

THE PLOTT/ZEILER ENDOWMENT EXPERIMENTS AND LEGAL POLICY

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In 2000, leading prospect theorists joked that the robustness of the endowment effect was "now part of our endowment, and we are naturally keener to retain it than others might be to acquire it."¹ It's to Plott/Zeiler's credit that their work pushes even those of us who thought themselves attached to prospect theory to reconsider our assumptions and easy reliance on old studies. Their work is elegant, careful, and quite provoking. I'm honored to have a chance to engage with it in this short response.

A typical reaction to the PZ's findings by orthodox legal economists has been to conclude that the work decisively shifts the burden against those advocating policy shifts based on prospect theory. As Kate Litvak wrote:

"I was always suspicious about the existence of the endowment effect. As I recall, most European cultures have an equivalent to the old English saying 'the grass is always greener on the other side,' meaning 'whatever the other guy has is inevitably better than what I've got, no matter what we are talking about.' Sounds exactly the opposite to the endowment effect – and widespread enough to become a major part of folk cultures across the continent."²

Josh Wright similarly argued:

"Prior to reading Plott & Zeiler, I was fairly confident that the number of 'endowment effect' regulatory proposals meeting [a rigorous proof] standard was small, and possibly zero. Pending convincing contradictory evidence that the effect actually exists in markets, the set of qualifying proposals now appears to be null."³

There's a general sense in such comments (and other examples abound) that PZ's papers ought to have stopped the train of prospect theory based legal work. The unfortunate truth that PZ's work hasn't been cited as extensively as its ought to have been in the law reviews⁴ then may suggest that legal scholars are (against all rational evidence) attempting to bootstrap their belief in endowment theory by remaining attached to it. Or, more charitably, such scholars feel under-qualified to judge a dispute that is at its heart about

¹ Daniel Kahneman, Jack L. Knetsch, and Richard H. Thaler, *The Endowment Effect, Loss Aversion, and Status Quo Bias*, in CHOICES, VALUES AND FRAMES 159, 170 (2000)

² http://busmovie.typepad.com/ideoblog/2005/12/the_endowment_e.html (commenting)

³ http://www.theconglomerate.org/2005/12/throwing_the_en.html

⁴ <http://www.truthonthemarket.com/2009/10/06/whats-wrong-with-the-endowment-effect/>

method: what experimental controls best permit us to predict how naïve citizens are likely to trade legal goods?

In this essay I hope to make two smallish points and thereby avoid meta-questions about motive, or trends in legal scholarship. *First*, I will draw attention to several new endowment experiments that raise questions which PZ's work has no easy answer for. *Second*, I'll argue that neither PZ nor their critics really engages with the kinds of behavioral questions about trading that legal scholars will ultimately need answered before well-founded normative work is to proceed.

1. Experimental Questions

There are several recent experimental economics papers that appear to respond directly or indirectly to PZ's work. Two are by well-known groups of endowment theorists.⁵ They claim that subtle differences in manipulation, including placing endowed items in front of subjects, and changing the wording of the prompt, can turn the endowment effect on or off in ways consistent with reference/loss theory but inconsistent with classical preference theory. Those papers are quite interesting, but I assume that their findings will be covered in one of the other presentations we'll hear today.

Instead, I thought I'd discuss two other experiments that attempt to study the endowment effect from relatively novel perspectives, hoping to raise questions for discussion.

1.1. Why Are Two Pens Worse Than One?

In a draft paper, Burson *et al.* provide evidence for a new "bound" on the EE by providing subjects with not one but multiple endowed items (pens and chocolate).⁶ In PZ's schema, they put the endowed item before the subjects; (2) determined endowment by experimental interaction; (3) mention ownership; and (4) reinforce privacy. These procedures are roughly similar to the "standard" ones described in PZ's paper, and would be expected to yield robust results.

