

University of Pennsylvania Law School
Penn Law: Legal Scholarship Repository

Faculty Scholarship

4-20-2014

Demand for Breach

Tess Wilkinson-Ryan

University of Pennsylvania Law School, twilkins@law.upenn.edu

Follow this and additional works at: http://scholarship.law.upenn.edu/faculty_scholarship

 Part of the [Applied Behavior Analysis Commons](#), [Behavioral Economics Commons](#), [Contracts Commons](#), [Law and Economics Commons](#), and the [Psychology and Psychiatry Commons](#)

Recommended Citation

Wilkinson-Ryan, Tess, "Demand for Breach" (2014). *Faculty Scholarship*. Paper 1234.
http://scholarship.law.upenn.edu/faculty_scholarship/1234

This Article is brought to you for free and open access by Penn Law: Legal Scholarship Repository. It has been accepted for inclusion in Faculty Scholarship by an authorized administrator of Penn Law: Legal Scholarship Repository. For more information, please contact PennlawIR@law.upenn.edu.

DEMAND FOR BREACH

Tess Wilkinson-Ryan
University of Pennsylvania Law School
(215) 746-3457
twilkins@law.upenn.edu

Abstract: These studies elicit behavioral evidence for how people weigh monetary and non-monetary incentives in efficient breach. Study 1 is an experimental game designed to capture the salient features of the efficient breach decision. Subjects in a behavioral lab were offered different amounts of money to break the deal they had made with a partner. 18.6% of participants indicated willingness to break a deal for any amount of profit, 27.9% were unwilling to breach for the highest payout, and the remaining subjects identified a break-point in between. Study 2 is an online questionnaire asking subjects to take the perspectives of buyers or sellers considering a profitable breach of contract. The results were consistent with Study 1, yielding a demand curve for breach. I conclude by proposing a research agenda that investigates in a systematic way how individuals make legal decisions in the face of competing norms.

DEMAND FOR BREACH

Tess Wilkinson-Ryan

I. Introduction

The theory of efficient breach predicts that rational actors will perform their contract obligations when performance is cheaper than breaching and paying expectation damages (Shavell 1980). Whether by conviction or for convenience, economic analyses typically assume fully rational self-interested parties, whose preferences are guided entirely or at least primarily by economic incentives (e.g. Posner 1979). A rational wealth-maximizer's behavior is very easy to forecast. Imagine the sale of a widget for \$100, where the buyer's next best option costs \$110. Now imagine a second buyer who comes along and offers \$111 for the widget. If the seller will owe \$10 in expectation damages to the buyer, we know that the rational seller will accept the offer of \$111, just as we know that she would have rejected an offer of \$109.¹

But what if we know that our would-be breacher subscribes to a set of social and moral norms that view promise-breaking as a serious moral violation? On some deontological views, contracts create a moral duty. As Charles Fried wrote in his introduction to *Contract as Promise*, "By promising we transform a choice that was morally neutral into one that is morally compelled." If performance is really morally compelled, the moral

¹ "Efficient" breaches are by definition wealth-maximizing and Pareto-superior. Damages for breach of contract are set at the expectation level, forcing the breacher to internalize the promisee's expectation interest.

promisor's behavior is, again, easy to predict. That promisor does not breach when the second buyer offers \$111, or \$112, or maybe even \$1,112.

These are intentionally extreme examples, neither of which purports to provide a comprehensive account of how humans make and break deals. Clearly it is not descriptively true that willful breach of contract is so morally abhorrent as to be non-existent. And, conversely, there are ample real-world, high-stakes cases—recently for example, in the mortgage context—of parties who could profit by breaching but choose to perform anyway, because the potential for profit fails to overcome their moral compunctions (Wilkinson-Ryan 2011).²

The problem with these two straw men is they each confine legal decision-making to a single attribute, based wholly on either financial *or* moral considerations. But surely most of us take both types of considerations into account for all manner of decisions. We have financial preferences (more money is better than less) and moral preferences (moral behavior is better than immoral behavior), and sometimes we cannot fully satisfy both, or either. This paper elicits behavioral evidence for how people factor both monetary and non-monetary incentives into their legal decision-making in the contracts context.

