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The Endowment Effect and Legal Analysis

Russell Korobkin*

I. Introduction

Over the last forty years, neoclassical economics has become embedded in the normative analysis of two broad areas of law: (1) how the law distributes entitlements amongst various competing claimants, and (2) how the law regulates the consensual exchange of entitlements after their initial allocation. In the first area, economics can help lawmakers to allocate entitlements efficiently — that is, to the claimants that value the entitlements most. In the second area, economics can help lawmakers to facilitate efficient transactions and impede or prohibit inefficient transactions. Economic analysis has also become a standard tool in the positive analysis of law. That is, the present state of the law is often explained as the direct result of an implicit or explicit concern with efficiency. Economic analysis has become so central to both the normative and positive study of law that, although many (or, more probably, most) legal scholars do not believe efficiency is or should be the law’s prime virtue, few would argue that the efficiency implications of law are entirely irrelevant to the policy making process.

In order to determine whether the law is efficient or how it could be made efficient, a theory of preferences is required. Just as the concern with efficiency is borrowed from economics, so too is the dominant theory of preferences used in the analysis of law’s efficiency: rational choice theory (RCT). There is no single definition of RCT, but most versions of it assume that the intensity of individuals’ preferences for an entitlement derive solely from the inherent utility of that entitlement to the individual.¹ Value is in the eye of the beholder, but it is determined independent of external situational characteristics that are subject to change. Most relevant to this article, RCT assumes that the value of an entitlement to an individual is independent of the relationship between the individual and the entitlement in the current state of the world. You may prefer to own a house in the city or a house in the country, but neither your preference nor its intensity should be causally affected by the location of the house that you own. You may prefer cheap gas and dirty air or expensive gas and clean air, but your preference should not depend on whether gas is cheap or expensive or whether the air is dirty or clean, or which of these combinations the law favors. I will refer to this premise as the “status irrelevance” assumption.²

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The status irrelevance assumption seems somewhat arcane when described in the abstract. As this article will demonstrate, however, it turns out to be quite central to the analysis of a range of areas of substantive law. Much of the normative analysis of law in legal scholarship in fact relies on the assumption.

A robust body of social science scholarship, however, demonstrates that the assumption is incorrect, at least in many circumstances. The much studied “endowment effect”\(^3\) is that people tend to value goods more when they own them than when they do not. Move a person from a city house to a country house and, low and behold, he is quite likely to prefer the country house more than he did when he resided in the city. A consequence of the endowment effect is the “offer-asking gap,”\(^4\) which is the empirically observed phenomenon that people will often demand a higher price to sell a good that they possess than they would pay for the same entitlement if they did not possess it at present.

A third term – the “status quo bias”\(^5\) – is often used interchangeably with the other two, but actually has a slightly broader connotation\(^6\): individuals tend to prefer the present state of the world to alternative states, all other things being equal. The present state of the world may be defined by ownership or non-ownership, but it might have nothing to do with ownership per se. If you live in the country you will probably prefer the lifestyle more than if you don’t live in the country, for example. If the air is clean and gas expensive you are more likely to prefer clean air and expensive gas to cheap gas and dirty air than you would if the air were dirty and gas cheap, even if you have no well-defined property right in clean air that could plausibly be called “ownership.”

Once confined to social science journals, the evidence contradicting the status irrelevance assumption is fast becoming an important topic of discussion and application in the legal-academic literature. In 1990, only seven law journal articles mentioned the term “endowment effect” or “status quo bias.” In 2000, 79 law journal articles contained at least one of those terms. According to the Westlaw Journals and Law Reviews (“JLR”) database, as of May 2002 nearly 450 law journal articles mentioned either the endowment effect or the status quo bias. In many of these articles, of course, the terms are mentioned only briefly or in passing, but in many others the concepts are central to the authors’ positive or normative claims regarding questions of legal policy. The concept is the most significant finding from behavioral economics for legal analysis to date.\(^7\)

As might be expected when legal scholars import into their work a concept developed by and primarily studied in other disciplines, the sophistication with which the endowment effect has been used to address legal policy questions varies substantially across the literature. Legal scholars have universally grasped the most important positive implication of the endowment effect – that legal entitlements will not change hands as

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3 The term was coined by Richard Thaler. Richard H. Thaler, Toward a Positive Theory of Consumer Choice, 1 J. Econ. Behav. & Org. 39, 44 (1980).


7 See Issacharoff, Can There Be, supra note __, at 1735 (“The endowment effect is the most significant empirical observation from behavioral economics.”).
often in the free market as the status irrelevance assumption implies – and often have successfully employed this insight to revisit long-standing arguments about normatively appropriate legal policy. However, two important subtleties sometimes escape legal scholars’ attention: (1) that the existence and extent of the endowment effect is context-dependent (and not fully understood), and (2) that the explanation for why the endowment effect exists (also not well understood) should often affect its normative implications.

This article explores how the endowment effect can be incorporated into legal policy analysis across a variety of substantive areas. In so doing, it illustrates two general conclusions about the relationship between the empirically observed endowment effect and legal analysis:

First, the endowment effect is an extremely important behavioral regularity for legal scholars to understand and take note of in their research. In virtually every field of law, the endowment effect findings can be valuable to reexamining policy arguments explicitly or implicitly based on the status irrelevance assumption embedded in the Coase Theorem.

Second, applying the endowment effect to legal policy questions requires care, nuance, and a healthy degree of respect for what we still do not know about how the effect operates. The endowment effect is context dependent, so predictions about how actors subject to the law will behave in particular situations of interest to legal policymakers must be made carefully. Even more important, the normative significance of the endowment effect in particular contexts will often depend on what causes the endowment effect, a subject that is not well understood. Thus, when the endowment effect is used as a basis for normative claims, these claims must often be qualified and contingent.

Part II of this article summarizes what social scientists have learned about the endowment effect. While the basic finding, as described above, is well-known and frequently repeated in law journal articles, this Part focuses on the less well-known fact that the effect is context specific. Although the endowment effect itself has been studied repeatedly, researchers still know surprisingly little about its causes, an understanding of which is necessary for policy makers to evaluate the normative significance of the effect. Part III considers a range of plausible causes and concludes that the actual causes are most likely not monolithic.

Parts IV-VI illustrate the importance of the endowment effect to legal analysis by identifying and critically evaluating applications of the effect across a broad (but not exclusive) range of substantive areas of law: Part IV analyzes the relevance of the endowment effect to areas of law concerned with the initial assignment and redistribution of property rights; Part V considers the relevance of the effect areas of law concerned with the facilitation of the private exchange of entitlements; Part VI considers the relevance of the endowment effect to the rules governing the enforcement of the law. These Parts demonstrates how, used cautiously and judiciously, endowment effect research has the potential to significantly deepen our understanding of law-relevant behavior and to sharpen normative legal policy analysis.

II. Social Science and The Endowment Effect

Neoclassical economics, relying implicitly on RCT as its behavioral theory, commonly assumes that decision makers treat opportunity costs the same as out-of-
pocket costs. An affirmative choice entails foregoing other opportunities, and those lost opportunities are just as costly as any more tangible loss associated with the choice.

This common assumption underlies the Coase Theorem, the edifice upon which much of law-and-economics scholarship rests. In his seminal article, *The Problem of Social Cost*, Coase explained that if transaction costs are zero, the assignment of a legal entitlement by the state will not affect the ultimate ownership of that entitlement. In his most famous example, Coase discussed a dispute between a farmer concerned with protecting his crops and a neighboring rancher who wished to let his cattle roam freely, even at the risk that they would trample the farmer’s crops. Coase explained that whether the farmer had a legal entitlement to exclude the rancher’s cattle from his land or the rancher had a legal entitlement to free range would not affect whether the cattle would or would not roam freely (although it would have distributive consequences). If the rancher possessed the legal entitlement but the farmer valued untrampled crops more than the rancher valued free range, the farmer would pay the rancher to control his cattle. If the farmer were entitled to exclude the cattle, the rancher would buy the farmer’s right if the rancher valued freedom for his cattle more than the farmer valued his produce. For Coase’s “invariance proposition” to be correct — that is, for the outcome of the dispute to be invariant to the original allocation of the entitlement — both the farmer and the rancher would have to value the entitlement at issue independently of whether they would have to buy it (an out of pocket cost) of whether they could sell it (an opportunity cost).

The immediate consequence of treating out-of-pocket and opportunity costs identically is that the maximum amount an individual is willing to pay (WTP) for an entitlement should be same as the minimum amount that he would be willing to accept (WTA) to sell that same entitlement if he owned it. If these two measures of value diverge, not only is the Coase Theorem incorrect, or at least incomplete, a range of legal prescriptions based on Coase’s insight require reevaluation. Over the last thirty years, a large body of evidence created by social scientists suggests such a reevaluation is in order.

A. Evidence of the Endowment Effect

In the 1970s, attempts to value monetarily public goods, often types of environmental protection, suggested that people systematically place a higher value on entitlements if they possess them than if they do not, and that the difference in valuation can be extremely large. These studies most commonly used a contingent valuation method (CV) of analysis, a survey-based approach that calculates a total value by summing the individual values reported by affected individuals, with some questions directed toward

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11 Id. at 4.
12 Id. at 6.
14 See, e.g., J.D. Marshall et al., *Agents’ Evaluations and the Disparity in Measures of Economic Loss*, 7 J. Econ. Beh. 7, 115, 116 (1986). Economists have long since observed that due to wealth effects, WTP and WTA might vary slightly, but the standard assumption is that the two should be so close that the difference between the two measures is expected to be negligible. See, e.g., Posner, supra note 5, sec. 1.2 at 12.
how much individuals would be willing to pay for a public good and others toward how much individuals would demand to give up a public good assuming it were provided.\textsuperscript{15}

In one notable study, 2000 duck hunters were surveyed about the value to them of protecting a wetland from development.\textsuperscript{16} Hunters were willing to pay $247 per person per season, on average, for the right to prevent development to make hunting viable, while they would demand, on average, $1044 dollars each to give up an entitlement to hunt there.\textsuperscript{17} In a similar study, Elk hunters reported that they would pay, on average, $54 per year to increase their elk sighting per expedition from one to five, whereas they would demand $142 each to allow environmental degradation sufficient to reduce sightings from five to one.\textsuperscript{18} In a variant on the clean air/dirty gas hypothetical used in the introduction, one survey found that a sample of residents of a region of the southwest would pay $4.75 per month, on average, to maintain 75 miles of air visibility in the face of potential pollution that would reduce visibility to 50 miles. In contrast, however, another sample drawn from the same pool and told that they (collectively) enjoyed the right to prohibit the pollution, reported that they would demand $24.47 per month before being willing to permit the pollution.\textsuperscript{19}

Amidst criticisms that the results of these types of surveys were unreliable because subjects lacked any real incentive to provide truthful answers,\textsuperscript{20} experimental economists began to conduct experimental tests of the endowment effect. These experiments are designed so that subjects have a personal financial incentive to acknowledge their true WTP and WTA values for the entitlements in question. The simpler of these are “choice” experiments, whereas the more complex are “exchange” experiments. Both types of experiments have produced results that demonstrate the robustness of the endowment effect.

In choice experiments, the experimenters segment their subjects into two groups by randomly assigning $\frac{1}{2}$ of the subjects a good and the other $\frac{1}{2}$ a roughly equivalent amount of cash. They then announce a market price for the good, and offer every subject the choice of between the good and the cash market price. If there is no endowment effect, the same percentage of subjects in each of the experimental groups should choose the good, as there is no difference between the subjects in each group other than their initial endowments.\textsuperscript{21} For example, Knetsch and Sinden randomly gave some experimental subjects a lottery ticket for a $50 cash prize, and others $3 in cash, and then


\textsuperscript{17} Id. at 26-27. See also Bishop and Heberlein (1979) (goose hunters willing to pay $21 for a hunting license but would demand $101 to give up a license).

\textsuperscript{18} William D. Schultze, et al., Valuing Environmental Commodities: Some Recent Experiments, 57 Land Econ. 151, 165-66 (1981). For other similar examples, see discussion in Marshall et al., supra note __, at 116 (describing studies of fishermen and goose hunters).


\textsuperscript{20} See, e.g., Viktor L. Adamowicz et al., Experiments on the Difference Between Willingness to Pay and Willingness to Accept, 69 Land Econ. 416, 417 (1993).

\textsuperscript{21} Note that it does not matter whether the market price is high or low. If the market price is set very high, a large majority of each group might choose money over the good, and if the market price is set very low, a large majority might choose the good. But the percentage of subjects in each group choosing the good should be the same, within the range of random statistical variation.
offered to buy or sell tickets for $3. Twenty percent of the ticket holders kept their tickets, suggesting that the WTA of most of these subjects was greater than $3. Only 38 percent of the non-ticket holders bought tickets, however, suggesting that the WTP of most of these subjects was less than $3. In a similar experiment, Knetsch gave some subjects coffee mugs and then offered to trade them a large Swiss chocolate bar for the mug, and gave others the large chocolate bar and offered to trade them one of the same mugs for their chocolate. Of the subjects endowed with the mug, only 11 percent chose to give it up for the chocolate bar, while only 10 percent of the subjects endowed with the chocolate bar were willing to give it up for the mug.

Choice experiments demonstrate a difference between average WTP and WTA values for a good, but they do not provide enough information to calculate the precise size of the disparity. In exchange experiments, experimenters elicit the precise WTP and WTA values of subjects like they do in hypothetical surveys, but they create miniature markets in which the subjects maximize their personal utility by truthfully revealing their valuations.

In the best known of many exchange experiments, Kahneman et al. provided ½ of their subjects (determined randomly) with a coffee mug bearing the Cornell university logo. Subjects who received the mug were told that they would have an opportunity to sell it, and the remainder of subjects were told they would have an opportunity to purchase one of the mugs. Following what is known as a Becker-DeGroot-Marschak (BDM) method of eliciting individuals’ valuations, the experimenters then (1) asked mug holders (“sellers”) to fill out a form that indicate, for each 50 cent interval between 25 cents and $8.75, whether they would prefer to keep the mug or to sell it at that price, and (2) asked non-mug holders (“buyers) to indicated, at the same intervals, whether they would be willing to buy a mug at each interval price. The experimenters explained in advance that based on the responses the experimenters would determine the market price of the mugs. All sellers who indicated on their form a willingness to sell at that price or lower would sell for the market price, and buyers who indicated a willingness to buy at that price or higher would buy a mug at the market price. Because exchanges would take place at the market-determined price, which would be set by all of the subject responses, buyers lacked a strategic incentive to low-ball their valuations and sellers lacked an incentive to exaggerate theirs.


23 Id. at 513. See also Marshall et al., supra note __, at 118-24 (finding similar results in five different hypothetical and real lottery ticket exchange experiments).


25 Id. at 1278. To provide a baseline, Knetsch offered a third group of subjects their choice of the mug or the chocolate bar, without first endowing them with either. Fifty-six percent chose the mug, and 44 percent chose the chocolate, id., suggesting that all other things being equal, the two items were viewed as roughly equivalent, on average, by the subjects. See also Jack L. Knetsch, Preferences and Nonreversibility of Indifference Curves, 17 J. Econ. Beh. & Org. 131, 134-37 (similar results when subjects were endowed with a pen or a mug and offered a trade for the other item plus 5 cents).


28 Kahneman, et al., supra note __, at 1329-32.
In four iterations of the experiment with the same subjects (one of the iterations was later selected as the one on which actual trades would be based), buyers provided a median WTP of from $2.25-$2.75, and sellers provided a median WTA of $5.25 each time. Because there were 22 buyers and 22 sellers in the experiment, the status irrelevance assumption predicts that 11 mug trades would take place (50%). In the four iterations of the experiment, however, only 1-4 mug trades took place. The experimenters achieved nearly identical results using pens as a commodity rather than mugs, finding that sellers’ WTA values were approximately twice buyers’ WTP values, and that only a fraction of the predicted number of trades actually took place.

The choice and exchange experiments provide convincing evidence that the endowment effect is not an artifact of experimenters’ use of hypothetical surveys, in which respondents have no personal stake in truthfully revealing their valuations. A recent study of 45 endowment effect studies found, in fact, that there is no significant difference in the size of the effect (i.e., the ratio between WTA and WTP valuations) between real experiments and hypothetical questionnaires.

B. The Importance of Context: When is the Effect Present?

The broad array of experiments testing the endowment effect demonstrate that it is remarkably robust across different types of endowments, but it is not universally apparent nor equally striking across contexts. In the choice and exchange experiments in which subjects participate in actual market transactions, financial constraints on the experimenters usually result in the endowments being small, tangible items of personal property, such as mugs, pens, chocolate bars, lottery tickets, etc, but some experiments have tested whether the endowment effect exists for less tangible entitlements. One early study, for example, found a large differential between subjects’ WTP to avoid having to taste a bad-tasting but harmless liquid and their WTA to taste the liquid when they had the right not to taste it. Hypothetical surveys have also demonstrated that the endowment effect exists for legal entitlements other than property rights to tangible objects, such as clean air.

Studies also indicate that the effect exists when no legal entitlement, per se, is at issue at all. Hartman et al. found that power company customers who had experienced high levels of service had a WTA for a reduction in the level of service that was four times as high as the WTP for higher quality service of customers who had experienced poorer service. Kahneman and Tversky told subjects to imagine they held one of two hypothetical jobs -- one of which had a higher salary and the other of which had better working conditions -- and then to decide whether they would prefer to switch to the other or to remain in their current position. The majority of subjects said they would stay at the

29 Id. at 1332 (tbl. 2).
30 Id.
31 Id.
32 The robustness of the effect is still a matter of some dispute, however, as some experimenters have failed to find an endowment effect using different experimental methodologies. This disagreement is considered in Part II.C.A, infra.
34 See, e.g., Rowe, supra note __.
35 Raymond S. Hartman et al., Consumer Rationality and the Status Quo, 106 Q. J. Econ. 141, 143 (1991)
current position, regardless of which job that was.\textsuperscript{37} Dubourg et al. found that subjects would demand much more to purchase a car with one fewer safety features than the standard model, thus slightly increasing the risk of injury in an accident, than they would be willing to pay for a car with one more safety feature than the standard model, thus reducing the risk of injury by an equivalent amount.\textsuperscript{38} These and other similar results suggest that individuals tend to prefer the status quo state of the world, all other things being equal, even when there is no enforceable legal entitlement or property right at issue.\textsuperscript{39} Consequently, the term “endowment effect,” though widely used by scholars, seems to have an insufficiently narrow connotation for the breadth of the observed behavioral effect. “Status quo bias,” a term often used interchangeably with “endowment effect,”\textsuperscript{40} is probably a more accurate description of the breadth of the phenomenon.

