition points, as when, for example, the sale of a home becomes necessary because the owner has to

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<sup>31</sup> Plassmann and Tideman, *Marginal Cost Pricing and Eminent Domain* at \*31 (cited in note 4).

relocate out of town or because some real estate has just been acquired by will and the heir has no particular use for the inherited property, which is then put on the market. Buyers will also make similar determinations when they enter the market. Of the thousands of items for sale in any department store, only a tiny fraction is purchased. For the others, any calculation of reservation price is irrelevant so long as that price is below the asking price. Finally, thieves form an interesting class of parties, because they are in the market to fence what they take, for rarely do they have the luxury to steal just those items they want to use. Since their subjective value is likely to be lower than their exchange value, the law invests extensive resources in stopping resale in order to dull the thief's incentive to steal in the first place.<sup>32</sup>

At this point, the first weakness of any self-assessment system becomes clear. Its very use forces every owner of real estate to enter the valuation market, perhaps every year or two, to expend considerable resources in valuing their most valuable assets. That prospect is particularly terrifying if done for tax assessment purposes, in which the price of undervaluation is a possible loss of the property and the price of overvaluation is ruinous tax liabilities. The situation is made even more difficult because an explicit temporal dimension is not found in any of the private-valuation systems examined above. Just how long does the option to purchase given to other individuals last? Make that period too long, and the option given to outsiders is of great value, because they can wait until such time as property values go higher and ignore the option if the property value declines. So the duration of that option becomes critical. Make that period too short, and the revaluation process must be continuously invoked. The traditional systems of market value allow for smooth movement, such that errors in assessed value in one period tend to be offset by those in another period. That cannot happen when the wrong self-assessment can trigger in any given period a forced sale to an outsider.

The emotional strain of forcing all owners in a community (who show undue anxiety over the appraisal process during a standard reappraisal period) through these ticklish calculations at the same time is enormous. The new demand will put huge

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<sup>32</sup> See, for example, 18 USC § 2315 (criminalizing the sale of stolen goods with up to ten years' imprisonment).



upward pressure on the appraisers who try to work through this maze in frenzied market conditions that no one has ever seen. Yet it is all so unnecessary in dealing with any real estate tax-assessment program. As Professor Levmore rightly insisted, what really matters in allocating common costs is the “relative burden on taxpayers,”<sup>33</sup> which is more or less the same whether market or self-assessed values are used.

Let us grant that there is some heterogeneity in the subjective values that different individuals attach to their own properties. But at the same time, there is no obvious way for any person to know exactly where he or she ranks on some hierarchy, because no one has inside information on the subjective value that other people attach to their properties. Nor is there any particular reason to think that any interpersonal variation is likely to be all that high. Those people whose subjective value for property falls below their market value (taking into account transaction costs) will continuously exit the market, which in turn will tighten up that distribution. So as a matter of simple prudence, it looks as though the social stability of the standard fair-market-valuation processes will do far better than any self-assessment scheme in securing simplicity, certainty, and parity among the parties. In most cases, the assessed valuation starts with the most recent historical valuation, which is then adjusted to take into account a recent sale of the particular property or comparables or by improvements or alterations that the owner makes to the property. There is a continuous shift that makes these determinations relatively straightforward within, say, an error rate of about 10 percent.<sup>34</sup> Real estate taxes are only a small fraction of market value, so that these errors seem small relative to the heavy expenditures needed to make an imperfect adjustment of reservation prices.

These self-assessments are radically different with eminent domain proceedings, which are rare, one-time events that strike only a small fraction of the community.<sup>35</sup> These are events, especially for residential facilities, of extraordinarily low probability, so much so that the risk is typically ignored in all residential

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<sup>33</sup> Levmore, 68 Va L Rev at 776–77 (cited in note 1).

<sup>34</sup> See id at 783.