My hypothesis is straightforward: people are going to vary along a continuum in their willingness to breach. There will be some people at the—for some, every contract is an

² In this example, as in others I present in this paper, there are clear opportunities for renegotiation or Coasean bargaining in some form. For the purposes of this project, I am essentially parceling that set of issues out of my analyses. Although I am confining the choice set to just breach/perform here, introducing the possibility of renegotiation clearly has implications for both the moral and economic calculus—a crucial but separate research question.

option contract and breach is a morally unproblematic option chosen when the price is low enough; and for others a promise is a sacred value, not to be traded against material goods. But a lot of people will, presumably, fall somewhere in the middle, unwilling to breach for an extra dollar but unwilling to forgo a windfall in the name of promise-keeping.

II. Methodological Approaches to Money-Morals Tradeoffs

The particular trade-off I am trying to test in this paper is money for promise-breaking—financial gains for cancellation of a previously agreed-to transaction. The goal of these studies is to capture the preferences of actors who agreed in good faith to participate in a particular deal, and who then have to decide whether to take a tempting alternative offer that was not specifically anticipated at the time of the original agreement. I use two behavioral methodologies, an incentive-compatible laboratory game and a hypothetical scenario questionnaire, to plot a demand curve for breach of contract.

Recent questionnaire experiments have yielded consistent evidence of heterogeneity in the personal or psychological cost of breach. In comparisons of tort and contract awards, subjects assigned damages to contract breachers ranging from nothing to over five times expectation damages (Wilkinson-Ryan & Baron 2009). In a study of willingness to breach an agreement to complete an unexpectedly onerous survey, some parties quit as soon as they realized how obnoxious the task was, while others spent hours dutifully answering each question (Eigen 2012). In every study on willingness to breach, the

modal response is something substantially greater than the efficient breach indifference point but certainly within an order of magnitude (e.g., Wilkinson-Ryan 2010). Even when the advantage from breach was framed in terms of a large, real-world loss—an underwater mortgage—subjects varied significantly in their responses. Some thought that breaching the mortgage contract by walking away was a reasonable response as soon as the home fell underwater, and others thought that homeowners should stick it out to the bitter end, while most found a tipping point around a 50% decrease in the home's value at the time of purchase (Wilkinson-Ryan 2011). These results all support the propositions that many people experience a disutility from breaching that they can price, and that the disutility of breach varies across individuals.

Eliciting willingness to breach by way of questionnaire studies has many advantages. It is possible to provide a wide range of subjects with highly contextualized information about situations that would be next to impossible to orchestrate in the real world. However, researchers have debated how seriously to take responses to hypotheticals, and have observed some consistent biases. For example, there are many studies of willingness to pay for public goods like environmental health, disaster preparedness, improved traffic safety, and product safety. Like willingness-to-breach studies, public goods valuation questionnaires implicate other-regarding preferences insofar as the individual decision-maker is highly unlikely to be the beneficiary of the improvement in question (e.g., Baron 1997; Mitchell & Carson 1989). Typically, subjects are asked how much they would pay for some good, such as, for example, the continued existence of an endangered species. The problem, as Jonathan Baron has observed, is that “[s]ome respondents refuse to

answer such questions sensibly.” (Baron & Spranca 1997). In particular, people report that they are implausibly committed to certain moral values when there is no money at stake. These “sacred” or “protected” values elicit enormously high willingness-to-accept values on surveys of public goods, just as some people, when asked to say how much profit they would need to realize to be willing to breach their contract, will write a positive integer and fill the rest of the response line with zeros. On the one hand, this may be a true representation of their very strong anti-breach preferences. On the other hand, it seems reasonable to assume that even Mother Theresa would have breached a \$1,000 contract for, say, \$50,000 profit—if only to donate it to a worthy charity.

In contrast to no-stakes questionnaire methods, in experimental economics games, participants must express their moral preferences with real money. Perhaps the most basic experimental design addressing the strength of altruistic or other-regarding preferences is the Dictator game. In a Dictator game (Kahneman, Knetsch, and Thaler 1986), for example, subjects literally pay for their moral preferences. The Dictator is told to split an endowment as she sees fit between herself and her partner; in some sense, she gives away an amount equal to the value to her of sharing (or making her partner happy, or however we want to frame the nature of the intangible good). A Trust game is essentially a two-stage Dictator game, where the second player’s decision to share or not to share the endowment often reflects the preference to reciprocate generous behavior (Berg, Dickhaut, and McCabe 1996). Results from experimental games like these suggest that some people are less altruistic than they’d like to think (or like others to think) (Berner, Kramer, and Levy 2008), but that nonetheless there is a marked persistence of

“irrational” generosity, reciprocity, and altruism even when the stakes are real and non-trivial.