Although the endowment effect exists for a variety of goods, there is evidence that it is stronger when the good is obtained as a result of skill or performance rather than as a result of chance. Loewenstein and Issacharoff\textsuperscript{41} distributed mugs to student subjects who had earned the highest scores on a class assignment. They told half of the recipients they had been awarded their mugs due to their performance; they told the other half that they had been awarded their mugs randomly. Although both groups of recipients subsequently placed a higher value on the mug than the non-recipients – demonstrating the endowment effect – the differential in valuation compared with the non-recipients was twice as high for the “performance” recipients.\textsuperscript{42}

Money itself does not create an endowment effect, but the effect does appear to be exist for financial instruments that are valued only for the money they are worth (i.e., have no intrinsic value themselves) if the value of the instrument is uncertain. Before testing whether mugs and pens would create an endowment effect, Kahneman et al. used their experimental approach to elicit subjects’ WTA and WTP values for tokens that could be redeemed after the experiment for a fixed amount of money. The experimenters found no difference between WTA and WTP values. Whether subjects owned the tokens or not, they valued them at the redemption value.\textsuperscript{43} Van Dijk and van Knippenberg likewise found no endowment effect for a bargaining chip that could be exchanged after the experiment for a fixed amount of money.\textsuperscript{44}

\textsuperscript{38} W. R. Dubourg et al., Imprecise Preferences and the WTP-WTA Disparity, 9 J. Risk & Uncertainty 115, 127 (1994).
\textsuperscript{39} In one interesting natural experiment, in the early 1980s New Jersey and Pennsylvania both enacted laws giving drivers the option of purchasing low-cost insurance with limited rights to sue other drivers. In New Jersey, the limited rights policy was the default choice, and consumers had to opt for the expanded rights option. In Pennsylvania, the opposite was true. A large majority of New Jersey drivers opted for the limited rights policies, while most Pennsylvania drivers opted for the expanded rights policies. See David Cohen & Jack L. Knetisch, Judicial Choice and the Disparities Between Measures of Economic Values, 30 Osgoode Hall L. J. 737, 747 (1992); Colin F. Camerer, Prospect Theory in the Wild: Evidence from the Field, in Choices, Values, and Frames 288, 294-95 (Daniel Kahneman & Amos Tversky eds., 2000).
\textsuperscript{40} See Korobkin, Status Quo Bias, supra note __, at n. 58 and sources cited therein for a discussion of the use of the two terms interchangeably.
\textsuperscript{41} George Loewenstein & Samuel Issacharoff, Source Dependence in the Valuation of Objects, 7 J. Beh. Decision Making 157 (1994).
\textsuperscript{42} Id. at 160-61 & exh. 2.
\textsuperscript{43} Kahneman et al., supra note __, at 1332 (tbl. 2).
Van Dikj and van Knippenberg did find a significant discrepancy between WTP and WTA values, however, when the value of the chip was uncertain within a specified range at the time the subjects’ valuations were elicited.\footnote{Id. at __.} Samuelson and Zeckhauser similarly found that subjects preferred investment options such as a high-risk stock fund, a moderate risk stock fund, a treasury bill, or a municipal bond fund, more if a certain sum of money that they had to invest was already allocated to that investment vehicle than if it was allocated to another investment vehicle or no vehicle at all.\footnote{Samuelson & Zeckhauser, supra note __, at 12-13.} These results suggest that securities and other financial instruments create an endowment effect even though they are held as stores of wealth rather than for their intrinsic or “use” value.

The difference in endowment effect for tokens with a fixed cash equivalent and tokens with an uncertain cash equivalent also illustrates a broader finding. The more difficult it is for individuals to compare two items in a proposed trade, the larger the endowment effect tends to be. Subjects can compare cash to a token with a fixed cash value easily and with complete certainty; hence, no endowment effect. In contrast, subjects cannot compare with certainty cash to a token with an uncertain cash value.

Van Dijk and van Knippenberg conducted an experiment in which \( \frac{1}{2} \) of a given group of subjects were given a particular bottle of wine as compensation for participating in a study, and the other \( \frac{1}{2} \) were given a different bottle of wine.\footnote{Eric van Dijk, & Daan van Knippenberg, Trading Wine: On the Endowment Effect, Loss Aversion, and the Comparability of Consumer Goods, 19 J. Econ. Psychology 485 (1998).} Subjects were then permitted to trade their bottles of wine with each other if they chose to do so. The only information about the wine provided to the subjects, other than the name on the bottle, was its country of origin. The experimenters found that when both bottles of wine were from the same country (Spain or Bulgaria), approximately \( \frac{1}{2} \) of the subjects made trades. When one bottle of wine was from Spain and the other from Bulgaria, however, less than \( \frac{1}{3} \) of the subjects made trades.\footnote{Id. at 492 (tbl. 2).} Bar-Hillel and Neter found that nearly all subjects endowed with a pen were willing to trade the pen for an identical pen plus a small amount of money, but most subjects endowed with a lottery ticket refused to trade it for a different ticket (with a different number) for the same lottery plus a small amount of money.\footnote{Maya Bar-Hillel & Efrat Neter, Why are People Reluctant to Exchange Lottery Tickets?, 70 J. Personality & Soc. Psychol. 17, 25 (1996).} Apparently, the more uncertain the comparison is between two items, and hence the more difficult to determine whether or not a trade will be profitable, the more likely individuals are to place a relatively high value on keeping what they have when given an opportunity to trade.

Consistent with these results, experimenters have also found that the endowment effect is more robust for entitlements with no close market substitutes than for goods that have close substitutes or are themselves readily purchasable. In one study, Shogren et al. found no differential between subjects’ WTP and WTA for an ordinary candy bar.\footnote{Jason F. Shogren, et al., Resolving Differences in Willingness to Pay and Willingness to Accept, 84 Am. Econ. Rev. 255. 259-64 (1994).} In contrast, they found an extremely large difference between subjects’ WTP to trade a lunch from a local source (provided to them by the experimenters) for a lunch that had been screened for food-borne pathogens and had a lower than average probability of causing food-borne illness and their WTA to trade the screened lunch for the ordinary

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one. Although the failure of Shogren et al. to observe an endowment effect for the market good is unusual, the difference between the market and non-market good seems consistent with the findings on the impact of comparability. When an entitlement has a close or identical market substitute – such as a candy bar – it is presumably easier for individuals to compare its value to the value of money and determine with a high degree of confidence whether they would be better off with money or the entitlement.

There is also some evidence for the more subtle hypothesis that the endowment effect will be smaller when a good has a somewhat close substitute as compared to no substitute at all. Adamowicz et al. tested subjects’ WTP and WTA values for tickets to a National Hockey League playoff game. In one condition, subjects were told that the game would be broadcast live on TV and radio, whereas subjects in another condition were told that the game could be viewed only in person. Although an endowment effect was apparent in both conditions, the effect was substantially larger for subjects who were told that the game could be seen only in person – i.e., those for which there was no substitute at all for the tickets.

A recent statistical analysis of 45 different endowment effect experiments by Horowitz and McConnell validates the hypothesis that the strength of the endowment effect does not depend on the type of entitlement at issue but does depend on how close a substitute there is for that entitlement. The authors conclude that, even accounting for differences in study design, the ratio of WTA to WTP “is highest for public and non-market goods, next highest for ordinary private goods, and lowest for experiments involving money.”

This finding that substitutability affects the importance of endowment gives rise to a corollary prediction: the endowment effect will be larger if an individual evaluates an entitlement for its use value than if she evaluates the same entitlement for its exchange value (because an item held only for its exchange value has ready substitutes). For example, if Adamowicz et al’s hockey ticket subjects assumed that they would sell the tickets to a broker, their WTA and WTP prices in the experiment would likely converge – especially if they knew with certainty what price brokers were paying for such tickets. This hypothesis finds support, at least inferentially, in at least two sets of experiments. Arlen et al. found a significant endowment effect for mugs in a pilot experiment designed to mimic the studies of Kahneman et al., but not when the subjects were told that the mugs were a factor of production that would affect the profits of their firm and that their salary would be based on the firm’s profits. The authors theorize that the context of the experiment likely made salient the value of the mug as a generator of

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51 Id. at 261-62.
52 See, e.g., Kahneman, et al., Experimental Tests, supra note__ (coffee mugs); van Dijk, & van Knippenberg, Trading Wine, supra note__ (bottles of wine); Loewenstein & Issacharoff, Source Dependence, supra note__ (coffee mugs); Adamowicz et al., supra note __ (movie tickets and hockey tickets); Knetsch, The Endowment Effect supra note__ (coffee mugs and candy bars). For further discussion of what the results of Shogren et al. and others using a similar experimental design might imply about the cause of the endowment effect, see Part II.C.A, infra.
53 Adamowicz et al., supra note __, at 421-24.
54 Id. at 423 (tbl. 4).
55 Horowitz & McConnell, supra note __, at 3.
57 Id. at 13-15.
58 Id. at 18-19. The experimenters did find a consistent but statistically non-significant effect.
company profits rather than as a unique consumption good, and thus caused subjects to
treat it as more fungible. David Harless had a group of subjects participate as both
buyers and sellers in a series of transactions involving lottery tickets, in part to allow a
within-subjects comparison of WTA and WTP, and found a small but non-significant
gap between the median values provided for the two measures. It seems plausible that
the opportunity to participate identical transactions as both buyer and seller focused
subjects’ attention on the exchange value of the lotteries.

A limited amount of evidence on a subject of particular importance to lawyers is
mixed: is the endowment effect as strong for agents as for principals involved in a
transaction? Marshall et al. answer in the negative. In a series of hypothetical scenarios
and one actual choice experiment, one group of subjects was asked whether or not
they would pay a fixed amount of money ($1 or $2) for a ticket in a lottery with a
specified prize, or whether or not they would give up such a ticket for the cash payment.
A second group of subjects was asked either whether or not they would advise a friend to
buy the ticket or sell the ticket. Subjects in the first group were much more likely to
prefer the tickets to the cash if they were sellers than if they were buyers, whereas there
was no significant difference based on role for the “advisors.” In contrast, I found a
pronounced endowment effect in hypothetical scenarios that asked law students to
assume the role of a lawyer and make transactional decisions on behalf of a corporate
client, with subjects placing a higher value on a contract term that would benefit the
client if the term was associated with the status quo contract language than if not.

The difference in results is perhaps explainable by the difference in instructions
provided to the experimental subjects. Marshall et al.’s agent subjects were asked to
provide advice to a third party, with no apparent consequences for the content of the
advice given. My subjects were told that their future opportunities with their client
depended on the results of the contracts they negotiated, and the subjects were reminded
to make decisions that are in the best interest of the client and will “reflect[] well on [the
subject’s] judgment and ability.” This might have caused my subjects to behave more

59 Id. at 31.
60 David W. Harless, More Laboratory Evidence on the Disparity Between Willingness to Pay and
Compensation Demanded, 11 J. Econ. Behav. 359 (1989).
61 In a within-subjects experimental design, the experimenter compares the WTA and WTP values given by
the same person, rather than comparing average WTA and WTP values given by different subjects who are
similarly situated except for entitlement ownership.
62 Harless, supra note __, at 375.
63 It is equally plausible, however, that multiplicity of transactions -- all of which had real financial
consequences for the subjects -- reduced risk by allowing the subjects to establish a portfolio of prospects,
and thus the experiments reinforce the finding that the endowment effect is smaller as uncertainty is reduced.
See text accompanying notes __-__.
64 James D. Marshall et al., Agents’ Evaluations and the Disparity in Measures of Economic Loss, 7 J. Econ.
65 Id. at 118-24.
66 Id.
67 Russell Korobkin, Status Quo Bias and Contract Default Rules, 83 Cornell L. Rev. 608, 637-47 (1998);
68 Marshall et al., supra note __.
69 Korobkin, Status Quo Bias, supra note __, at 678 (Appendix A2).
like principals with a personal interest in the transaction and less like disinterested third parties, at least relative to Marshall et al.’s subjects. A plausible hypothesis – although one that clearly requires further testing – might be that whether agents exhibit the endowment effect expected of principals depends on the degree to which the incentives of principal and agent are aligned.

Many authors have speculated that corporate decisions are less likely than individual decisions to be influenced by the endowment effect. To date, there is no direct experimental or empirical evidence on this question. To the extent that corporations seek only to maximize wealth, it seems to follow from the existing evidence that the effect is less pronounced when entitlements are held for exchange rather than use that corporate decisions should in fact be less subject to the endowment effect. On the other hand, all decisions executed on behalf of corporations are actually made by individuals. Corporate decision makers might be more expert in the type of transactions in which they deal than the average “individual” decision maker, but it is not clear whether expertise would make a decision maker more or less subject to the endowment effect. Ultimately, whether a corporation exhibits an endowment effect in any particular setting might depend on what causes the endowment effect in that setting – an issue discussed in detail below.

It is important to remember that, unlike the Coase Theorem, the endowment effect is not a theoretical prediction, but rather an empirical finding. As such, although the effect has proven robust across a range of contexts, there is no a priori reason to believe that the effect will be equally pronounced – or even exist at all – in all contexts. Because it would be impossible to test for the presence of the endowment effect in every context in which legal policy makers might have an interest, predicting the presence of the endowment effect in an unexplored context based on its existence in a similar context is unavoidable, and doing so is far more sensible than assuming the endowment effect never exists in any context until proven otherwise. However, legal scholars need to take care to ensure the closeness of their contextual analogies and not to lose sight of the fact that their conclusions will often be contingent on the soundness of such analogies.

III. Causes of the Endowment Effect

Evidence that the endowment effect exists is alone of great importance to legal scholars because it suggests that endowments will affect preferences and thus behaviors of individuals subject to the law. In order to draw normative conclusions about legal policy in light of the endowment effect, however, it is important to understand what


71 See text accompanying notes __-__, supra.

72 See generally Korobkin, Status Quo Bias, supra note __, at 664 (“multiple-agency problems make even commercial parties reliant on the limits of individual rationality”).

73 To the extent that experts are less likely to develop personal attachments to their entitlements, they might be less likely to exhibit an endowment effect. See notes __-__ and accompanying text, infra (attachment). But to the extent that their expertise allows them to distinguish small differences between similar items, they might be more likely to view items as comparable, and thus be more likely to exhibit an endowment effect. See notes __-__ and accompanying text, supra (paragraph on Van Dijk & Van Knippenberg & Bar-Hillel and Neter experiments).

74 See Part II, supra.
causes individuals to place a higher value on an entitlement they are endowed with it than if they are not (or, more broadly, what motivates individuals to value the status quo more highly than alternative states of the world.) Unfortunately, no single factor can explain completely the range of experimental results described above, which weakens the value of the endowment effect as a tool for deriving normative policy conclusions. Given the present state of endowment effect research, it is possible only to cautiously assess the relative importance of a variety of proposed causes. As Parts IV-VI will demonstrate, for the endowment effect to live up to its potential to transform normative legal analysis, social scientists and legal scholars need to better understand what causes the endowment effect in different contexts.

This Part describes and considers a range of possible explanations of the endowment effect. Section A considers claims that the endowment effect is an artifact of the experimental conditions under which it is demonstrated and concludes that such claims are largely unconvincing, although they might be correct in certain limited circumstances. Section B turns to claims that the endowment effect results from wealth disparities between endowed and unendowed individuals. This section concludes that its explanations may explain some of the evidence against the status irrelevance assumption, but that wealth-related factors cannot explain all or even most of the effect. Section C considers a range of explanations based on the concept of “loss aversion.” These explanations are more promising, but they too probably fail to explain every situation in which the endowment effect is exhibited.

A. Artifacts of the Experimental Setting

One possible category of explanations for the experimental results that demonstrate the endowment effect is that they are artifacts of the experimental techniques and conditions that create them. This set of explanations, which if correct implies that the effect is not an externally valid phenomenon that requires the consideration of legal policymakers, can take a variety of forms. In total, these explanations probably have some explanatory power in the case of some endowment effect experiments, but the weight of the evidence suggests that it is extremely unlikely that the effect is merely an artifact of the experimental methods that find it.

1. The “Strategic Heuristic”

In everyday bargaining situations, individuals are used to understating their WTP values and overstating their WTA values. This is part and parcel of buyers attempting to buy low and sellers attempting to sell high. Imagine, for example, that you were to visit a car dealership, and the salesman were to ask you “what is the most you would be willing to pay for a car today?” Assuming that you would answer the question at all, your instinct, no doubt, would be to understate your WTP. Although endowment effect experiments are designed such that there is no strategic advantage to be gained by understating WTP or overstating WTA, perhaps subjects are so programmed to employ

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75 Cf. Korobkin, Policymaking , supra note __, at 682-97 (proposing that policymakers follow an explicit two-step process of first identifying the cause of the endowment effect concerning a particular entitlement and second determining whether the claimants’ WTA or WTP prices are more reflective of the value they place on the entitlement).
what might be called a “strategic heuristic” when responding to such inquiries that the values elicited in experimental settings are biased by this habit.\textsuperscript{76}

If the observed endowment effect is really just a result of subjects attempting to behave strategically,\textsuperscript{77} it follows that the experimental results demonstrating the endowment effect are not externally valid. Experimental subjects misunderstand the nature of the experiments, and thus they report valuations that are inconsistent with the status irrelevance assumption, but the reported valuations do not reflect their actual subjective preferences. In the real world, buyers might begin negotiations with low offers and sellers with high demands, but in the interactive nature of negotiation this posturing would fade and transactions occur if the buyer’s true WTP is higher than the seller’s true WTP.\textsuperscript{78}

There are two methods of attempting to disprove the suggestion that the endowment effect results from subjects overrating their true WTP and understating their true WTA. The first is to demonstrate the endowment effect without requiring the subjects to state WTP and WTA values. The collection of choice experiments – in which subjects chose to keep what they have or to trade and a divergence between WTP and WTA values is inferred from the number of trades\textsuperscript{79} – does just this. The inference from these experiments that the endowment effect reflects actual differences in preferences based on ownership of an entitlement is reinforced by a recent experiment that found subjects of a variety of ages, ranging from kindergarten students to college students,\textsuperscript{80} demonstrated an equally significant endowment effect in a choice experiment.\textsuperscript{81} If the endowment effect was not indicative of true preferences, we would expect that the older subjects, more experienced with bargaining generally, might be less affected than the younger subjects.

The second method is to have subjects participate in multiple iterations of an experiment to give them an opportunity to learn that revealing their true WTP and WTA values is the dominant strategy. In the mug studies and pen studies conducted by Kahneman et al., the experimenters elicited WTP and WTA prices from subjects and constructed their markets four consecutive times for each of the goods using the same subjects in the same roles, specifically to test for whether WTP and WTA would converge as subjects became familiar with the experimental process.\textsuperscript{82} They found both WTP and WTA values, and the number of trades that took place between those endowed with the goods and those not endowed, to be constant across all iterations.\textsuperscript{83}

\textsuperscript{76} Cf. Peter Knez et al., 75 Am. Econ. Rev. 397 (1985) (suggesting that endowment effect results might be the result of subjects inappropriately applying normal bargaining heuristics of “buy low, sell high”).

\textsuperscript{77} It should be reemphasized that the endowment effect experiments are designed so that such “strategic behavior” would be misguided, assuming that subjects’ goals are to maximize the utility they receive from the final outcome of the experiment.