⁵ Those two papers are: Jack L. Knetsch and Wei-Kang Wong, *The endowment effect and the reference state: Evidence and manipulations*, 71 J. ECON. BEHAV. & ORG. 407 (2009) and Isoni, Loomes and Sugden, *The Willingness to Pay-Willingness to Accept Gap, the "Endowment Effect", Subject Misconceptions, and Experimental Procedures for Eliciting Valuations: Comment*, unpublished, available at <http://www.uea.ac.uk/eco/ecopeople/Working%20Papers/PZcomment%200802%2029.pdf>

⁶ Katherine Burson, Yuval Rottenstreich, and David Faro, *Providing Multiple Units of a Good Attenuates the Endowment Effect*, unpublished, available at http://sitemaker.umich.edu/kburson/files/scope_paper.pdf

Given only one item, Burson *et al.* observed a 30% trade rate. But when subjects are endowed with multiple goods, 46% decided to trade. This diminishing endowment begins immediately with one additional candy bar (or pen), although when subjects were prompted to price instead of trade, the endowment effect disappears over time, and not at once.

Burson *et al.* suggest that this startling finding should be explained as the result of changing individuals from a loss aversion frame to one in which the symmetries of the bargain are evaluated on their merits. With one bar in front of you, subjects roughly think "should I give up my chocolate to get a pen." When the question is ten bars for ten pens, subjects start to consider the question of relative worth. They leverage this finding to argue that PZ's experimental procedures worked in the same way to blunt loss aversion by (1) assigning goods by coin flip; (2) taking the goods away; (3) not endowing you with ownership rights.

Is there an explanation for these data that fits with PZ's hypothesis that the endowment effect is an artifact of subject misconception, and that fits with classical preference theory? To put it a different way, why would the endowment effect be sensitive to endowment of multiple items, holding procedure constant? I can see none: and instead think that these findings fit PZ's (2005) second possible explanation for their findings: "the [PZ] procedures themselves ... translate [items] into commodities for which neither ownership nor loss plays a particular part in the preference formation process."

1.2. No, I Won't Trade My Level 14 Axe For Your Handwoven Cloak of Invisibility!

Even apart from PZ's mythbusting, multiple scholars have observed that learning seems to matter to how the endowment effect interacts with real-world trading. As PZ observe about List (2003, 2004), such real-world observational and experimental data create into two sets of interpretative problems: (1) the possibility that experience interacts with experimenter signals; and (2) self-selection of confident traders. A recent paper appears to show some promise at evaluating real-world experience/endowment interactions, though the locus of study is the online land of Runescape, also referred to as Gielinor.⁷

In the Runescape paper, experimenters provided selected players in the world with goods that ordinarily require investment (time or game-chits) to obtain. The subjects were a group of inexperienced players and a group of experienced players. The goods – iron arrows,

⁷ Alistair Munroe and Yannick Ferreira De Sousa, *Trust, barter and exchange versus the endowment effect: virtual field experiments in an online game environment*, unpublished manuscript 2008, MPRA Paper 8977, University Library of Munich, Germany, available at <http://ideas.repec.org/p/pra/MPRA/8977.html>

magic rings, masks of power, etc. -- were, based on pretests, both well-known and paired with ones that traded approximately equal value in the large markets that function in the game universe. Interestingly, new players ought to value such goods more than more experienced players, as the latter individuals were both wealthier (in the game) and possessed skills which made creating such goods significantly less time consuming. Moreover, all players had at least some experience with trading.

The first striking finding from this experiment was that experienced players were extraordinarily high-volume traders. While List's most fervent collectors traded 11 times a month, half of Runescape's experienced gamers traded five or more times a day. These experienced traders demonstrated no WTP-WTA gap: in fact such players overtrade, as about 80% exchanged their items in an initial experiment involving low-value goods. Newer players, by contrast, traded at around a 30% rate. That is, experience in the game predicted a WTP-WTA gap.

A second experiment investigated these experienced overtraders. The question was whether familiarity with the particular items (as posited by PZ (2005) 1451) could explain the differences in trading value, or whether a different motivation was at work. Using special, high-value items, the investigators found that *years playing the game* and *combat skill* were the best predictors of willingness to trade, and that at high levels of experience and skill, overtrading dominated. *They found no familiarity or pricing effects*, nor any effects for players' self-reported daily volume of trading.

These experimental results undermine the hypothesis that experience increases the likelihood that familiarity with goods (or perceived familiarity) can explain the WTP/WTA gap's disappearance among professional traders. Additionally, because the goods were commonly traded on the online market, it's hard to see how experimental signals of worth would have any relevance to even inexperienced players' views of the good's worth. Indeed, inexperienced players valued their endowed goods at 25% below market price, while experienced players accurately valued their goods to within 1% of the spot price.