The studies I report below draw on both experimental games and hypothetical questionnaires, respectively, with the goal of identifying trends across methodologies as well as possible divergences. This paper shares some of its goals and methods with Uri Gneezy’s (2005) investigation of consequences on willingness to lie. As here, Gneezy used both an experimental game and a set of scenario studies. Gneezy’s behavioral experiment was a variant of a “cheap talk sender-receiver game,” a kind of Trust game with player communication. He found that players lied the most when lying produced the biggest payoff, and that there was less lying with lower payoffs to the liar or higher costs to the liar’s victim. He found similar patterns in questionnaire studies, leading him to conclude that it cannot be true that

Ethical types never lie because they experience infinite disutility from lying, whereas economic types always lie to maximize their wealth because they experience no disutility from lying. This model cannot explain why people are sensitive to payoffs associated with unethical behavior. (Id. 391).

This paper presents both behavioral and self-report methodologies to investigate sensitivity to payoffs associated with breach of contract. The studies reported below ask how people incorporate moral preferences, or moral incentives, into their decision-making. I am interested in two dimensions of this question. The first is how a given

person responds to different incentives to breach—e.g., as the stakes get bigger, is breach more attractive and thus more likely? The second is how this trade-off differs across individuals.

III. Study 1: Breach for Profit Laboratory Game

Study 1 is an experimental game designed to elicit participants' respective individual valuations of the cost of breaching a deal. The game protocol captures certain salient features of the situation faced by parties deciding whether or not to breach a contract. In particular, participants in this game manifested assent to participate in a mutually beneficial transaction. After agreeing but before performing as promised, the second-performing party was given an opportunity to abandon the original transaction and make more money elsewhere.

Before detailing the specific protocol of this game, it is worth couching some of the methodological choices in terms of their correspondence to contract and breach. This game uses the set-up of a traditional Trust game, in which one player, the “Sender,” can choose to send money to another in order to increase the total surplus, and in hopes that the second player will choose to share that increased surplus. The dependent variable in this as in many Trust game studies is whether and how much that second player³ (the “Receiver”) shares with the original sender—in this case, after the Receiver was offered a premium to behave selfishly. Like all experimental games and experimental studies generally, some of the design features were dictated by practical constraints. More

³ I will use the words “player,” “participant,” and “subject” interchangeably here.

importantly, though, a traditional Trust game elides certain important elements of contract, and so some of the design elements here are distinctive, and distinctively associated with particular problems or features of contract. In light of these issues, I flag four especially important theoretical and practical design challenges, and their solutions, in turn.

Assent: In order to make this transaction contract-like, both players were required to manifest assent. This is distinct from a typical Trust game in which only the Sender assents, by choosing to send. Here, the Receiver had to choose whether to communicate that she would divide the larger pot of money equally between them in the event that the Sender chose to give up the small endowment. The Receiver assented with a promise and the Sender assented by performing—by actually giving up her endowment and participating in the transaction.

Breach vs. Promissory Fraud: This task was intended to gauge how willing each participant is to breach a contract or break a deal, which is distinct from willingness to lie or willingness to be selfish. This means that the information about the opportunity to breach needed to be presented *after* participants had already assented to the deal. As such, after the Receiver had made her promise to share, and the Sender had ceded control of the transaction to the Receiver, only then did the Receiver get an invitation to use her endowment in order to participate in a more lucrative task. Of course, it is not possible to infer from this design whether a given Receiver who chose to breach for a minimal

increase in profit was always going to breach or whether it was only the promise of the extra money, however minimal, that changed her decision.

Efficient Breach: In order to participate in the second, more lucrative task, the Receiver had to use most of her endowment (\$10 out of \$12). If the Receiver chose to spend the \$10 to participate in the second task, the Sender got only \$2 back (instead of the promised \$6). The Receiver could pay \$10 to receive a payout on the second task of between \$11 and \$30—but the Receiver was not permitted to share the surplus with the Receiver.