\textsuperscript{78} It is possible to construe this argument about the strategic heuristic so that it does not render endowment effect results irrelevant. It is possible that subjects overstate their true WTA and understate their true WTP in experimental situations, but that they do precisely the same in real world transactions, even after interactive negotiations. Thus, while there is no actual difference between WTA and WTP, individuals in the real world would behave as if there were. Consequently, as a positive matter, we would expect entitlements to be more “sticky” (i.e., resistant to trade) than the Coase theorem suggests, at least in the case of infrequent transactions, although sophisticated “repeat players” might be immune to such stickiness.

\textsuperscript{79} See, e.g., sources cited in notes \_\_ - \_\_, supra.

\textsuperscript{80} William T. Harbaugh et al., Are adults better behaved than children? Age, experience, and the endowment effect, 70 Econ. Letters 175 (2001).

\textsuperscript{81} Id. at 180.

\textsuperscript{82} Kahneman et al., supra note 23, at 1331.

\textsuperscript{83} Id. at 1332 (tbl. 2).
experimenters concluded that “[o]bserved volume did not increase over successive periods in either the mug or the pen markets, providing no indications that subjects learned to adopt equal buying and selling prices.”

The results were virtually identical whether subjects were told that the market price would be established by constructing supply and demand curves from the subjects’ WTP and WTA prices or that the market price would be determined randomly.

Despite the considerable evidence that the endowment effect reflects true preferences, there are anomalous research findings. In several experiments using incentive-compatible auction mechanisms (auction mechanisms that provide an incentive for subjects to bid their true valuation) to elicit valuations and repeated trials with the results of each trial posted, experimenters have found that large endowment effects in the initial rounds or even disappear in later rounds, the results of Kahneman et al. notwithstanding. For example, Coursey et al., held multiple, second-price Vickrey auctions (in which the winner buys (or sells) at the price bid by the second highest bidder) for the right to avoid having to drink a better liquid (to elicit WTP) and the right to accept money to drink the liquid (to elicit WTA). The experimenters found that as the stages of the experiment progressed, the differential between WTP and WTA fell, and that by the final auction the gap was not statistically significant, although it did continue to exist. Using the same procedure, Shogren et al. found that WTA values for a candy bar exceeded WTP values in the first trial, but the difference disappeared in following trials. List and Shogren found that WTA and WTP converged over multiple trials, but the convergence was greater when the subjects were unfamiliar with the product being auctioned than when subjects were familiar with the product.

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84 Id. at 1332.
85 Kahneman et al., supra note __, at 1336-38. In theory, the former method could provide subjects with some incentive to understate their true WTP and overstate their true WTA, because the subject’s valuation could affect the market price if he were the marginal buyer or seller. If the market price is randomly determined, however, no subject’s valuation can affect the market price. Using the same procedure, Shogren et al. found that WTA values for a candy bar exceeded WTP values in the first trial, but the difference disappeared in following trials. List and Shogren found that WTA and WTP converged over multiple trials, but the convergence was greater when the subjects were unfamiliar with the product being auctioned than when subjects were familiar with the product.
86 Typically, there are several identical auctions, and after all are complete one is chosen at random to be the “binding” auction that determines subjects’ rewards. Because each trial might be the “real” one, subjects theoretically have an incentive to do their best each time.
87 In a second Vickrey auction, the highest bidder wins the auction but pays only the amount bid by the second-highest bidder. This gives each bidder the financial incentive to bid his full WTP (or WTA, depending on the structure of the auction).
88 Don L. Coursey et al., The Disparity Between Willingness To Accept and Willingness to Pay Measures of Value, 102 Q. J. Econ. 679 (1987).
89 Coursey et al., supra note __, at 686 (fig. II). The statistical method used by Coursey et al. was questioned by a pair of researchers who reanalyzed the data and concluded that the final difference was significant. Robin Gregory & Lita Furby, Auctions, Experiments, and Contingent Valuation, 55 Pub. Choice 273 (1987). See also Robert Franciosi, et al., Experimental Tests of the Endowment Effect, 30 J. Econ. Behavior & Org. 213, 225 (1996) (finding that, using a slightly different auction mechanism, the endowment effect over a number of trials was smaller than found in other experiments, although still significant).
90 Jason S. Shogren et al., Resolving Differences in Willingness to Pay and Willingness to Accept, 84 Am. Econ. Rev. 255, 259-60 (1994); see also Jason S. Shogren et al., Auction Mechanisms and the Measurement of WTP and WTA, 23 Resource and Energy Economics 97 (2001). Harless also found no significant endowment effect using a Vickrey auction procedure, but unlike Coursey et al. and Shogren et al. Harless did not find any change in the endowment effect across trials. Harless, supra note __, at 375. This difference suggests that Harless’ results were driven primarily by other features of his methodology that differed from the typical endowment effect methodology. See text accompany notes __-__, and note __, supra.
The question raised by these results is whether repeated Vickrey auctions are better or worse at eliciting subjects' true valuations than other measurement techniques. Vickrey auctions in general are well-known for providing participants with the incentive to bid their precise valuation rather than attempt to bid strategically. But the Vickrey method is arguably not as preference-revealing when multiple trials are used and results provided to subjects between trials. In a second-price Vickrey auction with multiple trials, subjects who learn from the results of the first trial that they are far from being the marginal bidder might lack an incentive to bid their truthful valuation in the subsequent rounds. Alternatively, over multiple trials, as subjects get a better sense of what level of bid is necessary to buy or sell, buyers may increase their bids (and sellers decrease theirs) not because they have finally learned that truthfulness is the best strategy, but because they want to “win” the auction, or because they think that the experimenter wants them to bid closer to the “winning” price. All of these explanations suggest the multiple-trial Vickrey auction results might be less reliable than other methods of measuring valuation.

Alternatively, subjects might raise their bids in later Vickrey auction trials because they believe that the posted winning bids of early trials reveal information about the value of the product. Shogren et al. imply that their Vickrey results suggest that there is no real endowment effect for experienced subjects dealing with market goods that have close substitutes. This conclusion is consistent with other findings that the endowment effect is reduced when close substitutes are available, and comports with common sense. Assuming a general endowment effect that causes an owner to place a high value on an item, if seller knows that an identical substitute is readily available to him for a low price, it seems logical that the seller would not demand his full private valuation to sell the item, because for a lower sales price he could replace the good and have money left over. If accurate, this explanation does not undermine the endowment effect generally but merely highlights a situation in which it might not operate.

2. Experimental Confusion

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92 The Vickrey auction is famous for providing incentives for truthful revelation of valuations. In fact, William Vickrey won a Nobel prize, largely on the basis of inventing this mechanism. See Peter Passel, 2 Theorists of Real-Life Problems Get Nobel, New York Times, October 9, 1996.


94 This is sometimes called the “top dog” effect. It is important to remember that, while subjects have a personal stake in truthfully revealing their valuation in the Vickrey experiments, the stakes are usually small (i.e., a few dollars or a small consumer item). Thus, it is plausible to believe that if subjects become bored with repeating the same auction over and over, their bids might reflect a desire to make the game more exciting rather than their true value for the mug, candy bar, etc. If so, this would cause WTP and WTA values to converge over time.

95 See, e.g., List and Shogren, supra note __, at 946.

96 In an interesting experiment, Knetsch et al. demonstrated that WTP and WTA values converged over a series of trials in a ten-player, second-price Vickrey auction (highest bidding buyer buys at second highest price, lowest bidding seller sells at second lowest price), but increased over a series of trials in a ten-player, ninth-price Vickrey auction (highest eight buyers buy at ninth highest price, lowest eight sellers sell at ninth-lowest price). Id. at 260 tbl. 1. The authors conclude that this demonstrate that Vickrey auction bids after the first trial seem to respond to strategic motivations. Id. at 262. For example, in the second price auction, the revealed winning WTP is relatively high, and thus might drive up WTPs in the next round, whereas in the ninth-price auction the winning WTP is relatively low, and thus might drive down WTPs in the next round.

97 This is sometimes called the affiliated bidding effect. See, e.g., List and Shogren, supra note __, at 942.

98 Id. at 266.
In a recent paper, Plott and Zeiler suggest that the endowment effect might be a consequence of confusion on the part of subjects asked to complete tasks in an experimental setting that bear little relation to tasks they confront in their daily lives.\(^99\) Using a BDM procedure similar to the one employed by Kahneman et al. but more extensive training of subjects, including “practice rounds,” they find no endowment effect for a mug,\(^100\) and suggest one explanation is that their experimental technique eliminates “behavior that motivates an individual to announce something other than a ‘true’ valuation.”\(^101\)

Plott and Zeiler’s results are troubling, but it seems far more likely that they are anomalous than that they identify a fundamental flaw with dozens of studies that have found an endowment effect. One notable difference between their experimental design and that used by Kahneman et al. is that Plott and Zeiler give a detailed explanation of why it is in subjects’ best interest to reveal their true WTA or WTP value.\(^102\) But there is no evidence that their subjects actually understand the strategic implications of the experiment better than did the Kahneman et al. subjects. Recall that in the Kahneman et al. experiment subjects appeared to demonstrate an understanding of strategy by exhibiting no endowment effect when the item for sale was a token with a fixed cash value.\(^103\) On the other hand, subject comments reported by Plott and Zeiler demonstrate that at least some of their subjects failed to understand the strategic implications of the experiment, despite the training that they received.\(^104\)

Another difference from the Kahneman et al. study is that Plott and Zeiler provided their subjects with two practice rounds prior to any binding trials and provided individual coaching after the practice rounds. It is doubtful, however, that the practice rounds themselves provided more useful experience with the BDM elicitation method, as Kahneman et al.’s subjects played three rounds with fixed value tokens and a number of rounds with mugs and pens, displaying an endowment effect even in the latter rounds that took place after substantial “practice.” The coaching provided by Plott and Zeiler itself might have skewed later responses. In practice round one, for example, the subject of the experiment was a “lottery” ticket with a certain cash value.\(^105\) If subjects provided a WTP or WTA that deviated from this amount, the experimenters explained to subjects that they had made a “mistake,”\(^106\) perhaps suggesting to subjects a general rule that WTP and WTA should always be the same.\(^107\)

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\(^100\) Id. at 15.

\(^101\) Id at 20. The authors are careful to admit that other interpretations of their results are possible, id at 20-21, and they claim to take no position as to which interpretation is most valid, id. at 21, but it is hard to escape their implication that the endowment effect might only exist if subjects do not fully understand the task at hand.

\(^102\) Id. at 10 (providing the script used to prepare subjects).

\(^103\) Kahneman et al., supra note __, at 1332 (tbl.2), 1334 (tbl. 3).

\(^104\) Plott and Zeiler, supra note __, at 18-19.

\(^105\) Id. at 11-12.

\(^106\) Id. at 12.

\(^107\) The experimenters themselves concede that their experimental method might have created a “demand effect” – that is, suggested to subjects that the experimenters wanted a certain type of answer. Id. at 21.
3. Perceived Information Signals from the Experimental Manipulation

Another way that endowment effect experimental manipulations could lead to statistically significant results that nonetheless are not indicative of true differences in valuation is if subjects believe that the experimental condition to which they are assigned signals information about the quality of the entitlement at issue. Specifically, it is possible that subjects infer quality from ownership or from the status quo.

Recall, for example, that Samuelson and Zeckhauser found subjects who had to choose among five investment options were biased in favor of the status quo investment even when there were no transaction costs of switching. If the status quo investment were, say, a bond fund, subjects with little knowledge of investing might have chosen to keep that investment not because they had a preference for the status quo, but because they assumed that if the funds were already invested in bonds someone must have determined bonds were a good investment. Assuming that subjects believe lawmakers are knowledgeable, the same thought process could explain a bias in favor of current legal entitlements. A hunter who is told that citizens are entitled to the protection of a wetland might assume that the wetland has more unknown positive characteristics than if the hunter is told that a developer has the legal right to build on the wetland.

Although perceived information signals provide plausible explanations for some experimental results, there are far too many experiments for which this explanation is implausible to believe that it explains the endowment effect. In many endowment effect experiments, entitlements are allocated entirely randomly, and subjects know that the allocations are random and that some people received opposite allocations. For example, when half the subjects in a room are randomly given lottery tickets while the other half are randomly and publicly given three dollars, it would seem unlikely (and completely unreasonable) that the subjects receiving a lottery ticket would infer that the lottery was of a higher quality (i.e., better chances of winning, etc.) than would subjects receiving cash.

B. The Role of Wealth in Valuation

Neoclassical microeconomics, undergirded by RCT, does not predict that WTA and WTP will always be exactly identical. There are two reasons consistent with economic theory for why WTA could be slightly higher than WTP, both derived from the idea that giving you an entitlement makes you wealthier, and a wealthier “you” might have somewhat different preferences than a poorer “you.” A related explanation suggests that wealth might affect expressed valuations, constraining WTP valuations while not constraining WTA valuations. These explanations provide a plausible explanation of why WTA can significantly exceed WTP, but the explanations are only plausible in a narrow set of circumstances.

1. Preferences Changes Due to the Wealth Effects of Entitlement Allocation

First, if a wealthy man and a poor man have identical preferences, the wealthy man should be willing to pay more than his poor counterpart for an entitlement because the former has more dollars with which to maximize his utility, so he values each dollar

108 See note __, supra, and accompanying text.
109 See note __, supra, and accompanying text.
relatively less. Theoretically, if A and B are identical in every way except that A possesses a certain entitlement and B does not, A is wealthier than B. A should therefore value each dollar less than B does, and consequently A should place a higher dollar value on the entitlement in question (expressed as a WTA price) than does B (who’s value is expressed as a WTP price). This is true whether A and B are different individuals or A are B are the same individual in different hypothetical worlds (i.e., in World A the individual possess the entitlement and in World B the individual does not).

Second, as individuals become richer, their preference structures can change. For example, a poor man might prefer a pizza (which he can eat) to a gallon of gasoline (for which he has no use because he cannot afford a car). A rich man might prefer the gasoline because he can use it to power his car (which he is able to buy because he is rich). Thus, assuming A and B have identical preferences, if A is endowed with an entitlement that makes him rich, his preferences might shift, causing him to value the entitlement more than B does.

While theoretically attractive, neither of these two explanations can satisfactorily explain the full range of endowment effect results. When the entitlement at stake is a low-priced item, such as a mug, a pen, or a chocolate bar, it is fanciful to think that increasing the wealth of experimental subjects by the increment of one mug, pen, or chocolate bar, would be a significant enough change in wealth to cause valuations of the entitlement to increase by two times or more. In addition, many of the endowment effect experiments explicitly control for wealth effects by providing endowed subjects with the entitlement at issue and non-endowed subjects with a cash equivalent, thus holding the wealth of subjects constant across experimental groups.

Although wealth effects cannot account entirely for the endowment effect in many contexts, they could plausibly account for a portion of the observed differential between WTP and WTA in experiments in which very expensive entitlements are at stake (i.e., environmental preservation rights). Wealth effects could therefore provide an explanation for why public goods surveys tend to yield larger WTP-WTA disparities than experimental markets concerning ordinary commodities.

2. Constraints on Liquid Resources

Relatively, a WTA-WTP differential could, in some instances, be explained not as the result of different preferences resulting from different levels of wealth, but as the result of differences in ability to back up preferences with dollars that result from different levels of wealth. This can be called the "resource constraint" effect. For expensive

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110 This follows from the standard assumption that there is a declining marginal utility for money. See, e.g., Posner, supra note 5, sec. 1.2 at 11.


112 See, e.g., Loewenstein & Issacharoff, Source Dependence, supra note 160, 163; Adamowicz et al., supra note __ at 419, 422; Knetsch, The Endowment Effect supra note__ at 1279. Alternately, some experiments control for wealth effects by comparing sellers (endowed) not only with buyers (unendowed) but also with “choosers” who may chose between the entitlement and cash. Choosers are as wealthy as sellers (because they can get the entitlement for free), but they behave like buyers, suggesting there is more to the buyer-seller discrepancy than wealth. See, e.g., Kahneman et al., supra note __, at 1338-39.

113 See text accompanying note __, supra.
entitlements, an individual’s WTP might be constrained by lack of resources (and access to capital markets) in a way that his WTA is not. For example, a poor person might provide an extremely high WTA value for a life-saving surgical procedure if he is entitled to the procedure, but a low WTP value – perhaps equivalent to his entire net wealth – for the same procedure if he not entitled to it.\textsuperscript{114}

It is important to note, however, that the fact that poor people have fewer dollars than rich people, and thus are more constrained when placing WTP values on entitlements, should not result in a uniformly larger endowment effect for poor people than rich people. For example, consider a steak dinner for which a rich person would be willing to pay $50. Without knowing more information, we might expect that a poor person – even one who enjoys steak a great deal – would be willing to pay a lesser amount because he has other more important uses for his limited supply of dollars. If this is true, however, we should also expect the poor person to have a correspondingly lower WTA for the steak dinner, because he would also have more important uses for the money he could receive in return for the steak dinner. In other words, except in special cases in which a poor person’s WTP is artificially constrained by an immediate lack of liquidity (coupled with a lack of access to credit), poor people should have lower WTP and WTA values than rich people, holding constant everything other than wealth. Thus, while wealth is undoubtedly a critical determinate of WTP and WTA values in all circumstances, it can only explain a deviation between WTP and WTA for a particular individual (i.e., an endowment effect) in a very limited set of circumstances.

\textbf{C. Loss Aversion and Related Theories}

The endowment effect is routinely explained as a result of “loss aversion,”\textsuperscript{115} the element of “prospect theory” that losses are experienced as more significant than equivalent gains.\textsuperscript{116} Loss aversion suggests that gaining an entitlement will be perceived as less significant than losing the same entitlement. If this is so, it follows that individuals will offer less to gain the entitlement (WTP) than they will demand to lose the entitlement (WTA). The loss aversion explanation is consistent with the results of all the experimental studies that find an endowment effect. Assuming that people feel entitled to the status quo state of the world in the same way that they feel entitled to

\textsuperscript{114} See Korobkin, Policymaking, supra note __, at 684-86; Korobkin, Status Quo Bias, supra note __, at 653; Herbert Hovenkamp, Legal Policy and the Endowment Effect, 20 J. Legal Stud. 225, 225 (1991); Thomas F. Cotter, Pragmatism, Economics, and the Droit Moral, 76 N. C. L. Rev. 1, 59-60 (1997). For an example of experimental results which could be explained by constraints on WTP valuations, see Richard H. Thaler, Quasi-Rational Economics xi-xii (1991) (finding subjects would pay $200 to reduce a risk of immediate death by 1 in 1000 but would demand $50,000 to agree to allow a 1 in 1000 increase in the risk of immediate death.