<sup>35</sup> See Abraham Bell and Gideon Parchomovsky, *A Theory of Property*, 90 Cornell L Rev 531, 604 (2005).

transactions until owners get some wind of government action, at which point a huge political response is par for the course.<sup>36</sup>

Unfortunately, eminent domain poses multiple problems to the use of any self-assessment system. The first is that the government often has huge power to influence the value of the property by its collateral actions. Thus it is common for local governments to cut back on local services to any given neighborhood that they target for condemnation.<sup>37</sup> In addition, they often make strategic announcements of their future intentions in order to dissuade persons from upgrading or even maintaining their property, which again forces down valuations.<sup>38</sup> In effect, they use the public announcement as a free option to freeze the price paid by insisting that any further improvements are done at the risk of the owner. That practice of course creates a risk of chronic overuse of the eminent domain power. Finally, typically the market value of any targeted property is far lower than subjective-use value.<sup>39</sup> Given that only a few individuals are put into this vulnerable position, any errors in computation do not cancel out either across people or over time. To get the right incentives, a legal regime has to make some allowance for subjective value without allowing the condemned party to hold out for a figure that captures the social surplus from the government project, at which point it will not politically go forward.

The need to constrain that kind of strategic behavior is especially important because in most condemnation cases more than a single property is condemned. Getting some estimate of social value for each such property is essential because without one, a government project may be less valuable, especially after transaction costs are added in, than the current set of uses. But if each property owner can angle for some holdout benefit, then valuable social projects could be underdone. I can think of no self-revelation mechanism that can distinguish between demands for subjective value and demands for holdout value. The

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<sup>36</sup> See Ilya Somin, *The Limits of Backlash: Assessing the Political Response to Kelo*, 93 Minn L Rev 2100, 2116–19 (2009) (discussing statistics on the recent use of eminent domain by state). See also Thomas Ross, *Transferring Land to Private Entities by the Power of Eminent Domain*, 51 Geo Wash L Rev 355, 355 & n 1 (1983) (describing public resistance to a residential taking in Detroit).

<sup>37</sup> See Alan Romero, *Reducing Just Compensation for Anticipated Condemnations*, 21 J Land Use & Envir L 153, 158–61 (2006).

<sup>38</sup> See Nicole Stelle Garnett, *The Public-Use Question as a Takings Problem*, 71 Geo Wash L Rev 934, 955 & nn 135–36 (2003).

<sup>39</sup> See Bell and Parchomovsky, 59 Stan L Rev at 885–86 (cited in note 5).

best way to deal with the valuation problem requires at a minimum these steps. First, make sure that all consequential damages—moving fees, relicensing fees, appraisal fees—are put into the equation, and second, impose a 10 percent across-the-board surcharge on the basic condemnation award to ease the pain of transition.

## B. Interaction of Real Estate Assets

Recall that the discussion of general-average contribution posited a set of assets whose value was entirely independent of the other assets on the vessel.<sup>40</sup> But that independence condition rarely if ever holds for any real estate market where divided interests, such as mortgages, easements, and covenants, are indispensable parts of any well-functioning real estate market. In addition, the value of any real-property interest is heavily dependent on its physical adjacencies to other private owners and to public infrastructure. These two types of interests pose special problems for valuation that are not found in any of the simpler cases discussed earlier.

### 1. Legal division.

A mature real estate law facilitates transactions that allow for the consensual creation of divided interests. In many cases, the gains from dividing property interests exceed the transaction costs needed to bring those changes about. Accurate deeds and recordation systems let all parties know exactly where they stand. What is good on the private side, however, creates immense transactional nightmares with forced acquisitions in both the real estate tax and eminent domain proceedings. Even if we confine ourselves to single properties subject to a self-assessment system, any change in ownership and possession could trigger the cancellation of a favorable mortgage or the violation of a restrictive covenant. Alternatively a condominium or cooperative board may either delay entry of the new owner or deny permission to take possession of the unit at all, perhaps by amending the basic charter to restrict such transfers. The ripple effects of these disputes could reach other units, throwing off their evaluations as well, leading perhaps to other applications for entry.

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<sup>40</sup> See Rose, *General Average* §§ 2.4–2.5 at 18–19 (cited in note 26).

The difficulties with self-assessment are much tougher in condemnation cases. There are relatively few condemnation cases for individual homes or apartments.<sup>41</sup> But when condemnation is required, the scale of the government project could easily require the condemnation of multiple parcels, some developed and some not. In addition, the condemnations of partial interests in real property, such as pipelines and roads over ranch or farmland, trigger serious valuation problems, which often include deciding how to take into account the variations that severance has on the value of the retained interest. Alternatively, a single complex structure could contain both owner-occupied apartments and leased premises, for which self-assessment mechanisms are largely useless. Indeed, the entire subject of valuation in complex condemnation proceedings is so arcane that only a few lawyers practice it on a regular basis. None of the handholds that allow for the simple valuation techniques used in the private transactions referred to above seem applicable here.