This means that the game diverges from efficient breach in a couple of respects. First, the breach was profitable for the breacher and wealth-maximizing overall, but emphatically *not* Pareto-superior—it clearly left the Sender worse off and the Receiver better off. There are two reasons for this design choice. The first is that the constraints of the laboratory game are such that performing and paying are almost always going to be identical. There would be no real sense in which the Receiver was breaking any kind of deal if the Receiver had to fully compensate the Sender, because there would be no distinction between performing and paying damages. Outside of the lending context, in real contracts, performance is typically distinct from compensation—delivery of a good or a service.

Second, and related, in order for the study to make sense, the Sender needed to not be indifferent to performance and breach—the Sender had to prefer performance to breach

in order to mimic a world in which breach disappoints the non-breaching party's expectations. This is in tension with a pure theory of efficient breach, of course, which assumes fully compensatory expectation damages and no transactions costs. However, there is ample evidence that expectation damages are undercompensatory (Cohen 1994; Farber 1980), that transactions costs are prohibitive (Macaulay 1991), and that even when money damages are equivalent to the expected value of the contract, parties still prefer performance and feel disappointed by the breach (Wilkinson-Ryan & Baron 2009, Wilkinson-Ryan & Hoffman 2010). As such, the design here makes breach of contract a loss and, presumably, a disappointment for the non-breaching party.

Finally, note that this set-up precludes Coasean bargaining—something that Receivers were told repeatedly, so that their breach decision was made in full knowledge of the consequences to the Senders. This is, again, in tension with economic theories of efficient breach. Indeed, the question of when and how subjects bargain in these situations would be its own fruitful avenue of inquiry. Here, however, the question was how a given subject weighed the financial incentives and the moral or social incentives involved in breaking a promise and disappointing a counterparty.

Contract Context and Relational Contracts: This game attempts to strike a balance between the very stripped-down context-free games typical of experimental economics and the barrage of social and moral cues that typically accompany the formation of contractual relationships. First, like almost all experimental games, participation was entirely anonymous. Reputation costs were minimized, as were any other normal

relational factors like affinity and personal history. Players were referred to by the relatively neutral terms “Sender” and “Receiver” rather than “Promisor” and “Promisee” or “Investor” and “Trustee.” The choice to breach/defect vs. perform was discussed entirely in terms of its specific consequences—e.g., “Pass 2 to Sender” (breach) or “Pass 6 to Sender” (perform).

The important exception to this effort at neutrality and contextlessness is that Receivers explicitly agreed to participate in an “agreement” or a “contract” (the wording was assigned randomly). This is one of the most important facts of this study, because it means that this study can get not only at social norms like reciprocity and courtesy, but also at the more firmly moral norm of keeping one’s word—something that is not possible in a traditional Trust Game where the Sender sends without any signals of the Receiver’s intentions.

A. Method

The goal of this study was to put subjects in a contract-like transaction, with a subsequent opportunity to “breach” for a profit, and to document the financial incentive required by each subject in order to be willing to disappoint her counterparty—in other words, the willingness to breach. This first study was conducted with real, present subjects, in real time, using real money. The game was programmed on the interactive software z-tree (Fischbacher 2007). Participants learned about the game and recorded their decisions on the z-tree platform.

Subjects were recruited via email and flyers around the University of Pennsylvania main campus. The study was conducted in an experimental laboratory, a room of networked computers, in carrels that made it difficult for participants to see anyone's screens but their own. The particular laboratory used at the University of Pennsylvania does not permit studies with deception; subjects were told verbally and in writing that the study involved no deception; and there was in fact no deception.

They were first introduced to the study and told that it involved a “multi-stage transaction.” Before beginning the main task, subjects saw a short tutorial on how to use a modified Becker-DeGroot-Marschak scale (1964). They read a brief scenario describing Alice, a woman interested in a lawn-mowing job for which she does not know the pay. After reading about Alice's reserve price, subjects were asked to fill out a “willingness to accept” form on Alice's behalf. After they filled it out correctly (if subjects made a mistake, the program reminded them of the reserve price and required them to correct the mistake), they saw what would happen if the job was worth more or less than Alice's reserve price. They were reminded that there are no strategic reasons to misreport willingness to accept. This procedure is in line with a number of papers (e.g., Zeiler & Plott 2005) arguing that confusion over elicitation methods drives results in some studies.