\textsuperscript{115} See, e.g., Leaf Van Boven et al., Egocentric Empathy Gaps Between Owners and Buyers: Misperceptions of the Endowment Effect, 79 J. Pers. & Soc. Psych. 66, 66 (2000) (“The endowment effect stems primarily from people’s greater sensitivity to losses than to gains: A Loss of a given magnitude is more painful than a gain of an equal magnitude.”); Issacharoff, Can There Be, supra note __, at 1734-35 (“Conceptually [the endowment effect] is a by-product of the concept of loss aversion….”); Christine Jolls et al., A Behavioral Approach to Law and Economics, 50 Stan. L. Rev. 1471, 1484 (calling the endowment effect “a manifestation of the broader phenomenon of ‘loss aversion’…”); Van Dijk & van Knippenberg, Trading Wine, supra note __, at 486 (“The endowment effect is generally interpreted as a manifestation of ‘loss aversion’.”)

goods or rights to which they have a legally cognizable ownership interest, loss aversion is also consistent with the results of studies that show a status quo bias.

Although the concept of loss aversion provides a useful intuition to explain the endowment effect, it is subject to various second-order explanations. Why do people appear to value losses more than equivalent gains? There are a range of plausible answers to this question, all of which are extremely plausible and probably correct in some contexts. The third ("disutility of selling") and fourth ("regret avoidance") are the most consistent with the full range of endowment effect experimental results.


According to economists, opportunity costs have equivalent value to out of pocket costs. But for many people in many instances, the two might not feel equivalent. For example, perhaps having a dollar taken away simply "hurts" more than not receiving a dollar expected. There is no accounting for this difference logically; it is caused by a difference in emotional content. I will label this explanation "pure loss aversion."

This explanation is simple and enticing, and it can explain many of the endowment effect experiment, but it cannot explain them all. If pure loss aversion were a complete explanation of the endowment effect, we would expect that there would be an endowment effect for financial instruments with a certain cash equivalent, and for other items held only for their exchange value. But this does not seem to be the case. Recall, for example, that Kahneman et al. found an endowment effect for mugs and for pens, but not for tokens with a fixed cash value. If losing $1 hurts more than foregoing a $1 gain, subjects should demand more than $1 to give up a token worth $1, but they do not. If pure loss aversion was a complete explanation, we would also expect the size of the endowment effect to be roughly equivalent for all entitlements, but studies routinely suggest that some entitlements – e.g., environmental goods – create a larger endowment effect than do some other entitlements – e.g. consumer goods.

2. Attachment

Perhaps loss aversion, and hence the endowment effect, is driven not by negative emotions associated with loss in the abstract, but because individuals form attachments to what they own. Consequently, an item owned has a predictably higher value than the very same item that is unowned. From this perspective, an unowned widget is merely a commodity with a value based on its potential for use or exchange. An owned widget, however, loses at least a portion of its commodity status and takes on additional value.

118 See e.g., Richard H. Thaler, Quasi-Rational Economics 131-32.
119 Some have speculated that this difference might have been adaptive in the evolutionary environment, thus explaining its persistence. See, e.g. Owen Jones, Time-Shifted Rationality and the Law of Law’s Leverage: Behavioral Economics Meets Behavioral Biology, 95 Nw. U. L. Rev. 1141, 1183-85 (2001); Jeffrey Stake, supra note __, at __; Hoffman & Spitzer, supra note __, at 89.
120 See Kahneman et al., supra note 23, at 1331.
122 See Korobkin, Policymaking, supra note __, at 689-70.
123 For an early version of this hypothesis, see Mark Kelman, Consumption Theory, Production Theory, and Ideology in the Coase Theorem, 52 S. Cal. L. Rev. 669, 691 (1979)
Attachment is a plausible explanation for the endowment effect in some cases, but far less so in others. For example, attachment seems to be a promising mechanism for understanding why hunters would demand far more to sacrifice a wetland than they would be willing to pay to protect the same wetland. In the former case, the property in question is “their” wetland. In the latter case, the property in question is merely “a” wetland. Attachment is also a promising explanation for the finding that people seem to demonstrate a greater endowment effect when they believe they have earned the endowment. It might be easier to create a sentimental bond with an entitlement that was not acquired randomly than with one that was.

On the other hand, attachment seems a far less plausible explanation of the endowment effect in experiments where subjects are asked to value consumer items just moments after they are randomly given the items. A mug set on a desk in front of me minutes ago is not likely to create a greater feeling of attachment than a mug set on the desk next to mine at the same time. Such results might be referred to as “instant attachment,” but this is really to say that attachment is not the explanatory feature for the endowment effect at all. Attachment also seems an implausible explanation for the endowment effect when the entitlement in question is held solely for its exchange value, such as a lottery ticket. A lottery winner would presumably suffer no ill effects from relinquishing the ticket in order to obtain her winnings, so it seems unlikely that trading the ticket prior to the lottery would create such an effect.

3. Disutility Caused by Selling

In at least some circumstances, the endowment effect might be explained as a resistance to participation in market transactions. Although market transactions are a fixture of modern societies, there might still be some items that people will resist evaluating in terms of dollars. In theory, this hesitancy could result in the endowment effect if either sellers demand a high price for the entitlement in order to compensate them for the discomfort of subjecting it to a market transaction as well as for the value of the entitlement and/or buyers offer a low price to compensate for the discomfort associated with participating in the transaction. For example, Abel might despise neighbor Baker’s loud stereo but feel so uncomfortable with paying Baker to turn it down that his WTP is very low, whereas if the city were to classify loud music as a nuisance Abel might feel so uncomfortable with accepting money from a neighbor that his WTA to not enforce the law might be extremely high.

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124 See text accompanying notes __-__, supra.
125 See note __, supra, and accompanying text.
126 See text accompanying notes __-__, supra.
127 See text accompanying notes __-__, supra.
128 See Don L. Coursey et al., Fear and Loathing in the Coase Theorem: Experimental Tests Involving Physical Discomfort, 16 J. Legal Stud. 217, 220-21 (1987) (calling this the “dignity hypothesis”); Korobkin, Status Quo Bias, supra note __, at 654 (citing the use of the term “protected values” by Jonathan Baron & Mark Spranca to identify the same concept);
130 Cf. Mark Kelman, Comment on Hoffman & Spitzer’s Experimental Law and Economics, 85 Colum. L. Rev. 1037, 1039 (1985) (asserting that in some situations individuals are likely to be averse to monetizing
In practice, however, engaging in market transactions is far more likely to create disutility for sellers than for buyers. This might occur as a result of the nature of the entitlement being sold or the context of the transaction itself.

Social norms prescribe that some goods -- such as those that explicitly involve health and safety, personal integrity, and environmental protections -- should not be sold, although there is often not an equally strong social injunction to buy such goods if one does not possess them. In one experiment, Boyce et al. found that a disparity between subjects’ WTA and WTP for a small tree increased dramatically when subjects were told that any trees left in the possession of the experimenters would be destroyed. This additional piece of information caused subjects’ WTA values to increase dramatically while WTP values remained constant, suggesting that subjects felt it would be wrong to sell a tree that would then be destroyed but that their moral obligation did not extend to paying to protect a tree. This might be because a single seller can seem uniquely morally responsible, whereas moral culpability for not buying is diluted because there are many good causes in which to invest and also many other non-buyers with which to share culpability for not buying. A similar asymmetry might cause artists to place an extremely high WTA on “moral rights” in their work without a correspondingly high WTP, or cause drivers to place a high WTA on existing regulations that promote automobile safety without a similarly high WTP for the same safety features in a counterfactual world without such regulations in place.

Even when there is no norm against selling a particular type of good, there may be a norm that could create disutility against certain people selling that good. Ordinary consumer goods are commonly purchased by ordinary individuals, suggesting that WTP values should not be depressed by a distaste for commodifying the objects in question. But most consumers do not sell ordinary goods unless they are engaged professionally in the business of selling such items. It is possible that distaste associated with selling even common items might cause individuals to demand a relatively high amount to compensate them for that discomfort.

A closely related idea is that people have a desire to “close transactions,” and they often prefer not to continually update their valuations of various entitlements. When an entitlement owner is forced to commodify an entitlement by considering the price at which he would be willing to sell, that price might reflect the disutility associated with having to make that determination along with the intrinsic value of the entitlements.

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131 See Coursey et al. supra note __, at 221.
134 See Cotter, Droit Moral, supra note __, at 64 (asserting that “the very idea of accepting money in exchange for the right to alter or destroy one’s work may strike many artists as barbaric”).
135 See Duborg et al., supra note __.
136 See Korobkin, Policymaking, supra note __, at 691-95 (suggesting that an individual might have a WTA for a ticket to a sold-out sporting event that is much higher than what he would have been willing to pay for such a ticket because acting like a “ticket scalper” is tremendously unappealing); Kelman, Consumption Theory, supra note __, at 692 (labeling this effect as a desire to “close transactions”).
137 Mark Kelman, Consumption Theory, Production Theory, and Ideology in the Coase Theorem, 52 S. Cal. L. Rev. 669, 691-93 (1977); Hoffman & Spitzer, supra note __, at 91-93.
4. Regret Avoidance

Another possible explanation of the endowment effect is that giving up an entitlement is more likely to cause future regret than not obtaining an entitlement, such that loss aversion is actually the consequence of a regret-avoidance or regret-minimization strategy.\textsuperscript{138} When an individual engages in a transaction, there is a risk of ex post regret – the individual might later decide that she made a bad deal and not only suffer negative utility from valuing the entitlement she gave up more than the compensation she received but also negative emotions stemming from choosing to enter into the unfortunate transaction. Because of this possible emotional cost, to give up an entitlement, owners might demand the objective value of the entitlement plus a premium to compensate for the possible future regret.

On the surface, there seem to be two conceptual problems with the theory of loss aversion as a regret-avoidance mechanism. First, although an individual might later regret the decision to engage in a transaction, she might alternatively regret the decision not to engage in the transaction. While the former point could increase her WTA, the latter would presumably decrease her WTA. Second, although an individual might later regret choosing to engage in a transaction if it appears undesirable in hindsight, she might enjoy an equivalent feeling of satisfaction if the chosen transaction appears beneficial in hindsight. While the former could cause her to shy away from choosing to part with entitlements, the latter could cause her to seek out such transactions.

These conceptual concerns mean that the regret avoidance theory must rely on two assumptions: (1) the utility consequence of regretting a “bad” decision to enter a transaction must be greater than the utility consequence of regretting a “bad” decision not to enter into a transaction, and (2) the utility consequence of regretting making a “bad” decision must be greater than the utility consequences of rejoicing over making a “good” decision.

There is reason to suspect that both of these assumptions are correct, at least most of the time. As to the former, it is plausible to think that actions are more salient than failures to act, and thus have the potential to cause greater regret.\textsuperscript{139} After all, in the course of a day, we make relatively few decisions to affirmatively act (i.e., engage in transactions) compared to all the decisions we implicitly make to not affirmatively act (i.e., not engage in possible transactions). Empirical research by and large supports this intuition about regret, at least in the case of routine decisions.\textsuperscript{140} The latter assumption is less intuitive but finds support in empirical research as well: although people are happy when they can attribute to their own agency decisions that look good in hindsight, that

\textsuperscript{138} For a more detailed description of this hypothesis, see Russell Korobkin, Inertia and Preference, supra note __, at 1610-26.

\textsuperscript{139} Cf. Kelman, Consumption Theory, supra note __, at 689 (observing that fixating on “what might have been” if one took advantage of untapped opportunities is a “sure[] path to the psychiatrist’s couch”).

\textsuperscript{140} See, e.g., Daniel Kahneman Varieties of Counterfactual Thinking, in What Might Have Been: The Social Psychology of Counterfactual Thinking, 375, 388-89 (finding that subjects predicted more regret when an investor switched investments and then lost money than when an investor chose not to switch investments and then lost money); Thomas Gilovich & Victoria Husted Medvec, The Experience of Regret: What, When and Why, 102 Psychol. Rev. 379, 390-84 (reviewing studies on regret); Janet Landman, Regret and Elation Following Action and Inaction: Affective Responses to Positive Versus Negative Outcomes, 13 Personality & Soc. Psychol. Bull. 524 (1987) (same).
emotions appears to be weaker than the unhappiness that results when their choices lead to decisions that look bad in hindsight.\textsuperscript{141}

The regret-avoidance theory is consistent with the observation that the disparity between WTP and WTA increases as the value of the entitlement becomes less certain,\textsuperscript{142} and with the somewhat peculiar finding that there is no endowment effect for tokens with a fixed cash value but there is an endowment effect for tokens with an uncertain cash value within a specified range.\textsuperscript{143} There is little likelihood of future regret if one were to sell a token worth $5 for $5. There is a possibility of future regret, however, if one were to sell a token potentially worth between $0 and $10 for $5 (or if one were to sell a lottery ticket that might pay off more or less than the price paid.) The regret-avoidance theory predicts that, because an individual would likely experience more regret if either (1) he sold the token for $5 and it turned out to be worth more or (2) he bought the token for $5 and it turned out to be worth less than if (3) he did not sell the token for $5 and it turned out to be worth less or (4) he did not buy the token for $5 and it turned out to be worth more, he will likely set his WTA price above $5 and his WTP price below $5. The regret-avoidance theory can also provide a plausible explanation of why Marshall et al.’s “agents” did not demonstrate an endowment effect for lottery tickets when advising others on whether to buy or sell: because they had no personal interest in the outcome of the lotteries, perhaps they had no fear of regretting the choices that they recommended.

IV. Allocating Legal Entitlements

Because all substantive areas of law are concerned with assigning, protecting, and/or assisting the transfer of legal entitlements, the endowment effect is relevant to scholars in every legal field and teachers in virtually every corner of the curriculum. Parts IV-VI demonstrate the scope of the endowment effect’s relevance by examining how it might bear on positive and normative issues in these three general categories, using as illustrations specific examples from a variety of substantive areas of law. In addition to demonstrating the broad range of the endowment effect’s applications, the analyses reinforce that the positive implications of the effect depend on context and the normative implications of the effect depend on its cause in particular circumstances. The endowment effect is an analytical tool of broad scope, but it must be wielded with considerable nuance.

Because the most basic function of law, in nearly every substantive field, is to allocate entitlements among members of society, this Part concerns the allocation of such entitlements. Economic analysis often adopts the normative position that entitlements should be allocated efficiently, usually understood to be to the claimants that place the highest monetary value on the entitlements.\textsuperscript{144} The evidence of the endowment effect raises substantial conceptual challenges to this analysis.


\textsuperscript{142} See Horowitz & McConnell, supra note __, at 3.

\textsuperscript{143} See van Dijk & van Knippenberg, supra note __ at 521. The researchers found that subjects who “buyers” and those who were “sellers” provided the same estimated expected value for the tokens. Id. Thus, the results cannot be attributed to subjects in the two groups inferring different information signals concerning the tokens’ exchange value from whether or not the experimenter endowed them with tokens.

\textsuperscript{144} This is not to say that economic analysts are necessarily unconcerned with distributional concerns, but the standard thinking is that such concerns should be addressed through taxes and transfers rather through the allocation of entitlements other than money. That is, groups or individuals with a moral claim to a larger share of the fruits of society than they currently have access to should be rewarded with dollars with which
A. The Initial Assignment of Property Rights

1. General Theory

As a matter of first principles, how should the state determine the initial allocation of property and other valuable legal rights? Efficiency-minded economic analysis has traditionally proposed two methodologies: (1) The “market mimicking” approach: assign entitlements to the claimants who value them the most. The Coase Theorem suggests that these claimants will eventually purchase the rights anyway (assuming low transaction costs), so this approach avoids transaction costs. \(^{145}\) (2) The “market facilitating” approach: assign entitlements to the claimants who can transfer the entitlements most cheaply. Because the state may not always know which claimants value the rights the most, this approach is most likely to insure that entitlements eventually flow to the highest-value claimants. \(^{146}\)

The endowment effect makes both of these approaches to entitlement allocation problematic. Market facilitation is rendered a problematic strategy because -- since WTA often exceeds WTP -- entitlements will be “stickier” than the Coase Theorem predicts. Even when transaction costs are low, the initial allocation of an entitlement will often be its final allocation, even if a different initial allocation would also have been the final allocation. This suggests that when efficiency is the normative goal, the market facilitating approach will be relatively less successful than it would be in a world without endowment effects.

Market mimicking is rendered a problematic strategy because the WTP-WTA differential clouds the presumption of economics that an entitlement is allocated efficiently if it is possessed by the claimant who has the highest dollar value for it. Which claimant values the entitlement the most -- the claimant with the highest WTA value, or the one with the highest WTP value? Neoclassical economics cannot answer this question, because rational choice theory assumes these values will be identical.

Herbert Hovenkamp addresses the latter problem by arguing that wealth is maximized when entitlements are allocated to the claimant with the highest WTA value. \(^{147}\) To bolster his argument for using WTA, he relies on a series of examples. In one, Alice’s WTP for health insurance for her sick child is less than $1000 per month, because she does not have $1000 of discretionary income each month, but her WTA is over $2000, because she would not give up an insurance policy for that amount if she had one. \(^{148}\) Hovenkamp concludes that “clearly, if the welfare economist has reliable...
information about both numbers, he must take the larger one into account in calculating welfare."

I have elsewhere\textsuperscript{150} taken issue with Hovenkamp’s solution to the problem of identifying the most efficient entitlement holder, arguing that Hovenkamp’s blanket prescription is relevant only if the endowment effect is caused by the resource constraint effect.\textsuperscript{151} In Hovenkamp’s examples, such as the “Alice” scenario, WTP is artificially constrained by a lack of funds. When this is the case, allocating entitlements on the basis of WTA is sensible.\textsuperscript{152} But when the endowment effect is driven by other factors, it is not obvious that WTA is a better measure of a claimant’s “value” for the entitlement than WTP.

My contention is that if the WTP-WTA differential is explained by regret avoidance or disutility caused by selling, WTP is a more accurate measure of the claimant’s value for the entitlement at issue. This is because if the state does not initially award the entitlement to the claimant, the claimant will never suffer regret or disutility that he would suffer if he were to give up the entitlement. Because that disutility will not be suffered if the state allocates the entitlement to a different party, that disutility logically should not be taken into account when the value of the entitlement to competing claimants is compared.\textsuperscript{153} Consequently, the efficient entitlement allocation demands close attention to situation-specific causes of the endowment effect.

Cass Sunstein, among the first legal scholars to recognize the relevance of the endowment effect to legal scholarship,\textsuperscript{154} has reached a different conclusion, arguing that the existence of the endowment effect suggests that attempts of the state to mimic the market when assigning entitlements lacks coherence and ought to be abandoned.\textsuperscript{155} Sunstein concluded that the endowment effect (among other factors) supports “considerable legislative and judicial intrusion into private preference structures,” rather than basing legal structures on existing private preferences that are clearly context-dependent.\textsuperscript{156} Because law can shape private preferences, Sunstein argues that the law should attempt to do so for the better,\textsuperscript{157} rather than react to existing revealed preferences in the name of efficiency, as traditional economic analysis would do.

At a theoretical level, I think Sunstein gives up on efficiency analysis too easily. The endowment effect renders efficiency analysis more difficult than it is if all entitlement claimants have equivalent WTA and WTP valuations, but a clearer understanding of what

\textsuperscript{149} Id.