The role of selection is more difficult to disentangle. However, PZ's well-taken caution should not obscure the analogous limitations of experimental work to recreate such professional-trader effects, which appear to result only when a player had *engaged in several thousand exchanges*. It's also the case that (contrasting with List) these particular results find that overtrading persists in experienced traders whether the good to be traded was an everyday consumable, or a rare magic warrior ring.

2. What Do Legal Policymakers Care About?

Almost every paper that employs endowment effect theorizing in a law journal does so with a particular (strong?) form of the hypothesis in mind. The claim is that endowment with a *legal right* (a prospective and probabilistic property interest) will create a WTP-WTA gap in the real world. A few studies examine this hypothesis directly, but most simply take the old pen and mug experiments as fair proxies.⁸ Regardless, there are no studies (as far as I am aware) which manipulate two key dimensions that appear to significantly affect WTP-WTA gaps in various experiments, and which are highly salient in the legal context.

2.1. Legal Rights are Probabilistic, Not Certain

In several experiments, individuals were given endowments of a particular species of legal right – *i.e.*, particular contract terms,⁹ default rules generally,¹⁰ property or liability rules¹¹ -- and WTA-WTP gaps were observed as predicted. Speculative work in legal theory imagines that endowments attach a wide variety of legal goods – interim judicial rulings,¹² lawsuits themselves,¹³ shareholder primacy norms in corporate law,¹⁴ etc. Putting aside PZ's methodological criticisms, I think that such easy conflation of legal goods with property is potentially problematic.

Generally, legal rights are predictions about what will happen in court, not currently held pieces of property. Take the paradigmatic case of a property interest protected by the right to a criminal action for trespass. This is a legal good at the core of the case for endowment, but even it rests on a string of merely probable events: a trespasser must enter the land when you can observe them; you must call the police and they must judge your call sufficiently emergent to justify a response; they must investigate and conclude the trespasser worthy of arrest; there must be conviction following adjudication beyond a reasonable doubt, considering any potential defenses that might exist. Ordinary citizens know from their daily experiences that most potentially criminal acts are not turned into convictions: wouldn't they therefore be skeptical that the legal right against trespass is the same as a piece of property? The case for disentangling legal rights from actual property is even stronger in

⁸ For a nice summary of the literature, see Russell Korobkin, *The Endowment Effect and Legal Analysis*, 97 N.W. U. L. Rev. 1227 (2003).

⁹ See, e.g., Russell Korobkin, *Inertia and Preference in Contract Negotiation: The Psychological Power of Default Rules and Form Contracts*, 51 VAND. L. REV. 1583 (1998).

¹⁰ See, e.g., Cass R. Sunstein & Richard H. Thaler, *Libertarian Paternalism Is Not an Oxymoron*, 70 U. Chi. L. Rev. 1159 (2003)

¹¹ See Jeffrey J. Rachlinski and Forest Jourden, *Remedies and the Psychology of Ownership*, 51 VAND. L. REV. 1541 (1998).

¹² See Jeffrey J. Rachlinski, *Gains, Losses and the Psychology of Litigation*, 70 S. CAL. L. REV. 113 (1996)

¹³ Jeremy A. Blumenthal, *Legal Claims as Private Property: Implications for Eminent Domain*, 36 HASTINGS CONST. L.Q. 373 (2009)

¹⁴ Antony Page, *Has Corporate Law Failed? Addressing Proposals for Reform*, 107 MICH. L. REV. 979 (2009).

the context of the civil law, where the underlying moral norms are likely weaker and the chain of enforcement more uncertain.¹⁵

Why does the uncertainty of legal goods matter? Even endowment enthusiasts like Knetsch argue that the way that goods are perceived by subjects plays an important role in determining whether loss will be perceived as a loss. Thus, in some experiments, having a good in the room (and thus "lost" when traded) created a WTP-WTA gap, while of course PZ observe different effects when the good is out of the room. To the extent that individuals perceive particular legal rights as mere predictions of what a court would do in the unlikely event of enforcement, they might not exhibit endowment in real world transactions.¹⁶

Admittedly, is unclear whether individuals see legal goods this way. The effect might turn on the content of the rule as much as any general background view about the majesty of the law. In a recent experimental series, Tess Wilkinson-Ryan and I explored why individuals demonstrate an anti-breach bias, demanding compensation above expectation for even simple monetary exchanges.¹⁷ We found that individuals believed there was a moral right to compensation independent of the legal rule of expectation damages, spurred and manipulated by feelings of exploitation. This finding illustrates how little we know about individuals' perception of legal rules. Even well-known rules like expectation damages are routinely ignored when presented to subjects, to the extent the conflict with strong moral norms.