## 2. Physical adjacencies.

The complexities for both tax and condemnation cases are every bit as formidable in dealing with physical adjacencies that never crop up with ordinary goods. The amount someone is willing to pay for his property depends on who is living next door and what they are doing. Neighborhood changes brought about by the forced condemnation of any given unit will therefore alter, up or down, the value of other nearby properties.<sup>42</sup> Let some stores or residences on a block be condemned, and the values of all the other properties in the vicinity will move up or down—it is often hard to say which. The owner of any property is forced to make present judgments about these market movements at any given time, while the condemning authorities can wait to see how prior ventures play out. Market-valuation schemes may be systematically too low, but these self-assessment schemes are likely to produce yet greater distortions.

## C. Mechanical Difficulties

Last, it is important to say something about the methods of transfer that are required to make good on these schemes. In

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<sup>41</sup> See, for example, Chang, 39 *J Legal Stud* at 224–26 (cited in note 6).

<sup>42</sup> See, for example, Garnett, 71 *Geo Wash L Rev* at 954–55 (cited in note 38).

dealing with ordinary chattels, simple delivery usually suffices to transfer ownership, though occasionally, as for motor vehicles, some registration is required. The system works well enough that in most cases of delivery, the parties can make effortless determinations as to whether a physical delivery transfers ownership or is only a loan of the chattel. But real estate transactions involve infrequent transactions that are marked from the earliest times by high levels of formality.<sup>43</sup> In voluntary real estate markets, the process usually takes place in two stages—an initial agreement in writing followed by a conveyance that takes place only once the buyer physically inspects the premises and examines the chain of the title, after which an opportunity to cure may be allowed or some cash adjustments may be required.<sup>44</sup> That two-stage process meshes only uneasily with any self-assessment system in which the buyer has to determine the physical and legal risks in a hostile setting. Just who will set ground rules for both sets of inspections or sort out any difficulty that arises when two or more parties claim to be the winning bidder?

#### CONCLUSION

The inherent difficulties of self-assessment systems should caution against allowing coercive transactions to displace voluntary ones. The law of contract is uneasy about allowing for unilateral breaches on a promise to pay an unliquidated level of expectation damages under a theory of efficient breach.<sup>45</sup> The tort system tends to limit the right of one person upon the payment of just compensation to take the property of another to cases of private necessity, lest the entire system careen out of control.<sup>46</sup>

The stated purpose of these forced exchanges is to avoid holdout problems of one sort or another. But in these cases the cure is often worse than the disease. I have long taken the position that the exercise of these forced exchanges should be subject to strict limitations of some form of imminent peril of the loss of

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<sup>43</sup> See, for example, Gaius, *The Institutes of Gaius* bk I, §§ 119–22 at 39 (Clarendon 1946) (Francis de Zulueta, ed).

<sup>44</sup> Barlow Burke, Ann M. Burkhardt, and R.H. Helmholtz, *Fundamentals of Property Law* 425 (LexisNexis 3d ed 2010).

<sup>45</sup> See, for example, Lon L. Fuller and Melvin Aron Eisenberg, *Basic Contract Law* 209–11 (West 8th ed 2006) (criticizing Richard Posner's approach to the doctrine).

<sup>46</sup> See, for example, *Vincent v Lake Erie Transp Co*, 124 NW 221, 221–22 (Minn 1910).

life or property that goes under the heading of either private or public necessity but should never be thought of as a standard alternative to voluntary transactions.<sup>47</sup> Outside those extreme settings, there are limited cases in which self-assessment systems work. But the conditions that make these feasible for *mutuum*, *confusio*, *accessio*, and general-average contribution work are hard, if not impossible, to satisfy with real estate. A system of eminent domain law and real estate taxation is clearly necessary. But self-assessment systems contribute little or nothing to their successful execution. It is for good reason that they are never observed in practice.

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<sup>47</sup> See, for example, Richard A. Epstein, *A Clear View of The Cathedral: The Dominance of Property Rules*, 106 Yale L J 2091, 2105–11 (1997).