\textsuperscript{150} Korobkin, Policymaking, supra note __.

\textsuperscript{151} Id. at 680. See text accompanying notes __ - __, supra.

\textsuperscript{152} Id. at 684-86.

\textsuperscript{153} Id. at 691-97.

\textsuperscript{154} Even earlier — prior to the development of a substantial empirical literature on the endowment effect (and prior also to the coining of the term) — Mark Kelman intuitively sensed the existence of the endowment effect and used that intuition as a basis for criticizing the Coase Theorem. See Mark Kelman, Consumption Theory, Production Theory, and Ideology in the Coase Theorem, 52 S. Cal. L. Rev. 669 (1979).


\textsuperscript{156} Id. at 1172. It is important to stress that Sunstein took this position nearly 20 years ago, before the development of later work on the implications of the endowment effect for efficiency analysis. However, in a related context, he has recently repeated his view that the challenge the endowment effect poses to efficiency analysis suggests policy makers should reach decisions on other bases, such as what they believe to be in public interest. Sunstein, Switching the Default Rules, supra note __, at 132.

\textsuperscript{157} Sunstein, Legal Interference, supra note __, at 1173.
causes the endowment effect in particular circumstances could help policy makers to determine which valuation is more reflective of welfare, and thus more suitable for use in an efficiency analysis. On a practical level, Sunstein’s conclusions are more defensible. Given that we still lack a clear understanding of the endowment effect’s exact causes as well as how different causes might drive the effect in different contexts, in many situations policy makers might find that efficiency analysis is insufficiently tractable to serve as the basis for entitlement allocation decisions.

Consider, as an example, the copyright doctrine of “fair use,” which effectively determines whether a non-creator of intellectual property is entitled to make certain uses of a copyrighted work or the creator is entitled to prevent such uses. A traditional market mimicking analysis might attempt to determine, for example, whether music consumers place a higher value on the right to copy music from a purchased compact disk than the value that music sellers would place on preventing such copying. Alfred Yen speculates – probably correctly – that the value of the entitlement to such consumers will be higher if they are assigned the entitlement than if the producers are assigned the entitlement. Following Sunstein’s lead, he concludes that efficiency rationales for entitlement allocation are indeterminate, and thus fair use jurisprudence must rely on values other than efficiency. Assuming that music producers, as bottom-line oriented businesspeople, would exhibit a minimal gap between WTP and WTA values, it is possible that consumers would have a WTP value for copying rights below the producers’ valuation, along with a WTA value for such rights that exceeds the producers’ valuation. If so, until we have a better understanding of the cause of such a gap, Yen’s conclusion might be difficult to refute.

2. Physical Possession as a Basis for Ownership: Adverse Possession

On first glance, the endowment effect seems to suggest that efficiency can be served by basing legal entitlements on physical possession, on the theory that the physical possessor’s valuation (i.e., his WTA to give up possession) will tend to be higher than the valuation of the non-possessor (i.e., his WTP to gain possession). This approach, while promising, relies on a number of empirical and theoretical assumptions. To be appropriate in a particular context, it must be true that (1) the physical possessor feels endowed with the entitlement and the non-possessor does not, (2) possessors and non-possessors must have identical valuations on average except for the consequences of the endowment effect, and (3) WTA and WTP valuations are equally relevant measures of value under the circumstances. An analysis of a particular rule of property law – the adverse possession doctrine, under which a legal entitlement is obtained by demonstrating physical possession of land – illustrates the complexity of the analysis.

Cohen and Knetsch argue that the advent of the doctrine of adverse possession can be explained by a lay understanding of the endowment effect: that possessors place a higher value on ownership than non-possessors. As a historical claim, it may or may not be

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159 See, e.g., Alfred C. Yen, Restoring the Natural Law: Copyright as Labor and Possession, 51 Ohio St. L. J. 517, 545 (1990).

160 Id. See also A. Michael Warnecke, The Art of Applying the Fair Use Doctrine: The Postmodern Art Challenge to the Copyright Law, 13 Rev. Litig. 685, 701 (1994) (observing that an endowment effect would cause copyright holders to demand more for access to their work than would otherwise be predicted).

161 Id. at 558.

162 David Cohen and Jack L. Knetsch, Judicial Choice and the Disparities Between Measures of Economic Values, 30 Osogoode Hall L. J. 737, 751 (1992). The authors argue, more generally, that biases in the law
correct that vague intuitions about the endowment effect better explain the development of this area of property law than, say, society’s need to provide an incentive for individuals to develop unused land. The more relevant question, from a legal policy perspective, is whether the endowment effect provides a normative justification for the doctrine. Jeffrey Stake advances just such an argument, contending the endowment effect implies that the state should allocate disputed land to an adverse possessor rather than to a record owner, because doing so will create more utility on average.

This argument would be attractive if the adverse possessor feels endowed with the property and the record owner does not. This assumption is conceivable, but it seems hasty where one party (the non-physically possessing party) is the owner of record and the physically possessing party knows that she is not the owner of record. Under these facts, it seems quite possible that the record owner would feel endowed, and that the adverse possessor would not. (As research on the endowment effect makes clear, physical possession, while relevant, is not the sole basis for the existence of an endowment effect.) Perhaps the assumption that the adverse possessor will feel psychologically endowed and the record owner will not is more likely to be correct in the case of boundary disputes, in which both parties believed that the adverse possessor was in fact the record owner, than in the case of a claim for the full property against an absentee owner. At a minimum, it seems fair to predict that the context-specific facts are likely to determine whether either party, and if so which one, feels endowed from a psychological standpoint.

Stake asserts that the normative claim could be valid even if both the adverse possessor and the record owner both feel endowed with the property in question, because (a) the adverse possessor has a tangible physical object while the record owner has only an “intangible financial asset[,]” and (b) that the endowment effect is stronger for physical assets than financial assets. Both of these premises are problematic, however. As to the first, there is no obvious reason to think that a landowner must actually be using his land to consider himself an owner of a tangible physical asset rather than an investment property (perhaps the record owner plans to build a house on his land in the future). As to the second, even if the record owner views his land as a financial asset, an endowment effect has been shown to exist for financial assets as long as they have an

toward possessors, which are hard to justify from a rational choice theory perspective, can be explained in this way. Id. at 749.


164 Jeffrey Evans Stake, The Uneasy Case for Adverse Possession, 89 Geo. L. J. 2419 (2001); see also Jeffrey Evans Stake, Loss Aversion and Involuntary Transfers of Title, in Law and Economics: New and Critical Perspectives 331 (Robin Paul Malloy & Christopher K. Braun eds., 1995). Stake allows that other justifications might have been responsible for the original adoption of the doctrine but claims that none provide a justification for maintaining the doctrine today. Stake, Uneasy Case, supra, at 2455.

165 Id. at 2461-65

166 Cf. Carol Rose, Left Brain, Right Brain and History in the New Law and Economics of Property, 79 Or. L. Rev. 479, 489 (2000) (observing that the indicators of “endowment” diverge in adverse possession cases, where “possession and title go in opposing directions”).

167 See Part II, supra.

168 For a discussion of these two contexts in which the adverse possession doctrine applies, see 5 Thompson on Real Property sec. 2544, 613-14 (1979).

169 Stake, Uneasy Case, supra note __, at 2463.
uncertain value—consider, for example, the experiments demonstrating an endowment effect for lottery tickets, which are obviously not held for their use value.\textsuperscript{170}

If we assume that record owners hold land only for resale, and that there is an active real estate market with stable and known prices, it is plausible to assume that record owners would display a smaller endowment effect than adverse possessors, as the WTP and WTA of record owners would probably both be relatively close to the market price. However, even if adverse possessors tend to have a larger endowment effect than do record owners, this does not suggest that their WTA values would be higher than the record owners’ WTA values or even than the record owners’ WTP values. Adverse possessors and record owners are probably not identical in every way other than their land ownership status, so it is possible that, on average, record owners have WTP and WTA values that far exceed WTA value of adverse possessors. This seems quite likely, in fact—at least where complete adverse possession rather than boundary disputes are at issue—since record owners at one point purchased the property at issue, signifying that they placed a higher value on it at least at that time than did the former owner or any other potential buyer. If record owners on average have a WTP that exceeds adverse possessors’ WTA, there is no efficiency gain from assigning ownership to the adverse possessor, because the record owners will simply buy the property back. Any transaction costs of doing so would be, in fact, efficiency losses, as would increased efforts to adversely possess land for the purpose of earning a fee by selling it back to the record owner.

Even if we assume that the WTA and WTP of adverse possessors on average “sandwich”\textsuperscript{171} the WTA and WTP values of record owners, assigning the entitlement to the adverse possessors is only a welfare-maximizing rule if WTA rather than WTP best reflects the parties’ value for ownership. This depends, in turn, on the reason why the endowment effect exists. If the large endowment effect exhibited by adverse possessors is caused by a disutility associated with selling property or regret avoidance the parties’ WTP values probably most accurately reflect their utility of ownership, which in turns suggests that a legal rule that assigns ownership to record owners would actually maximize social welfare.\textsuperscript{172}

This discussion does not suggest that the law of adverse possession specifically is inefficient; rather, it suggests that applying the endowment effect to specific legal problems requires a nuanced understanding of what we do know about the effect from empirical evidence and a healthy respect for what we do not know. Granting property rights to adverse possessors over absentee record owners is socially efficient if record owners hold their land for its exchange value rather than use value, the land’s exchange value is not too uncertain, adverse possessors value the land in question for its use value, adverse possessors’ use value once they occupy the land exceeds the land’s market value (and thus the record owners’ WTP), and the gap between the adverse possessors’ WTA and WTP is caused by increased utility created by psychological endowment of the land rather than disutility associated with voluntarily alienating the land. But this is a lot of assumptions.

The doctrine of adverse possession applies to two distinct circumstances—the complete conversion of property by a non-owner from an absentee owner, and boundary mistakes that result in one neighbor making use of a piece of his neighbor’s parcel—and

\textsuperscript{170} See notes __-__, infra.

\textsuperscript{171} That is, the adverse possessors’ average WTA is higher than and their average WTP is lower than both the WTA and WTP values of the record owners. See Korobkin, Policymaking supra note __, at 671-74.

\textsuperscript{172} Id. at 691-96.
the endowment effect suggests that perhaps these circumstances require an independent efficiency analysis. The doctrine of adverse possession is more likely to be efficient for boundary disputes than for complete conversions, because in the former case adverse possessors are more likely and record owners less likely to feel endowed with the disputed property, and adverse possessors and record owners are more likely to be similarly situated aside from the endowment effect, thus implying similar WTA and WTP valuations on average.

B. Redistributing Property Rights

Many policy initiatives require the state to consider whether to upset the status quo by redistributing a legal entitlement that is clearly allocated ex ante to one class of claimants. Under the status irrelevance assumption, an efficiency analysis of such an initiative would require the government to compare the WTP for the entitlement of the would-be beneficiaries (or “winners”) to the WTP for the entitlement of the would-be burdened class (or “losers”). If the losers' WTP exceeds the winners', the entitlement is already allocated efficiently. If the winners’ WTP exceeds the losers' but transaction costs are low, no government intervention would be necessary because the winners would purchase the entitlement from the losers. If the winners' WTP exceeds the losers' and transaction costs are high, however, government intervention is necessary to ensure an efficient reallocation. The endowment effect complicates this analysis, and it raises troubling normative problems, even accepting a commitment to efficiency.

1. Land Use: The Zoning Power and the Takings Doctrine

These general problems can be understood in the context of disputes concerning competing land-use preferences. Assume that a land owner wishes to put his property to a particular use, while the neighbors would prefer a different use. Should the neighbors, through the local government, enact a new zoning restriction designed to prevent the undesired project? A standard economic analysis might begin by asking whether the neighbors or the landowner place a higher value on their preferred use.\(^\text{173}\)

The problem, of course, is that the answer to this question might depend on the location of the preexisting entitlement. The neighbors’ valuation (WTP) might be lower than that the landowner’s valuation (WTA),\(^\text{174}\) assuming that the landowner feels endowed with a right to use his property unencumbered by the zoning restriction and the neighbors do not perceive an endowment.\(^\text{175}\) Thus, the local government would not be able to prevail on the landowner to sell his right to put his property to his preferred use. In a counterfactual world, however, in which the zoning restriction was longstanding, the

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\(^\text{173}\) See, e.g., Posner, supra note 5, at 12.


\(^\text{175}\) In many land use disputes this assumption might not hold. While the landowner who is not subject to a pre-existing zoning requirement is likely to feel endowed with the entitlement to use his property without qualification, if the law permits uncompensated zoning restrictions the neighbors might also feel endowed with a right to protect endangered species (which currently dwell on the owner’s land) or enjoy their view (which would be blocked by the owner’s planned ten story building). See Richard Epstein, *Babbitt v. Sweet Home Chapters of Oregon: The Law and Economics of Habitat Preservation*, 5 Sup. Ct. Econ. Rev. 1, 47 (1997) (observing that many environmental disputes arise when the property owner and the environmentalists claim competing vested rights).
landowner might not have been able to convince the local government to sell him a variance.

Whether the stickiness caused by the endowment effect is undesirable, and thus policy tools such as zoning that redistribute property rights are normatively desirable, turns on the question of whether the state should take into account the relatively high WTA valuations that we would expect from property owners.\textsuperscript{176} If the high WTA value of the burdened group reflects that it would experience greater negative utility from redistribution than the remainder of the polity would experience positive utility – as, for example, the “pure loss aversion” or attachment explanations would suggest – redistribution can be seen as inefficient and, thus, normatively undesirable.

A potential concern with this conclusion is that it threatens to render public policy extremely conservative and opposed to change. Since WTA values will always be higher than WTP values for any given individual, owners’ valuations will usually exceed those of non-owners, the state will rarely redistribute entitlements, and the “haves” will prevail over the “have nots” in policy disputes\textsuperscript{177} even more often than under traditional economic analysis (which itself is often criticized for favoring those who have the dollars to back up their preferences relative to those who do not\textsuperscript{178}). On the other hand, if the status quo is a “good” for which people have an innate preference, it is difficult to argue that efficiency-minded lawmakers should not take this preference into account, just like any other.

In contrast, if WTA values are illegitimate, or if the burdened class’s high WTA values are caused by a feature that would not be implicated by a forced rather than a voluntary reallocation of rights (such as the regret or disutility of selling explanations) efficiency considerations would support redistributional policies, assuming that the WTP value of the beneficiaries exceeds the WTP value of the burdened group. The zoning power might even be explained as a mechanism that allows the majority to accomplish what the endowment effect (as well as transaction costs) renders it unable to accomplish through bargaining.\textsuperscript{179}

A problem with this view is that the zoning power is not closely tailored to accomplishing this task, because, not only does it allow the government to force arguably efficient transfers that the endowment effect would otherwise prevent, it also allows the government to force inefficient transactions (i.e., those in which the neighbors’ WTP is lower than the landowner’s WTP) because the “winners” from redistribution are not required to pay anything to the “losers.”

\textsuperscript{176} But see Cohen and Knetsch, supra note __, at 742 (claiming that gains always should be measured by WTP and losses by WTA).

\textsuperscript{177} Cf. Samuel Issacharoff, The Difficult Path from Observation to Prescription, 77 N.Y.U. L Rev. 36, 41 (2002) (observing that attachment to the status quo might have caused John D. Rockefeller to suffer from the break up of Standard Oil but questioning whether the law should intercede to avoid such costs).


\textsuperscript{179} Poindexter claims that the endowment effect could minimize the incidence of aesthetic zoning ordinances. Poindexter, supra note __, at 500-01. But if communities can zone without compensating affected landowners, the endowment effect should have no effect on the incidence of zoning regulations unless we assume that political power precisely reflects private valuations (and, therefore, that owners would be able to block proposed zoning ordinances if their WTA for their properties exceeded the WTP of the more numerous neighbors). If the beneficiaries of the zoning proposal, or of any other policy initiative that involves transferring an entitlement from one group to another, have greater political power than those who are burdened, the beneficiaries will presumably impose the initiative even if their WTP is less than the WTA of the burdened.
If the government wishes to promote the efficient use resources by redistributing rights if and only if the valuation of those rights by the winners exceeds the valuation of the losers, but the WTA measure is considered an illegitimate measure of value, then permitting the community to condemn landowners’ rights and requiring it pay a fixed price determined by the state might be an appropriate policy. This insight suggests that the endowment effect might partially explain and/ or justify the takings power.

William Fischel offers a variant of this argument based on a study of takings clause debates in state constitutional conventions.180 Fischel points out that the delegates to state constitutional conventions determined that “just compensation” for government takings should be set at the market value of the property even though, as property owners themselves, they knew that this amount would be insufficient to satisfy those whose property was taken.181 He contends that this represented a conscious choice by lawmakers to sacrifice the well-being of certain property owners to avoid the costs of full compensation, such as likely having to forego some public works.182

Whether this “conscious choice” was in fact made to avoid the stickiness created by the endowment effect, as Fischel suggests,183 seems quite unclear, even on the historical facts that he presents. It is always likely that an incumbent landowner will value his property at an amount greater than its “market value.” (Otherwise, the landowner presumably would have already sold the property before the government considered exercising its eminent domain power, unless transaction costs are extremely high.184) But the endowment effect is not a necessary condition for this to be the case; it is only necessary that individuals have different subjective preferences, and that landowners tend to value their land at a greater value than others do. The endowment effect could, of course, exacerbate the differential between the landowner’s asking price and the property’s market value, but a policy choice to compensate for takings with market value seems geared more closely towards refusing to recognize subjective valuation rather than refusing to recognize the endowment effect (because the latter policy decision suggests compensating at subjective WTP value not market price).

Whatever the origins of the rule, the “market value” of a property might be the best proxy for its owner’s WTP that is discoverable at a reasonable cost. If WTA overstates the amount of value a landowner derives from the use of his property, requiring owners to sell to the government for “market value,” while not optimally efficient, might result in the efficient use of land more often than either requiring the government to bargain for the property, in which case high owner WTA prices will inhibit efficient transactions, or permitting uncompensated takings, in which case the government would likely exercise eminent domain even when its WTP is lower than the landowner’s WTP.

2. Regulation, Legislation, and the Status Quo


181 Id. at 193.

182 Id. at 193.


184 See, e.g., Epstein, Babbitt v. Sweet Home, supra note __, at 48-49 (observing that “market value is below subjective value of land in those cases where the land is not on the market”).
The endowment effect leads to the prediction that, once established, altering the legislative or regulatory status quo will be difficult. If the endowment effect demonstrates that people value what they have more than what they do not have, all other things being equal, changing a law that reflects one balance of costs and benefits may be difficult even if a different balance would be preferred were the issue to be addressed for the first time today. All other things being equal, the public is likely to prefer the set of policy trade-offs that exist to other possible sets of trade-offs. More pointedly, parties who benefit from the status quo will fight harder to avoid a change in the status quo than they would have fought to establish their preferred position if the status quo had been the opposite, and this will make the status quo difficult to change. This prediction, of course, has a broad range of applications across virtually all subject areas.