Subjects then moved on to the main transaction. Each person was assigned a partner and assigned a role. In each pair, one participant played the Sender and one player the

Receiver. The Sender began the game with 6 tokens. In this version, one token was worth one dollar. The Sender could then choose to keep the 6 tokens and end the game, or to pass 4 tokens to the Receiver. Tokens passed to the Receiver were tripled, meaning that if the Sender passed 4 tokens, the Receiver would have 12 tokens and the Sender 2 tokens. As in a normal Trust Game, the last move was the Receiver's, who chose how many tokens to pass back to the Sender. Receivers could choose to pass back either 6 or 2 tokens. Subjects were instructed that each player would have "one and only one" opportunity to transfer tokens.

This game included two important additional steps. First, prior to the Sender's pass decision, Receivers were asked to indicate to the Sender whether or not the Receiver agreed to return 6 tokens in the event of an initial transfer. Receivers could choose to agree or not to that statement, and Senders could see their respective partners' choices.

The second important addition to this Trust Game was the addition of the temptation to breach. If a Sender passed tokens to the Receiver, the Receiver possessed 12 tokens. Receivers knew that they would be asked whether they wanted to transfer 2 or 6 tokens to the Sender. Before they could make that pass-back decision, Receivers were told that the next stage of the "multi-stage transaction" was an optional task (called "Task 2"). They were told that Task 2 had a payout between 10 and 30 tokens, but that participants who wanted to participate in Task 2 were required to pay 10 tokens up front. Borrowing was not permitted; participants could participate in Task 2 only if they currently had at least 10 tokens. At this point, Receivers were asked to complete a "willingness to participate"

form. They were instructed to “think about the minimum guaranteed payout that you would need to be willing to pay 10 tokens to participate.” They were also explicitly told, “If you pay 10 tokens to participate in Task 2, you will have 2 tokens remaining to pass back to the Sender.”

They then saw six possible value ranges for Task 2: 10-11 tokens, 12-13 tokens, 15-16 tokens, 17-18 tokens, 23-24 tokens, and 29-30 tokens. For each possible task value (described as “task options”), they chose either “Keep 6 tokens. Pass back 6 tokens.” Or “Keep 10 tokens. Pass back 2 tokens.” Once the task option was chosen, subjects who had 10 tokens could choose to participate.

Task 2 was a very simple vowel-counting task. Those who correctly counted the number of vowels in a short sentence received the higher payout; those who entered an incorrect amount received the lower payout.

Summary of Game:

1. Sender is endowed with 6 tokens; Receiver is endowed with 0.
2. Sender is told that she can pass 4 tokens to Receiver, which will triple upon transfer.
3. Receiver communicates to Sender whether Receiver will pass back 2 and keep 10, or pass back 6 and keep 6, in the event that the Sender chooses to participate in the transaction.

4. Sender either keeps 6 tokens, or passes 4 and keeps 2. If the former, the transaction is over.
5. If Sender passes 4, Receiver has 12 tokens and Sender has 2.
6. Receiver learns of Sender's transfer decision.
7. Receiver learns of Task 2. Participation in Task 2 costs 10 tokens. Possible payoff of Task 2 is between 10 and 30 tokens.
8. Receiver indicates at which payouts, if any, of Task 2, Receiver would choose Task 2 over passing 6 back to Sender.
9. Task 2 payout is determined and Receiver's relevant decision is effected.

After subjects knew their final payouts, they were to indicate their views about the perceived moral implications of participating in Task 2 instead of passing back the promised amount to the Sender. Subjects indicated agreement, on a Likert scale, with the following statements:

1. It would be immoral to participate in Task 2 because it leaves the sender with less than he or she was expecting.
2. It would be immoral to participate in Task 2 if the Receiver has agreed to pass back 6 tokens, because it means going back on your word.
3. It would be immoral to participate in Task 2 because the Sender was generous and deserves reciprocal generosity.

Before learning of their final payout, subjects also had the opportunity to provide any comments on the study in a free-response space.

The study included one experimental manipulation. On the agreement page, half of the Receivers were randomly assigned to see the agreement described as a “contract” and half only saw the word “agreement.”

B. Results

These results report the decisions of 90 subjects, including 45 participants assigned to be Senders and 45 subjects assigned to be Receivers. Subjects were primarily undergraduate students at the University, with some staff members also participating. 62.2% of Receivers were female, with a median age of 21. The average payout from the game was \$7.16. 44 Receivers agreed to pass back 6; 43 Senders passed 6 tokens, meaning that 43 total “contracts” were formed.