Manipulating legal certainty would significantly aid those scholars wishing to employ or reject endowment effect theory in legal journals. For example, consider an experiment that used standard controls, paired one or another default right, but which told subjects in one condition that the right would be merely *likely* to be enforced after a court challenge, and in the other than the legal right would be *certain* to be enforced (perhaps through a policeman on hand). Perhaps the former condition would be less likely to lead to WTP-WTA gaps because individuals would never feel a sense of loss. On the other hand, experimenters have found in some circumstances that probabilistic goods create *more* severe WTP-WTA gaps.¹⁸

2.2. Is Law Deserved Or Random?

¹⁵ I recognize that there is some work about inchoate goods in the context of investment decisionmaking, but that seems to be distinguishable.

¹⁶ Rachlinski and Jourden anticipated this inquiry. *Supra* note 11, at 1572.

¹⁷ See Tess Wilkinson-Ryan and David Hoffman, *Breach Is For Suckers*, 63 VAND. L. REV. ____ (forthcoming 2010). For previous work by Wilkinson-Ryan, see Wilkinson-Ryan & Jonathan Baron, *Moral Judgment and Moral Heuristics in Breach of Contract*, 6 J. EMPIRICAL LEG. STUD. 405 (2009); Wilkinson-Ryan, *Liquidated Damages and Efficient Breach*, __ MICH. L. REV. ____ (forthcoming 2010).

¹⁸ Korobkin, *supra* note 8, at 1237-38.

A separate empirical point relates to how individuals think about the genesis of legal rules. Experimental subjects appear to demonstrate differences depending on whether they are randomly assigned goods or feel like they have earned them. How are legal rules allocated to parties? More importantly, how are they *perceived* to be allocated? This issue is highly context dependant, but a few general observations may be in order.

My intuition here is that most people think that they deserve the law they like, but that the legal rules they dislike are the product of bad actors or random luck. At a more general level, I think that a consequence of the certainty assumption discussed above is a view that you don't earn law: it is *neutral*, *apolitical*, and *stable*. I often observe that my law students, for example, have a default preference for natural law theories. If that's the case, most people may think as a first-order guess that they are allocated particular contract terms, legal rules, or statutory entitlements somewhat randomly. The result is that in the ordinary case, a particular statute and rule ought not to create strong endowments.

A contrary example is wages in the employment context notwithstanding at will employment rules,¹⁹ where ordinary citizens might believe that a particular legal rule – quantum meruit recovery – is the result of expended effort. Similarly, in jurisdictions where citizen participation is high, or with respect to particularly politically salient rules,²⁰ legal entitlement would be intertwined with psychological deserts.

These are questions which could be evaluated with well-designed experiments that manipulate how subjects come to possess legal entitlements. In one condition, perhaps, assign a default term in an explicitly random manner; in another, state that bargaining in an unrelated contract set the term as the standard. A different manipulation could test the difference between statutory entitlements created through legislative processes, referendum, or subject's own choices.

* * *

The larger point is this: although there have been many experiments involving ordinary goods, experiments involving legal goods are quite rare, and ordinarily do not employ manipulations which would help to answer questions of pressing importance to policymakers. Experimental work, to influence legal audiences, ought to be more frankly targeted at legal goods and at legal trading. Until skeptics talk to law professors where they live, by showing (if they can) that the kind of bargaining that individuals engage in with

¹⁹ Consider the well-known good faith case, *Fortune v. National Cash Register* (SJC Mass 1977), where an individual prevailed in asserting a right to an extra-contractual bonus earned as a result of pre-termination conduct.

²⁰ E.g., anti-torture prohibitions and tax rules.

respect legal goods does not create WTP/WTA gaps, they are unlikely to do much to halt the endowment juggernaut.