This prediction will be difficult to prove empirically, because it mirrors the prediction of public choice theory that the regulatory status quo is difficult to change due to the entrenchment of interest groups. At the least, the endowment effect is likely to increase the inertia in favor of existing regulatory policies over and above what entrenched interest groups not affected by the endowment effect would create. More speculatively (and interestingly), the endowment effect might well provide a better primary explanation for regulatory inertia than does public choice theory, because it can be argued that in the absence of the endowment effect rational interest groups should be expected to exert as much effort in the political process to secure potential gains as to prevent potential losses of the same magnitude.

A corollary prediction is that imposing new (or increased) regulations on existing entitlements will tend to be disfavored, even when such regulations will provide countervailing benefits, whereas applying regulations to new entitlements is likely to generate less opposition since the entitlement holders will lack a sense of endowment in the regulatory status quo. Imposing new pollution standards on existing sources of greenhouse gasses in order to mitigate global climate change will be difficult because...

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185 The use of precedent in legal reasoning ensures a bias in favor of the status quo in judicial opinions with or without the existence of the endowment effect. However, to the extent that a previously clear legal rule is brought into question by a judicial ruling, the endowment effect might lead to the prediction that it will be interpreted as consistent with rather than contradictory to the pre-existing law. Cf. Stephen Bainbridge, Insider Trading Regulation: The Path Dependent Choice Between Property Rights and Securities Fraud, 52 SMU L. Rev. 1589, 1648 (1999) (predicting that, due to the status quo bias, interest groups will press, and courts will accept, an expansive rather than a narrow reading of the Supreme Court’s ruling in United States v. O’Hagan).

186 See, e.g., William N. Eskridge, No Promo Homo: The Sedimentation of Antigay Discourse and the Channeling Effect of Judicial Review, 75 N.Y.U. L. Rev. 1327, 1388 (2000) (claiming that the endowment effect helps explain the robustness of laws prohibiting same-sex marriage and gays in the military); Daniel Shaviro, When Rules Change: An Economic and Political Analysis of Transition Relief and Retroactivity 87-88 (2000) (arguing that the endowment effect helps to entrench undesirable tax laws); Clayton P. Gillette, Lock-In Effects in Law and Norms, 78 B. U. L. Rev. 813, 827-28 (1998) (the endowment effect suggests that those who benefit from statutes “may invest more (relative to social value) in retaining their advantage than those who would profit from transition”).


losses in the form of economic dislocation will loom larger than the potential environmental gains.\textsuperscript{190} On the other hand, regulating future sources of greenhouse gases may be a more promising strategy.\textsuperscript{191}

Larry Zelenak relies on the distinction between existing and future entitlements as the basis for a creative argument about the government’s choice of particular tax policies from among a constellation of possible options.\textsuperscript{192} State governments maintain monopolies on lotteries, and they effectively place an extremely high tax on lottery players by keeping large percentage of the income from ticket sales rather than returning all of the income to the winners. Zelenak suggests the following explanation for this particular policy choice: raising taxes on existing products – espresso drinks is an example Zelenak uses\textsuperscript{193} – might hurt the burdened citizens more than establishing a high tax rate on a new product like the lottery, because a tax on existing products disrupts the status quo and could be viewed as loss by the vendors and purchasers of that product, while a lottery tax would be viewed as a less valuable foregone gain.\textsuperscript{194}

The normative policy prescriptions that follow from these observation are less clear. Cass Sunstein believes that the endowment effect suggests that government should not take individual preferences into account when determining environmental regulations because existing preferences are determined in large part by the existing regulatory structure.\textsuperscript{195} It is no doubt true that, at least to some extent, preferences are socially constructed rather than fixed and unchanging. But Sunstein’s prescription denies the validity of individuals’ very real preferences for that which we are familiar. Perhaps individual preferences for the status quo should not preclude change because people will adjust to whatever new baseline is set.\textsuperscript{196} But even if this is true, what should govern policy if not the preferences of the governed?

Zelenak draws the precise opposite conclusion, arguing that the endowment effect suggests that a utilitarian government should tax new products rather than existing products, all other things being equal.\textsuperscript{197} This analysis follows from utilitarianism, however, only on the assumption that the endowment effect exists in forced-sale contexts – in this case, that taxpayers would not only choose the status quo over an objectively equivalent alternative, they would feel similarly worse off if an objectively equivalent

\textsuperscript{191} Cf. Cass R. Sunstein, Endogenous Preferences, Environmental Law, 22 J. Legal Stud. 217, 231-34 (1991) (noting that the 1977 Clean Air Act Amendments regulated new sources of pollution more heavily than existing sources); Cass R. Sunstein, Selective Fatalism, 27 J. Legal Stud. 799, 821-22 (1998) (asserting that the endowment effect supports the predicting that regulation of new risks will be more stringent than regulation of existing risks and claiming that this disparity exists in fact).
\textsuperscript{193} Id. at 28-29.
\textsuperscript{194} Id. at 29.
\textsuperscript{195} Id. at 234-35.
\textsuperscript{196} Some research suggests, in fact, that individuals underestimate how well people adjust to the status quo. The implication is that people actually set WTA too high (because they adjust to losses more easily than expected) and WTP too high (because they adjust to gains quickly as well, and do not obtain the expected utility boost from acquisitions). See George Loewenstein et al., …
\textsuperscript{197} Zelenak emphasizes that all other things are not always equal, and thus the lottery might not be the new product a utilitarian should choose to tax. He points out, for example, that utilitarian policy makers need to take into account the elasticity of demand for the subject of the tax (low elasticity reduces the deadweight loss caused by taxes) and whether the product is consumed by the poor are the rich (the rich presumably have a lower marginal utility for tax savings). Id. at 38.
alternative were forced upon them. If the endowment effect is the result of individuals having high WTA values because of a requirement of compensation for agreeing to divest an entitlement, government compensation should not require this premium. If this explains the endowment effect, there is no reason to think that taxpayers would suffer a higher cost from a tax on lattes than from a tax on lottery tickets.

Jeff Rachlinski and Cynthia Farina suggest that adding sunset clauses to or mandating a periodic legislative review of statutes could reduce the stickiness of legislation, but neutrality in the legislative context is hard to manufacture. A sunset clause would appear to reinstitute the pre-statutory status quo, rather than eliminate any sense of a status quo. Requiring periodic reviews of statutes would not likely alter the perception that the statute represents the status quo (and the transaction costs of such a blanket requirement would likely be prohibitive).

V. Facilitating the Exchange of Entitlements

In addition to allocating legal entitlements, law facilitates the reallocation of entitlements between private parties. The endowment effect has consequences for the use of law for this purpose as well. This Part explores the implications of the endowment effect for setting contract default rules both generally, and as applied to the specific subject of job protection default terms in employment contracts, and the use of law to facilitate the contractual control of agents by principals in the context of corporate law.

A. Contract Law

1. The Power of Default Rules

Most contract law rules are “default” rules rather than “immutable” rules. That is, they are rules that will govern parties that fail to negotiate their own terms to govern their transaction but that parties may opt out of by mutual agreement. The economic justification for making contract rules “defaults” is clear: unless a contract term harms third parties, the terms agreed upon by the contracting parties will be more efficient than state-determined terms, because the parties would not have agreed to the terms if they were not both made better off in the process.

Economic theorists differ somewhat on the question of what is the optimal method for the state to select contract default rules, but the status irrelevance assumption suggests that, unless transaction costs are high, not much is at stake. If the state makes Rule A the default rule, all parties that would be better off with term B will contract for it; if the state makes Rule B the default, all parties that would be better off with term A will contract for it. Evidence of the endowment effect raises the question of whether this assumption is correct, or whether the choice of default rules affects the substance of private contracts.

If contracting parties would favor default terms over competing terms, all other things being equal, the selection of Rule A as a default would result in more parties using term A than would result if Rule B were the default. The empirical question is whether

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198 Rachlinski & Farina, supra note __, at 605-06.
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contracting parties would be biased in favor of default terms. After all, a default term is not an endowment, even for a contracting party that would benefit from that term. Unlike mugs, lottery tickets, or even public goods, which an entitlement holder can use and enjoy without the assent or assistance of anyone else, a party that stands to benefit from a default rule can do so only if she is able to convince another party to contract with her and accept that term. The benefits of a favorable default term are, in their best light, quasi-endowments, and they are probably more accurately described as “illusory endowments.”

I conducted a series of experiments designed to address the question of whether default contract rules would affect valuations in the way that property rights do, and my results suggest that they can. Law students were asked to play the role of a lawyer negotiating a shipping contract on behalf of an overnight delivery company. In one type of scenario, subjects were told that there were two possible terms that could be used in the contract to deal with a particular issue, one of which clearly favored the subjects’ client and the other that clearly favored the other party. For example, in one scenario subjects were told the two possible terms dealing with consequential damages for loss or delay of packages was either (a) the client would be liable for all consequential damages, whether or not foreseeable, or (b) the client would be liable only for reasonably foreseeable damages. In another scenario subjects were told the two possible terms for dealing with unforeseen circumstances that make delivery commercially impracticable were (a) the client would be excused from performing or (b) the client would be liable for damages. Subjects were then given range-estimates of what the differential costs to their client would be (on a per-package delivered basis) of performing its obligations if the contract contained term B rather than term A, and they were then required to value term A relative to term B.

The experiment was conducted by manipulating one variable among the subjects. One-half of the subjects were told that term A was the default rule and were thus asked to provide their WTA price (on a per-package basis) to agree to insert term B into the contract, and thus contracting around the default rule. The other half of the subjects were told that term B was the default rule and were thus asked to provide their WTP for inserting term A into the contract, and thus contracting around the default rule. In both

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203 See Zamir, supra note __, at 1761 (“[R]ights derived from default rules or general usages arguably are not rights the prospective contracting party ‘already has.’ These rights are only derived from the other party’s consent to make a contract that does not negate them.”)
204 Korobkin, Status Quo Bias, supra note __, at 631.
205 Id. at 638-39.
206 Id. at 642-43.
207 Id. at 638-39 (consequential damages scenario), 642-43 (impossibility excuse scenario).
208 Id. at 679 (Appendix B1: consequential damages scenario), 683 (Appendix B2: impossibility excuse scenario).
209 Id. at 681 (Appendix B1: consequential damages scenario), 684 (Appendix B2: impossibility excuse scenario).
scenarios, WTA values significantly exceeded WTP values; in other words, the strength of the subjects’ preferences for the term that benefited their client was biased in favor of whichever term was identified as the default.

Cass Sunstein found similar results in a simple experiment based on a context of personal interest to most law students: contract negotiations between a lawyer and a law firm. He asked one group of students to imagine they accepted a job with a law firm at a base salary of $120,000 and two weeks of vacation time (a state-provided default) and determine how much salary they would give up (i.e., pay) for two additional weeks of vacation time. A second group of subjects was told they had four weeks of vacation (a state-provided default) and asked the minimum amount of additional salary they would demand to agree to accept two fewer weeks. The former group (i.e., the WTP condition) provided a median response of $6000, whereas the latter group (i.e., the WTA condition) provided a median response of $13,000.

To be sure, contracting parties might demonstrate a preference for default terms for reasons other than the endowment effect. For example, individuals without complete information about the costs and benefits of various terms might view the state’s choice of a default term as signaling information about the quality of that term that increases its desirability. Parties might prefer a default term out of fear that suggesting an alternative might signal to the other party that the party seeking to avoid the default is likely to be an undesirable contracting partner. Or parties might assume that most other sets of parties will accept the default term, and that using the most popular term will provide benefits of network externalities. But default terms seem to have a stronger effect than can be explained by any of these explanations. My experiments demonstrate that the bias in favor of default terms can persist even when the economic value of that term to the parties is clear (thus controlling for the signaling value of a term), when contracting around the default does not require the party to propose doing so (thus controlling for the possibility of signaling one’s undesirability as a trading partner), and even when parties are told that what is perceived as the default term will be accepted by a minority of parties (thus controlling for the network externalities explanation).

These experiments demonstrate the positive point that the selection of default rules can have a substantive effect on private ordering. The normative conclusions are less obvious. How should legal policymakers behave differently knowing that the endowment effect exists for contract terms? I have argued that the evidence suggests

211 In the consequential damages scenario, WTA=$6.96 while WTP=$4.46. Id. at 639. In the impossibility excuse scenario, WTA=$302,000 while WTP=$78,000. Id. at 643.


213 Id.

214 Id.

215 See Part III.A.3, supra.

216 For example, a party who proposes a liability limitation might be thought to signal that he will be an unreliable supplier, or a party who proposes an arbitration requirement might be thought to signal that he is likely to breach the contract or likely to bring claims against the contracting partner at the drop of a hat.

217 See generally Marcel Kahan & Michael Klausner, Standardization and Innovation in Corporate Contracting (or “The Economics of Boilerplate”), 83 Va. L. Rev. 713 (1997); Michael Klausner, Corporate Law and Networks of Contracts, 81 Va. L. Rev. 757 (1995); Zamir, supra note __, at 1763.

218 See Korobkin, Status Quo Bias, supra note __, at __.

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220 See Korobkin, Inertia and Preference, supra note __, at __.
three basic policy prescriptions. First, because the endowment effect makes default terms “sticky” and reduces the number of parties expected to contract around defaults, it is particularly important to select default terms that are more efficient for most contracting parties. Second, because some parties will not contract around default terms that are objectively less efficient than alternative terms, “tailored” defaults (i.e. defaults that are based on the factual circumstances of individual transactions) are preferable to “untailored” defaults (terms that apply to all contracting parties). Third, for contingencies that are highly salient to parties such that they are unlikely to forget to negotiate terms to address them, it might be preferable not to provide a default term at all, instead denying enforcement of contracts that fail to provide a term to govern that contingency.

This analysis assumes that policymakers care only about maximizing the utility of the contracting parties and have no substantive preference for any specific contract compared to any other. If the contract term in question creates a negative externality that effects the social efficiency calculation, then the stickiness caused by the endowment effect can be employed to encourage that term without mandating it. For example, assume that a particular contract term has a mild negative externality for third parties. The externality suggests that, all other things being equal, the term in question is disfavored from an efficiency perspective. The mildness of the externality, however, means that efficiency considerations favor the term if it is significantly more desirable for the contracting parties than an alternative choice that has no negative externality. Thus, efficiency-minded policy makers would like to mandate the alternative term when it is only mildly disfavored by the contracting parties, but not when it is substantially disfavored by the contracting parties. Since law makers are unlikely to be able to distinguish between the two conditions, they might substantially achieve their preferences and (in this example) come close to maximizing social utility by choosing the alternative term as a default term.

The basic point here is that the difference in practice between a default and an immutable term, while substantial, is not as large as traditional economic analysis assumes. Given the existence of the endowment effect, default terms can be understood as actually being “semi-immutable.”

Recognizing this feature of default terms, Sunstein suggests abandoning utilitarianism completely, suggesting that when lawmakers believe a particular type of contract term will make people’s lives “simply be better,” policymakers can push them in that direction through the choice of default terms. As an example, he suggests that if policymakers want workers to place a high value on not being sexually harassed, it makes sense to make a “no harassment” term the default and force employers to contract around it than the reverse. To the extent that Sunstein wishes to point out that, given an exogenously determined policy objective, the status quo bias can be manipulated to help

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221 Korobkin, Status Quo Bias, supra note __, at 666-68.
222 Id. at 670-73.
223 Id. at 673-75.
224 Cf. Richard W. Painter, Rules Lawyers Play By, 76 N.Y.U. L. Rev. 665, 687 (2001) (suggesting, in the context of professional responsibility rules, that rule makers consider selecting “policy-preferred” default rules, knowing that these rules will control most of the time). I assume that if lawmakers are uninterested in using contract default terms to promote allocative efficiency and favor an alternative term for other reasons, they will choose to make the alternative term immutable rather than merely a default.
225 Sunstein, Switching the Default Rule, supra note __, at 132.
226 Id.
achieve that objective, his argument is unobjectionable. But he goes further, defending paternalism by claiming that the choice of default rules cannot help have the effect of shaping preferences.\textsuperscript{227}

This argument gives the endowment effect more power than it need have. Although default terms cannot truly be neutral, the government can avoid shaping preferences with default rules if it wishes to do so. One approach is to require contracting parties to select from among a menu of terms, rather than anointing one the default term.\textsuperscript{228} To take Sunstein’s example, rather than selecting a default term, the government might require employees and employers to select a contract term governing the level of sexual harassment protection from a menu of options.\textsuperscript{229} A similar approach is to use a “non-enforcement” default, in which courts will not enforce the contract at all unless the parties provide a term to deal with a particular contingency.\textsuperscript{230} If lawmakers affirmatively wish to act paternalistically, they can, of course, create an immutable rule rather than a default rule, and, logically, they should choose that approach.

2. Alternative Sources of Reference Points

Loss aversion suggests that losses from a reference point will be valued more highly than equivalent gains. Because experimental tests of the endowment effect usually isolate a single variable for testing, the experimental design usually clearly identifies the relevant reference point: subjects are mug owners, or they are not mug owners; they are entitled to enjoy a public good, or they are not; they are accustomed to one level of service, or to another. In the real world that legal policy must navigate, the reference point from which individuals judge changes in status as “gains” or “losses” is often less obvious. It is one thing to presume individual preferences will be biased in favor of the status quo. It is another to identify what they perceive the status quo to be.

In my analysis of contract default rules described above, I structured the experimental stimuli to suggest to subjects that the legal default rule defines the status quo. Marcel Kahan and Michael Klausner suggest, however, that contracting parties’ reference points could be the terms embodied in standard form contracts that they often rely upon as a starting point in negotiating and drafting contracts.\textsuperscript{231} They hypothesize that, “[a]lthough these parties have no formal property (or other) rights in a standard term, the standard terms form an expectational baseline ….”\textsuperscript{232} If so, the endowment effect suggests that final contracts will be biased in favor of terms that exist in pre-existing form contracts, even when the terms are individually negotiated.

I tested this hypothesis by redesigning my original experiments such that subjects negotiating a contract term were informed of both the legal default rule and the term in the standard form contract.\textsuperscript{233} Subjects were told that they had agreed with their

\textsuperscript{227} Id.

\textsuperscript{228} In some contexts, of course, techniques such as requiring menus of choices might be too cumbersome for actual use.

\textsuperscript{229} Cf. Jeffrey Evans Stake, Paternalism in the Law of Marriage, 74 Ind. L. J. 801, 808 (1999) (proposing a menu of choices rather than a single default term for terms in marriage contracts).

\textsuperscript{230} See Korobkin, Status Quo Bias, supra note __, at 673-74; Ayres & Gertner, supra note __, at 95-97 (classifying nonenforcement defaults as a type of “penalty” default).


\textsuperscript{232} Id.