The remaining analyses take up the choices of the 43 Receivers who had a breach/perform decision to make. First, there were no significant differences between subjects who saw the contract language and those who saw the agreement language. This may have been a power issue (this is a relatively small sample), but there are no easily discernible trends in the data. As such, data from all Receivers are analyzed as a single group.

In the table and figure below, I report the willingness to breach as a function of the net profit from breach. The net profit from breach is the difference between the expected total profit from performance (\$6) and the expected total profit from breach (between \$11 and \$30).⁴ Note that subjects always knew that they would be able to profit by breaking their promise—they knew that they would be able to make the choice between keeping 6 or keeping 10. Because their return options were limited, and because they were not asked to make that choice until after Task 2 was introduced, there is no behavioral evidence identifying which of the low-incentive breachers would have breached for even less.⁵

The results suggest that subjects were responsive to both moral and financial incentives. The median willingness to breach break-point was at the \$18 payout level—that is, more than half of subjects would not breach unless breach paid \$12 more than performance. About one-fifth of the subjects were willing to breach at the lowest incentive; another quarter refused to breach even when breach would pay \$30 total, five times more than performance. Table 1 shows the percentage of subjects who chose to breach at each incentive level. Figure 1 shows the willingness-to-breach (WTB) distribution as a

⁴ Each breach level was listed as a range, e.g., \$10-11, or \$29-30. All that was required in order to receive the higher payout was to count the number of vowels in a short sentence, and all subjects did this correctly. The purpose of giving ranges rather than discrete payouts at each level was to increase the realism of Task 2 as an actual task or transaction rather than simply an offer of more money from the experimenter.

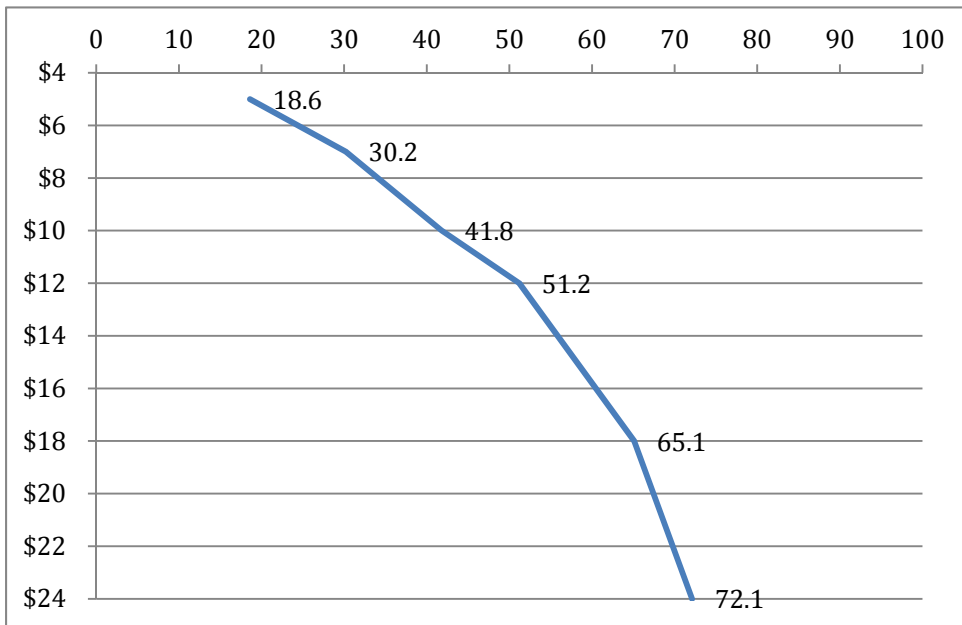
⁵ 18.6% of the subjects reported in the post-task questionnaire that they formed the intention to breach even before the introduction of Task 2—in other words, all of the subjects who breached at the lowest incentive level were deceiving their partners and did not in fact intend to perform.

demand curve. There were no differences in WTB by sex. Studies were run in sessions of 10 to 16 players per session; there was no effect of session on WTB.

Table 1. Percent of Subjects Willing to Breach by Net Incentive

Net Profit from Breach	Percent Willing to Breach (WTB)
\$5	18.6%
\$7	30.2%
\$10	41.8%
\$12	51.2%
\$18	65.1%
\$24	72.1%

Figure 1: Percent Breaching as a Function of Breach Profit



Recall that subjects were also asked to report on their agreement with a three statements about the moral dynamics of breach. They were statements about disappointing the Sender's expectation (Expectation), failing to reciprocate the Sender's generosity (Reciprocity), and failing to keep one's own promise (Promise).