\textsuperscript{233} Russell Korobkin, Inertia and Preference, supra note __, at 1599.
negotiation counterpart to use a standard industry form as the basis for their negotiation, but that each term would be individually negotiated. They were also told that the form term was the opposite of the legal default rule. That is, if the subjects contracted around the form term, they would reestablish the default term that the standard form circumvented. In this set of experiments, subjects’ preferences were biased in favor of the form term, rather than in favor of the default rule.

These results suggest that contract terms will be biased in favor of the status quo, but that the reference point that identifies the status quo for contracting parties is extremely dependent on context. The implication for legal policy is that the content of contract law probably substantively effects the content of contracts, but not all the time. The effect of contract law can be swamped by other reference points, depending on the circumstances.

Reference points for contractual negotiations are likely to be affected by social norms and traditions even when those traditions are not recorded and perpetuated formally as in the industry form contracts of interest to Kahan and Klausner. For example, Amy Wax argues that the endowment effect plays a critical role when men and women negotiate their roles within a marriage, because the reference point is defined by cultural expectations, and spouses will demand a high price to give up that which traditions causes them to feel entitled.

Sophisticated contracting parties will probably know the content of applicable default rules and, as the discussion in Part V.A.1 suggests, those parties will sometimes but not always see those rules as representative of the status quo. Unsophisticated contracting parties, on the other hand, may have little or no idea what background rules of contract law govern their transactions, much less whether those background rules are immutable rules or defaults. As an example, Pauline Kim found that a large majority of employees surveyed believe (incorrectly) that they can be fired from their jobs only for good cause, rather than for any reason at all save specific types of discrimination. Clearly, the existence of an “at-will” default probably had no affect on the preferences of the employees surveyed (although it might have had an effect on their employers’ preferences), since the employees appear to be unaware of the content of the default rule.

B. Employment Contract Defaults: “At Will” or “Just Cause”

One of the most hotly contested topics in employment law is whether employers should be permitted to dismiss employees for any reason or for no reason, or whether dismissal should be permitted only for “just cause,” however defined. Much of the

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234 Id. at 1599-1600.
235 Id. at 1601.
236 See also Sunstein, Switching the Default Rule, supra note __, at 118-19 (noting that the extent to which legal default rules affect valuations will vary across contexts, as people sometimes order their affairs by reference to norms rather than legal rules).
237 Amy Wax, Bargaining in the Shadow of the Market: Is There a Future for Egalitarian Marriage, 84 Va. L. Rev. 509, 585 (1998). Wax specifically claims that men will demand a high price when women seek to avoid traditional roles and responsibilities, id., but the point is relevant to both husbands and wives.
debate assumes that the rule will be a default, rather than an immutable rule. Assuming that either rule will be a default, traditional economic analysis suggests three insights. (1) Because of the Coase theorem, the choice of legal standards will not make much substantive difference to how employers and employees actually order their affairs. (2) The relative infrequency of employees contracting around the currently dominant default of “at-will” employment demonstrates that this is the more efficient rule for most parties. (3) The default should be the rule that is efficient for most parties in order to minimize transaction costs associated with contracting out of the default. Recent economic thinkers, focusing on information disparities between employers and employees, have sought to revise the conventional wisdom regarding insight #3, arguing that a just-cause default is appropriate because it forces employers who prefer an at-will term to specify this in the employment contract, thus putting workers on notice that this term will govern the relationship.

Again, the endowment effect raises a series of challenges to the law-and-economics orthodoxy. First, it challenges the status irrelevance assumption that underlies the claim that the choice of defaults will not effect the substance of employment contracts. Based on the endowment effect studies concerning non-employment default terms, the choice of defaults should affect the substance of at least some employment contracts (assuming, of course, that employee and employer know the default), because employees are likely to have a higher WTA than WTP for a just-cause term, and employers are likely to have a higher WTA than WTP for an at-will term. Second, the incidence of at-will or just-cause terms in current employment contracts is not necessarily reflective of what the incidence of those terms would be if the defaults were changed. Some percentage of employment contracts that include at-will terms in the shadow of an at-will default would probably include just-cause terms under a just-cause default. Thus, the dominance of at-will contracts in a world dominated by at-will default terms does not prove that at-will terms are efficient for most contracting parties.

The issue of contractual protection for employees illustrates a further complication that can, in theory, arise whenever two endowments or quasi-endowments are intertwined — call this the “double endowment effect.” Employees have a valuation for just-cause protection, and they also have a valuation for the job that a just-cause term does or would protect. The valuation that an employee places on a just-cause term will likely depend on (a) her taste for job protection, (b) whether or not just cause is the default term, and also (c) her valuation of the job itself. The endowment effect suggests that an employee will probably value a job that she has more than a job that she does not have.
whether an employee bargains for just-cause protection is likely to depend not only on whether just cause is the default term, but also on whether the bargaining over the term takes place before or after she is endowed with the job.

A double endowment effect renders the standard endowment effect analysis twice as complicated. In a world of at-will default terms and a norm of pre-employment bargaining over terms, we are likely to see a large number of at-will employment contracts for both reasons, not merely the former. It is likely that more just-cause contracts would exist if either the default term were changed to just cause or the usual time of bargaining was adjusted so that negotiations over the term took place after the employee began working. If both the default term and the time of bargaining were changed, we might predict even more just-cause contracts.

The endowment effect also raises an issue about the distributional consequences of default rules. David Millon argues that if society wishes to use employment law to benefit employees generally (as he proposes), it should adopt a just-cause default. He contends that under a just-cause default, employees would value the just-cause term more than they do under an at-will default, and therefore they would demand a large payment to accept an at-will term, making them more wealthy. Depending on the distribution of employee WTA values and employer WTP values, some employee-employer pairs would agree to substitute an at-will term for the default just-cause term, while other pairs would not. Employees in the first group would capture a benefit for giving up the just-cause term; employees in the second group would be wealthier by virtue of enjoying just-cause protection. This state of affairs would presumably be better for employees than if a just-cause term were made immutable, as the employees who contract around the just-cause default for other remuneration are made better off than they would be under an immutable just-cause term, while the employees who do not contract around the default would be indifferent.

This argument for using the endowment effect to foster redistribution is enticing, but it may be wrong in this case because contract terms are not, in fact, true endowments. Employees and employers bargain over a range of contract terms, not just one, and in a competitive market we would expect employers to offer a higher salary (or other perks) if coupled with an at-will term than if coupled with a just-cause term. If the law provides a just-cause default, and the endowment effect then causes employees to be reluctant to part with it, the likely consequence is a lower salary (or fewer other benefits) than employees would enjoy under an at-will term. Put another way, changing a default term in a world in which default terms are sticky will have a similar effect (although less pronounced) to mandating an immutable contract term. Mandated terms can, under

generally George Loewenstein & Samuel Issacharoff, Source Dependence in the Valuation of Objects, 7 J. Behav. Decision Making 157 (1994).


247 Id.

248 See text accompanying note __, supra. It might also be wrong for an entirely different reason. Even assuming the ability of employees to demand concessions from employers for agreeing to contract around a just-cause default term, if employees erroneously believe that they are protected against firings without cause by an immutable rule, they might ignore when employers place “at-will” terms into their employment contracts, and thus not demand any compensation. See Cynthia L. Estlund, How Wrong are Employees About their Rights, and Why Does it Matter?, 77 N.Y.U. L. Rev. 6, 23 (2002).
certain assumptions, redistribute wealth to the favored class, but they will often fail to achieve that goal.\textsuperscript{249} On balance, it seems unlikely that shifting from an at-will to a just-cause default will significantly benefit employees overall.\textsuperscript{250}

Whether employees would benefit at all from the shift depends in large part on whether their WTP or WTA values better reflect their utility for a just-cause term. Imagine, for example, that a large employer has determined that an at-will employee is worth $100 to the firm, and a just-cause employee is worth $90 to the firm, and that an employee is willing to sacrifice $5 in pay to switch from an at-will default to a just-cause term but would demand $15 to contract around a just-cause default. Under an at-will default then, the employer will pay the employee $100; under a just-cause default the employer will pay the employee $90. The employee and employer will not contract around the default term in either case. Whether the employee is “better off” under the just-cause default than the at-will default depends on whether we believe that $15 is a better gauge of the utility the employee derives from the just-cause term than $5, a question that again suggests the need for a better understanding of what precisely causes the endowment effect. If the high WTA value is driven by the employee’s fear that he might regret sacrificing his legal right or a belief that it is wrong to voluntarily give up a civil right of sorts, a strong case can be made that adopting a just-cause default will make that employee worse off: The just-cause protection is intrinsically worth only $5 to her. Once the law gives her the legal right to it, alienating the right becomes expensive. But if she never has the right, she never has to bear the costs of alienating it.

\textit{C. Controlling Corporate Actors}

Economic analysis views the corporation as a “nexus of contracts,”\textsuperscript{251} and the fundamental problem of corporate law as facilitating the contractual control by owners (i.e., shareholders) of their agents (i.e., managers).\textsuperscript{252} Thus, a normative view of corporate law requires a positive view of the behavior of corporate agents.

An initial, positive question is whether corporate managers acting as agents for the corporation will exhibit an endowment effect when managing corporate assets. Arlen et al. claim that their experiments -- in which subjects are asked to value a mug that they were told was an input into corporate profits and failed to demonstrate a significant endowment effect – suggest that the answer is “no.”\textsuperscript{253} Their data, however, is not conclusive on this point. In the Arlen et al. experiments, subjects knew with certainty the

\textsuperscript{249} See, e.g., Richard Craswell, Passing on the Costs of Legal Rules: Efficiency and Distribution in Buyer-Seller Relationships, 43 Stan. L. Rev. 361, 369-72 (mandated contract terms unlikely to have redistributive effect); Lawrence H. Summers, Some Simple Economics of Mandated Benefits, 79 Am. Econ. Rev. (papers and proceedings), May 1989, at 177 (same); Christine Jolls, Accommodation Mandates, 53 Stan. L. Rev. 223, 243-72 (2000) (mandated terms can have redistributive effects under certain conditions).

\textsuperscript{250} See Sunstein, Switching the Default Rule, supra note __, at 125-27; Sunstein, Law of Work, supra note __, at 237-38.


\textsuperscript{253} Arlen et al., supra note __, at 33 (concluding that “introducing a business agency relationship tends to dampen (and virtually eliminate) [the endowment] effect”).
exchange value of the mugs.\textsuperscript{254} Thus, failure to find an endowment effect as likely illustrates that the endowment effect will tend to disappear when an item is held for exchange and its exchange value is known with certainty\textsuperscript{255} as anything about agency relationships generally or corporate agency specifically. Other scholars assume that, under conditions of uncertainty, corporate managers will (or at least might) place a higher value on endowed opportunities than potential opportunities.\textsuperscript{256} Which assumption is correct remains an open question worthy of further investigation by corporate law scholars.

In the context of individuals making decisions on their own behalf, the endowment effect is not obviously “irrational” behavior: a preference for what one has over what one does not have, or for what one is accustomed to compared to the unknown, is no more troublesome than a preference for chocolate over vanilla ice cream, or vice versa. This is true regardless of what causes the endowment effect. If corporate agents exhibit an endowment effect, however, this is more troubling, because their shareholder principals who can diversify their investment portfolio and are presumably concerned only with maximizing the expected value of the corporation.\textsuperscript{257}

1. Managers’ Endowment Effect: The Problem of “Lockups”

Consider one effect that the endowment effect might have on the analysis of “lockup” agreements in merger and acquisition transactions. Under a lockup agreement, a bidding company agrees to enter into an agreement to purchase a target company for a specified price on the condition that, if the transaction is not consummated, the bidder receives a specified amount of compensation.\textsuperscript{258} Corporate law requires that any such agreement be approved by the target’s shareholders.\textsuperscript{259} Consequently, such acquisition “agreements” often turn into bidding wars between the initial bidder and other suitors.

The status irrelevance assumption leads to a basic prediction that an initial bidder will increase its bid for the target to no more than its original evaluation of the value of the company minus the lockup fee. For example, if the bidder has a WTP of $100 million for the target and a lockup fee of $10 million, the bidder should offer no more than $90 million for the target. (At $95 million, the bidder would gain a $5 million dollar profit from acquiring the target at a cost of losing out on a $10 million lockup fee). If the endowment effect causes an increase in the bidder’s valuation for the company when the initial agreement (which is non-binding on the targets’ shareholders) is reached, the bidder might “overpay” for target relative to its profit potential to shareholders, and in the

\textsuperscript{254} Id. at 16-18. The experiments varied the profit potential of the mug across subjects, but each individual subject knew with certainty the marginal profit that would be achieved by using the mug as an input to production.

\textsuperscript{255} See notes ___ - ___ and accompanying text, supra.

\textsuperscript{256} See, e.g., Mark A. Lemley and Lawrence Lessig, The End of End-to-End: Preserving the Architecture of the Internet in the Broadband Era, 48 UCLA L. Rev. 925, 950 (2001) (calling a tendency of businesses to place a higher value on core competencies than new ideas a “corporate endowment effect”); John C. Coates & Guhan Subramanian, A Buy-Side Model of M&A Lockups: Theory and Evidence, 53 Stan. L. Rev. 307, 362-64 (2000) (suggesting that corporate managers who place a value on acquiring another company might have an increased value after an acquisition agreement is reached due in part to the endowment effect).

\textsuperscript{257} See generally Stephen M. Bainbridge, Corporation Law and Economics 692-93 (2002).

\textsuperscript{258} See, e.g., Easterbrook & Fischel, supra note __, at 79.
process cause an inefficient social allocation of resources if the endowment effect prevents the sale to a bidder that could put the target to a more valuable use.  

The legality of lockup agreements traditionally hinges on whether courts believe that such agreements violate the fiduciary duties of the target’s managers to their shareholders. Coates and Subrahamian infer from the endowment effect analysis (as well as other agency cost arguments) that courts should also consider that lockup agreements violate the fiduciary duties of the bidder’s managers to their shareholders. Whether this fear is well founded depends on whether corporate agents are subject to the endowment effect and, if so, whether entering into an initial acquisition agreement will cause the bidder’s managers to feel endowed. Theoretical predictions are mixed. In support of the claim that the initial agreement might have such an effect, Coates and Subrahamian point out a large majority of such agreements are approved by shareholders, and that the signing of the agreement is often followed by champagne toasts and celebratory dinners, whereas much less fanfare surrounds the shareholders’ approval. On the other hand, knowing that such an agreement has no legal force unless and until it is approved should temper feelings of ownership. In addition, recall that some empirical evidence suggests that an endowment effect is less likely to occur when the same individual is both a buyer and a seller of the entitlement in question. In the lockup context, the bidder is initially the buyer. When other suitors entering the bidding, the first bidder effectively becomes a seller, as it must decide in each round of bidding whether the lockup fee satisfies its WTA value to relinquish the target. Having examined the value of the target from the role of buyer and seller, managers may be less likely to exhibit an endowment effect.

2. The Effect of Shareholders’ Endowment Effect on Managers

The lockup example hypothesizes that managers’ decisions might reflect that they are subject to the endowment effect. Another issue is that if shareholders exhibit an endowment effect, this might affect the way that they evaluate the performance of their managers, thus causing rational managers to choose to act in way that is cognizant of the effect.

The “pure loss aversion” explanation of the endowment effect posits that losses are more painful than equivalent gains. This suggests managers might strive to avoid losses during every reporting period, even when doing so might mean making decisions that reduce the long-term profit potential of the firm. Managers might also pursue projects

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260 Coates & Subrahamian, supra note __, at 377-78.
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262 Coates & Subrahamian, supra note __, at 383.
263 Id. at 362-63.
264 See notes __ - __ and accompanying text.
265 Lucien Bebchuk and Mark Roe suggest that the endowment effect is one of several reasons that might explain why Europe and the United States have kept different dominant models of corporate ownership structures despite intense market pressure on corporations on both sides of the Atlantic to select the most efficient structure. Lucien Ayre Bebchuk & Mark J. Roe, A Theory of Path Dependence in Corporate Ownership and Governance, 52 Stan. L. Rev. 127, 141 (1999).
that have proven undesirable rather than recognizing an apparent “loss”\textsuperscript{267} in the current reporting period, especially if shareholders can evaluate the project’s outcome when it ends but not while it is ongoing. The endowment effect thus might counsel for establishing longer periods of time between corporate accounting periods, although this, of course, would need to be balanced against the costs of less immediate oversight of agents’ activities.\textsuperscript{268}

3. Shareholders’ Endowment Effect: Managerial Salaries

Just as an endowment effect among shareholders might affect management’s decisions, an endowment effect among managers might affect shareholder decisions. Consider, for example, the subject of executive compensation.

Tying compensation to the performance of the company is often thought to be desirable, since it incents management to maximize shareholder value.\textsuperscript{269} Edward Iacobucci speculates, however, that the endowment effect has hindered a shift from traditional fixed compensation to performance-based compensation, because managers are reluctant to give up the fixed compensation to which they have become accustomed.\textsuperscript{270} Consequently, companies are forced to substitute large amounts of new, variable pay for small (or no) reductions in fixed pay.\textsuperscript{271} This explanation might explain, in part, the large increases in total executive compensation in the United States over the last decade,\textsuperscript{272} and suggest that shareholders are not necessarily best served by instituting performance-based compensation when significant fixed compensation remains a psychological endowment.

VI. Enforcement Rules: Litigation and Remedies

In addition to allocating entitlements and facilitating contractual reallocations of entitlements, the legal system resolves disputes among entitlement claimants. The effects of, and the effectiveness of, the dispute resolution system, like other aspects of law, need to be reevaluated in light of the endowment effect. This section considers how issues surrounding the choice of remedy, the computation of damages, and the effects of court judgments might be reconsidered.

A. The Choice of Remedies: Property Rules Versus Liability Rules


\textsuperscript{268} For example, a frequent schedule of reporting and evaluation might provide agents with an incentive to put forth their maximum effort every day.


\textsuperscript{271} Id.

In an important article on the economics of remedies, Guido Calabresi and A. Douglas Melamed differentiate remedy rules into two categories. “Property rules” – those that provide for injunctions – prohibit A from taking the legal entitlement of B without B’s consent. “Liability” rules – those that provide for money damages – permit A to take B’s entitlement without B’s consent if A pays B a court-determined amount of money. According to the traditional law and economics analysis, the relative efficiency of the two types of remedies depend on circumstances. Because courts might set damage amounts too low and thus encourage transfers of entitlements when the taker actually values the entitlement less than the owner, property rules are preferable when the transaction costs of bargaining are low. When transaction costs are high, however, efficient trades may not occur, thus making liability rules desirable.

Because the traditional analysis is based on the assumption that the value of an entitlement does not depend on ownership (that is, WTP = WTA), that analysis also necessarily assumes that the size of the endowment effect does not depend on whether it is protected by a property rule or a liability rule. Because the endowment effect demonstrates that the first assumption is often incorrect, the second assumption could conceivably be incorrect as a positive matter also. The normative analysis of the choice of remedy rules might thus require reevaluation.