Subjects responded on a scale of 1 to 7, where 1 was "totally disagree," 4 was "neither disagree nor agree," and 7 was "totally agree." Responses on Expectation and Reciprocity were not significantly different from each other, but the Promise variable elicited significantly stronger agreement than either of the other two variables.

Table 2. Survey Responses: To what extent do moral factors weigh against breach?

	Mean (Standard Deviation)	Percent Strongly Agreeing (6-7)
Expectation	5.07 (1.50)	37.2%
Reciprocity	4.74 (1.81)	44.2%
Promise	5.58 (1.48)	62.8%

Subjects showed up to this experiment for the promise of a minimum payout of \$5 for a 30-minute task—a baseline fact that suggests that they were, in general, people who placed a fair amount of value on a relatively small sum of money. Nonetheless, only about half of them were willing to break their promise when promise-breaking paid \$12

more than promise-keeping. Indeed, more than a quarter of the subjects refused to break their promise when doing so would yield a total payout of \$30. These subjects were willing to give up real money in order to avoid doing something that they found morally problematic. The results from the brief post-task questionnaire suggest that subjects generally had moral compunctions about disappointing their counter-party and failing to respond to generosity with reciprocal generosity, but the strongest moral sentiment was about promise-breaking. Subjects thought it was wrong to go back on their word. Note that this does not mean that they were utterly unwilling to do so—almost three-quarters of subjects were willing to breach at some level—it just suggests that their moral or social preferences were factors in their decision-making, sometimes outweighing financial considerations and sometimes outweighed by them.

There are of course real limitations to the generalizability of the results of Study 1, which I describe here partly by way of introducing Study 2. Study 1 is intended to be closely analogous to a real-world contracts context, but as an anonymous laboratory game it lacked many of the important elements of that context. The stakes were real but very low; there was no legal framework in which parties were negotiating and operating; there were no reputation costs, transactions costs, or even social costs to breach. Study 2 uses a different set of methodological tools based on hypothetical contract scenarios to ask the same questions. Although Study 2 is vulnerable to its own set of criticisms, the goal is to show similar patterns across a methodological spectrum.

IV. Study 2: Scenario Study

The second study aimed to investigate the same central questions as Study 1, but used a hypothetical questionnaire. Subjects were asked to put themselves in the position of a promisor who has an opportunity to breach one deal in order to take a better one. There are many ways that intuitions about the promisors' economic and financial incentives might vary systematically as a function of the context of the breach. Study 2 covers two of those dimensions. The respective experiences of a buyer and the seller are intuitively different—a buyer breaches to save while a seller breaches to profit; most people are buyers very frequently but only sellers once in a while—so I use a different scenario for each. Though the scenarios are not directly comparable, the general hypothesis is that we will see a familiar demand curve in each. The second dimension considered here is the difference between a breach with and without legal consequences. Each scenario (buyer and seller) is presented in a “breach” and a “cancellation” condition, in order to test whether or not the overall pattern of responses depends on the legal rule.

A. Method

Study 2 was a web-based questionnaire study programmed in the Qualtrics survey software. Subjects each saw two scenarios, each in one of two possible conditions. In the breach condition, subjects read that breaching the contract would require compensation of the non-breaching party. In the cancellation condition, subjects read that they were within the cancellation period and could cancel the contract without financial or legal repercussions. The cancellation version is included in order to try to assess the pure effect

of promise without complicating legal repercussions—especially insofar as subjects may imagine more transactions costs or uncertainty when the legal system is involved, thus driving the willingness to breach number higher. The breach version included what is essentially a statutory liquidated damages provision. This was intended to make the compensation requirement appear certain and reliable, if not almost routine. A buyer scenario and a seller scenario are included in order to cover what are arguably very different qualitative experiences in contract.

The first scenario asked subjects to put themselves in the position of a buyer:

Please imagine that you are looking to buy a used car. You go to a local dealer, AutoWorld, and find a relatively inexpensive certified pre-owned Toyota that has been well reviewed. It comes with a five-year warranty and you negotiate to purchase it at a price of \$10,000. You fill out the agreement of sale, entering the price and the vehicle specifications. You and the sales manager sign at the bottom of the contract.