In two experiments, Jeffrey Rachlinski and Forest Jourden investigated the positive question. The authors asked subjects to play the role of a fiduciary for an environmental preservation trust interested in protecting a wetland and a partner in a biotech firm that had developed a pesticide from an endangered plant. Subjects in the “buy” conditions were asked to rate their willingness to buy for the trust the wetland from a helicopter company that was disturbing migratory birds there, and their willingness to buy the endangered plants from a chemical company that wished to destroy them. Subjects in the “sell” conditions were asked to rate their willingness to sell the wetland or their willingness to sell the plants. Within each condition, some subjects were told that the rights to the wetland/plants were protected by a property rule, while others were told that the rights were protect by one of two types of liability rules. The size of the endowment effect was measured by comparing the willingness of buyers to buy and willingness of sellers to sell. Only among the subjects exposed to the property rule was there a significant difference between the percentage of subjects unwilling to sell and those willing to buy, thus demonstrating an endowment effect. There was no endowment effect among the subjects exposed to either liability rule.
The authors suggest the broad positive conclusion that there is less of an endowment effect for liability rules than for property rules -- a conclusion they explain as reflecting the fact that entitlements protected by liability rules do not create the same feeling of ownership as entitlements protected by property rules. The positive implications of the study, however, might be limited by its context. The authors implicitly assume that the results were motivated by differing degrees of loss aversion that depended on the remedy. But the experiments concerned environmental protections -- a subject that is particularly suited to the disutility explanation for the endowment effect -- and the results were driven by particularly high levels of unwillingness to sell under the injunction remedy. It is possible that the endowment effect observed for the injunction remedy was driven by subjects’ belief that it is improper to sell an environmental resource that one can protect, but that this belief was undermined in the liability rule scenarios because the law permits the destruction of the resource for a price.

In other words, the results might have been driven by what the choice of remedies says about society’s commitment to the environment rather than by any differences in feelings of ownership that the choice creates. Thus, while the results certainly show something, it is unclear whether they suggest that liability rules will reduce the endowment effect generally, or just in situations in which high WTA prices under property rules reflect a community perception that selling that type of entitlement is immoral -- a perception that could be weakened by protecting the entitlement with only a liability rule.

Daphna Lewinsohn-Zemir argues, in direct contradiction to Rachlinski and Jourden, that the endowment effect is likely to be less pronounced under a property rule regime than a liability rule regime. She reasons that, because under a property rule owners sell their entitlements only voluntarily, property rules “induce a frame of mind” that focuses attention on what is to be gained from selling rather than what is to be lost, whereas the pain of “selling” will be greater under a liability rule “when such parting is (or can be) forced upon an unwilling owner.” Her prediction is that under a property rule sellers will perceive their entitlements for their exchange value rather than their use value, which should translate into the existence of only small or nonexistent endowment effect.

Because almost all endowment effect experiments, including those that have found very large effects, are implicitly designed against a backdrop of property rules, no empirical evidence supports Lewinsohn-Zemir’s hypothesis, (and, of course, Rachlinski and Jourden’s data runs counter to it). Lewinsohn-Zemir appears to compare

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283 Id. at 1572 (“The power to refuse to sell a right seems to be psychologically important to ownership. Property is not truly owned if someone can willfully appropriate it upon payment of a fee.”). Ian Ayres has suggested provocatively that if liability rules, which effectively give the non-owner a call option on the entitlement in question, do in fact reduce the strength of the endowment effect relative to property rules, the endowment effect might be enhanced by granting the entitlement holder property-rule protection plus a put option that allows him to force a sale on the non-owner at a court-determined price. Ian Ayres, Protecting Property with Puts, 32 Val. U. L. Rev. 793, 811 (1998).

284 Id. at 1567 tbl. 2 (showing all “buy” and “sell” responses were similar except for “sell” responses under the injunction remedy, which were substantially higher).


286 Id. at 254.

287 Id.

288 Lewinsohn-Zemir claims that the Rachlinski and Jourden data should be “viewed skeptically” because the body of endowment effect results support her conclusion rather than their’s, id at 255, but she does not explain this claim.
entitlement owners under a property rule regime who wish to sell to entitlement owners under a liability rules regime who do not wish to sell, and concludes that the former group will have lower WTA values than the latter group, \(^{289}\) while implicitly assuming that non-owner WTP values will be identical in both cases.\(^{290}\) But it is unclear why, at any given offer price, there would not be as many owners under the property rule regime with no interest in selling as under a liability regime, or why there would not be as many owners under a liability rule regime who wish to sell -- and do so voluntarily -- as under a property regime. If the takings price under a liability regime is set below the highest WTA of an owner, there will be more transfers under a liability rule regime than a property rule regime, but there is no obvious reason that this fact would bear on the WTA values of owners. Thus, based on current knowledge of the endowment effect, it seems that the best prediction is that the endowment effect either will be smaller under a liability rule regime, and thus suggest that more private transactions will take place under a liability rule regime, or that the size of the endowment effect and the number of transactions will be unaffected by the choice of remedy rules.

Perhaps more interesting for legal scholars than the positive question of whether the choice of remedy rules affects the extent of the endowment effect is whether the answer affects the normative case for property rules or liability rules. That is, assuming that the endowment effect is smaller under one type of rule than the other, what does this imply about which regime is preferable? Rachlinski and Jourden and Lewinsohn-Zemir adopt the same position here. Rachlinski and Jourden contend that their experimental results present an argument for liability rules, because the smaller endowment effect that (they contend) liability rules generate will facilitate more trade than a larger endowment effect created by property rules.\(^{291}\) Lewinsohn-Zemir claims that if there is a smaller endowment effect under property rules (as she contends), property rules should be favored because they will allow for a greater number of efficient transactions to take place.\(^{292}\) Both policy recommendations, however, depend on the assumption that the “stickiness” of entitlements created by the endowment effect is undesirable, a conclusion that can be contested generally and, at the least, probably depends on understanding the motivation for the effect in this particular context. Without a theory of what causes the endowment effect, it is unclear why a smaller endowment effect, causing less entitlement stickiness, thus causing more transactions, will lead to a more efficient allocation of entitlements or be more desirable for any other reason.

Assuming that the endowment effect is normatively undesirable, however, liability rules may be more desirable than property rules, whether or not they reduce the size of the endowment effect. Liability rules facilitate trade better than property rules so long as the court-determined price charged for taking the entitlement from its initial owner is less than the WTA of at least some initial owners. Thus, liability rules should minimize the effects of the “stickiness” caused by the endowment effect.

B. Measuring Damages Under Liability Rules

\(^{289}\) Id. at 254.

\(^{290}\) Lewinsohn-Zemir compares her predicted WTA values of two hypothetical owners and concludes that one (the property-rights owner) will demonstrate a smaller endowment effect. This is nonsensical literally, since the endowment effect is a measure of the difference between WTA and WTP of the same person (or persons who are identically situated except for ownership status). For Lewinsohn-Zemir’s conclusion to follow logically, she must assume identical WTP values of her two hypothetical owners. Thus, I presume she intends to make this assumption.

\(^{291}\) Rachlinski and Jourden, supra note 233, at 1575.

\(^{292}\) Lewinsohn-Zemir, supra note __, at 255-56.
When liability rules require courts to award compensatory money damages, the endowment effect calls into question how factfinders should determine what cash amount will make the harmed party whole. Specifically, the endowment effect suggests that the cash equivalent of the injury might vary depending on the victim’s reference point. A victim would likely demand far more to agree to suffer the injury than the cash gain that would be required to compensate him after the fact.

McCaffery et al. provide empirical support for this intuition in a series of mock jury experiments. Experimental subjects were asked to award damages to a plaintiff for pain and suffering. The experimenters attempted to manipulate the reference points of subjects in two groups by providing detailed jury instructions. The first group was given a set of facts and told to think about the question this way:

To determine the appropriate amount of compensation, imagine that you are the plaintiff. You have already suffered the described injury. What amount of money is needed to make you “whole” again – that is, as fortunate as if nothing (i.e., neither the injury or the payment) had happened?

The second group of subjects was provided with identical facts but told to think about the question this way:

To determine the appropriate compensation, imagine that you are the plaintiff. You have already suffered the described injury. Before any injury has taken place, the defendant offers you a sum of money to suffer the described injury exactly as it is later experienced. What amount of money would you demand to willingly accept the injury.

Subjects in the second group, exposed to the pre-accident reference point, gave average responses that were roughly twice as high as the average responses of subjects in the first group, exposed to the post-accident reference point. As the experimenters observed, “[t]his result is precisely in line with the findings from the general endowment effect literature.”

The positive results leave unanswered the obvious normative question: should jury instructions in personal injury cases be framed from the pre-injury or post-injury reference point? McCaffery et al. conclude that the post-accident (i.e., WTP) frame provides the accurate amount of compensation, whereas the pre-accident (i.e. WTA) frame would actually leave the plaintiff better off than before the accident. This conclusion seems to implicitly assume that the pre-accident values are higher than the post-accident values because the former suggests freely giving up an entitlement -- which may be psychologically difficult because people don’t like to commodify their health or because they fear later regretting the choice – whereas in personal injury cases victims do

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294 Id. at 1356.
295 Id.
296 Id. at 1359.
297 Id.
298 Id. at 1389-92.
not choose to sacrifice their health. Consequently, full compensation requires only compensating them for their injuries, not compensating them for the anguish of making a choice (which they never had to make). The authors do suggest, however, that distributive justice concerns might counsel for employing the larger, pre-accident measure in jury verdicts, since the fact that tortfeasors deprive their victims of free choice can itself be seen as morally blameworthy.\footnote{299}

The question of whether damages should be calculated based on the victim’s WTP or WTA is not limited to personal injury suits, of course, but is in theory relevant to any cause of action for compensatory damages. Consider, for example, the problem of assessing damages for harms caused to the environment, a situation, like personal injury cases, in which valuation is particularly difficult because of the lack of a “market price” for the harm. The most common approach to the valuation of goods for which there is no market is the use of contingent value surveys, in which people are asked for their WTP for the environmental goods that have been damaged or destroyed.\footnote{300} Traditionally, economists assumed that WTP and WTA values would be approximately identical, so surveying citizens’ WTP values could be justified on the ground that people tend to be less familiar with the idea of being paid to lose something than the notion of paying to get something, making WTP surveys are less confusing than WTA surveys.\footnote{301} Evidence of the endowment effect challenges this traditional approach.

Environmental scholars have argued that environmental damages should be based on the WTA values of those who are harmed, as environmental degradation is a “loss” from the status quo and WTA measures the value of losses.\footnote{302} This approach takes seriously the emotional consequences of the endowment effect – that is, that people appear to feel worse when losing something than when foregoing an equivalent gain. But the approach is not obviously right, because it is not clear that the “worse” feeling that causes a discrepancy between WTA and WTP prices exists when a loss is beyond the control of the losing party. For example, if the reason individuals exhibit higher WTA values than WTP values for environmental commodities is because of a desire to avoid disutility caused by consenting to the sale of environmental resources for cash,\footnote{303} non-consensual environmental damage may be adequately compensated with WTP values.

One potential solution to the problem is to look for other methods of valuing environmental commodities other than contingent valuation. The value of environmental degradation is sometimes determined by restoration or replacement costs rather than contingent valuation.\footnote{304} This approach does avoid directly measuring WTP or WTA values, but it does not really avoid the problem. Replacement or restoration costs are essentially WTP measures, in that they effectively measure how much money would make the injured parties whole rather than how much money would be required to convince them to give up their entitlements in the first place. Like direct WTP measures,
these costs do not take into account the psychological feeling of loss associated with environmental degradation.

One method that partially avoids the valuation problem caused by the endowment effect is replacing monetary penalties for environmental degradation with a requirement that the tortfeasor mitigate the damages caused. Although this also appears to be effectively a WTP measure (it is the economic equivalent of restoration cost), there is some evidence that those injured by environmental damage might derive more benefit from mitigation than an equivalent cash payment. In one survey, between 68 and 85 percent of respondents (depending on precisely how the question was asked) favored mitigation of hypothetical damage to a local stream over payment to the government of the cost of mitigation, suggesting that perhaps mitigation can psychologically erase a perceived loss rather than merely compensate for it.

Even when a victim’s losses have a readily ascertainable market value, awarding that market value as compensation can be viewed as failing to make the victim whole if WTA values rather than WTP values are viewed as the proper measure of full compensation. Consider, for example, the remedy rules for breach of a contract for the sale of goods, which limit a non-breaching buyer’s damages to the cost of “cover” or the difference between the contract price and the market price at the time of breach. Assuming that contractual rights create a psychological endowment, such “compensatory” damages are not likely to make non-breaching parties indifferent between performance and breach, at least judged from by WTA, even assuming full reimbursement for incidental and consequential damages and other transaction costs for which contract law usually fails to compensate.

The issue of whether monetary damages should be ascertained on the basis of the WTP or WTA of the harmed party necessarily also calls into question rules of substantive law that turn on the damages suffered by one or more individuals. Consider negligence law. Whether Party A has an entitlement to engage in an activity that causes harm to Party B, or whether Party B has an entitlement to be free of the injury-causing activity (a right protected by a liability rule), often depends on whether the activity is negligent. Whether the activity is negligent depends, in turn, on whether the benefits of the activity outweighed the costs of the risk ex ante, taking into account the likelihood that the activity will cause damages and the extent of those damages. This threatens to render negligence doctrine circular: whether an act is negligent (i.e., the victim has an entitlement to be free of the harm) depends on the damages it causes, the value of which depends on whether or not the victim has an entitlement to be free of the harm suffered

305 Knetsch, supra note __, at 204-05.
306 U.C.C. sec. 2-712.
307 U.C.C. sec. 2-713.
308 See Larry A. Dimatteo, A Theory of Efficient Penalty: Eliminating the Law of Liquidated Damages, 7 AM. Bus. L. J. 633, 704 (2001) (claiming that the endowment effect suggests compensatory damages in contract law will fail to make the non-breaching party whole). Dimatteo’s analysis fails to make the following qualifications to his conclusion: (1) it assumes contractual rights create a sense of endowment (quite probable), and (2) WTA is the appropriate measure of compensation (unclear).
309 See U.C.C. sec. 2-715.
310 For example, attorneys’ fees.
311 See generally Hoffman & Spitzer, supra note __, at 106 (observing that the WTA-WTP disparity creates problems for negligence doctrine).
312 See generally U.S. v. Carol Towing.
(i.e., whether the act was negligent). The only way out of this bind, it seems, other than accepting a second-best measure of damages such as “ascertainable market price,” is to again inquire into the causes of the endowment effect and attempt to determine whether they suggest WTA or WTP is a more accurate measure of welfare.

C. Litigation Outcomes and Post-Litigation Bargaining

Economic analysis provides a counterintuitive prediction about the effects of litigation over disputed entitlements. If the status irrelevance assumption is correct, the outcome of litigation should affect the relative distribution of wealth between the litigating parties, but not the ultimate allocation of the entitlement. The Coase theorem predicts that the losing party will simply purchase the entitlement from the winning party if the former values it more than the latter. The endowment effect offers a challenge to this intuition. It suggests that, like clear ex ante legal rules, judicial decisions allocate entitlements, which will then tend to be sticky because the parties’ WTA values should exceed their WTP values.

There is some evidence supportive of this prediction. Ward Farnsworth studied the aftermath of 20 nuisance disputes that appeared to involve low transaction costs of bargaining (i.e., small numbers of parties involved such that there would not likely have been coordination or holdout problems), such that post-litigation bargaining likely would have been feasible. In none of the cases did the losers even attempt to purchase the winner’s entitlement after the court clarified initial rights, nor did any of the lawyers involved believe that, had the litigation results been different, the winner would have attempted to purchase the entitlement from the loser.

There are many plausible explanations for why the Coasean prediction appears to fail, at least among the cases Farnsworth analyzed. As Farnsworth points out, for example, the acrimony that developed between the parties as a result of the dispute and the subsequent litigation might have made the parties unwilling to speak with each other long enough to determine whether a mutually profitable transaction would be possible. It is also possible that judges resolved the disputes by awarding the contested entitlement to the party that valued it most, thus obviating the need for any redistribution. But the endowment effect provides another potential, complementary explanation: perhaps after the courts clarified the status quo by resolving the dispute, the entitlement either to act or to prevent the other party from acting became more valuable to the entitlement owner than to the non-owner.

This endowment effect in this circumstance might be attributable to regret-avoidance tendencies – as Farnsworth points out, individuals entitled to enjoin a nuisance will find few close substitutes for their entitlement, making it hard to price, and perhaps leaving the entitlement holders “most comfortable erring on the side of caution and saying that ‘it’s not for sale.’” It could also result from the disutility associated with violating a

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314 Id. at 384.
315 Id. at 395-97.
316 Farnsworth suggests this possibility, id. at 394, as do Jolls, et al. Christine Jolls, et al., supra note __, at 1498-1501 (relying on Farnsworth’s findings). The endowment effect seems particularly likely to be evident in this circumstance based on the finding that the effect is particularly robust when an entitlement owner believes that she owns the entitlement as a result of merit rather than chance. Prevailing in litigation might serve as evidence of such merit. See Jolls, et al., supra note __, at 1498.
317 Id. at 398.
social norm not to commodify certain entitlements – people might feel it is improper to reduce entitlements to be free of noise, odors, fumes, etc. to their cash equivalents.

If this positive hypothesis – that the endowment effect dissuades post-litigation bargaining over entitlements – is correct, it in turn raises normative questions about how the law substantively should resolve disputes over entitlements. The Coase theorem suggests that when transaction costs are low, efficiency does not demand that entitlements initially be allocated to their efficient owner. Theoretically, this could allow courts to assign entitlements so as to satisfy other concerns, such as distributive justice, without fearing a resulting inefficient use of resources. If the endowment effect renders judicial assignment of legal rights highly resistant to reallocation, it becomes arguably more important to take efficiency into account in the initial assignment. Of course, this prescription is itself problematic, as the efficient allocation depends on the causes of the endowment effect, which are themselves not yet well understood.

VII. Conclusion

While not attempting to serve as a comprehensive analysis of all areas of law, this article is intended to illustrate the breadth of the endowment effect’s relevance in the analysis of law, especially when the efficient allocation of resources is seen as being a relevant goal. Regardless of subject area, regardless of whether the legal regime in question exists to allocate entitlements, facilitate their transfer, or enforce substantive rules, and regardless of whether the analyst is concerned with positive questions (i.e., what consequences a given legal rule will have on the behavior of those subject to it) or normative questions (i.e., what rule or set of rules ought to be enacted), the endowment effect bears on any complete analysis of the issue.

The concerns, problems, and questions raised by the endowment effect are varied and significant enough to serve as a research agenda for legal scholars and a discussion agenda for law school instructors for many years. And as empirical research continues to deepen our understanding both about the contexts in which the endowment effect does and does not operate and the causes that drive the endowment effect in those contexts, the legal analysis will continue to become more precise, more conclusive, and more useful in the design of legal policy.