Breach condition:

You agree to return tomorrow to pick up the car and pay the sales price in full. In your state, in the event of breach of contract by a buyer on undelivered goods, the buyer is liable for 5% of the contract price. In other words, if you back out of the deal, you will have to pay \$500 to AutoWorld.

Cancellation condition:

There is a state-mandated 24-hour cooling-off period for purchases worth over \$5,000. This means that you can back out of the deal within a day of signing the sales agreement, and you will not have to pay anything to AutoWorld. You go home.

You go home. That evening, while reading the newspaper, you see an advertisement for Grady's Discount Cars. The ad reads, "Just In: New Lot of Certified Pre-Owned Toyotas! Come Look! Best Deals in Town" and then includes a list of cars (listing the make, model, and mileage of each) and their prices. You can see that Grady's Discount Cars is selling a car that is virtually identical to the one that you found at AutoWorld, and that it is cheaper.

Subjects were then asked a series of willingness-to-accept questions. The net value of breach was the same across conditions, but the new contract price differed to reflect the increased cost of compensation in the breach condition. To wit:

Breach condition:

AutoWorld is charging \$10,000 for the car. If you choose the Grady's Car you will have to pay \$500 to AutoWorld. Please imagine that Grady's Discount Cars is selling the same car for \$9400. Would you cancel the deal with AutoWorld and purchase the car from Grady's Discount Cars?

Cancellation condition:

AutoWorld is charging \$10,000 for the car. Please imagine that Grady's Discount Cars is selling the same car for \$9900. Would you cancel the deal with AutoWorld and purchase the car from Grady's Discount Cars?

In each case, subjects answered the willingness-to-accept question at six levels of total savings/profit: \$100, \$300, \$500, \$1000, \$1500, \$2000. Results are shown in Figure 2.

The second scenario asked subjects to put themselves in the position of a seller:

Please imagine that you are selling your old car, a 1998 Toyota Camry with 127,000 miles on it, and it has recently passed inspection. You have listed it on Craigslist, an online classified site, and you have also taken out a small classified ad in the local newspaper. You have listed the car at \$2,300 or best offer. Soon after you post the listing on Craigslist, you receive a flurry of offers via email. The highest is from Will Patterson, who offers \$2,100 assuming the car performs well in the test drive. You invite him to come try it out, and after he drives it he confirms his offer of \$2,100. He does not have the money with him, so you write up a quick agreement of sale that you both sign. You agree that he will be back tomorrow to pick up the car and pay in full.

Breach condition:

In your state, in the event of breach of contract on undelivered goods worth less than \$3,000, the buyer is liable for \$100 as money damages. In other words, if you back out of the deal, you will have to pay \$100 to Will.

Cancellation condition:

Your state has a mandatory 24-hour waiting period for any car sale. In the 24 hours after the agreement of sale is made, either party is permitted by law to withdraw from the deal and cancel it entirely without penalty.

Early that evening, you receive a call from Dave Scott, who saw your listing in the newspaper. Dave used to have a 1998 Camry that he really liked, and he offers to buy the car. He is willing to pay more than Will.

Subjects answered the willingness-to-accept question at the \$100, \$200, \$400, \$600, \$900, and \$1400 levels of profit. Subjects were also asked to provide any additional comments in a free-answer space at the end of the survey.

Subjects were 200 respondents from a panel recruited by the commercial survey firm Qualtrics.⁶ Subjects were paid \$5 each to complete a 15-minute questionnaire.

⁶ Qualtrics is both the maker of the software and a survey firm that will administer the instrument to a panel whose parameters are specified by the investigator. This study used a general population sample. Many legal and scientific survey studies have successfully used Qualtrics samples, with recent papers published in law reviews (e.g., Shen 2013, Schwartz 2013) as well as peer-reviewed journals including the *Journal of Legal Studies* (Simon & Scurich 2011) and *Nature* (Tinghog et al. 2013).

B. Results

Subject ages ranged from 18 to 76 with a median age of 40. 55% of subjects were female. 48.5% of subjects had a college degree; 16% had attended no post-secondary education.

In Study 2 as in Study 1, subjects' tradeoffs and preferences appear to be different enough that willingness to breach varied by individual. There were no significant differences by subject sex. The main WTB results are shown in Figures 2 and 3 below.

Figure 2: Proportion of subjects indicating willingness to breach at each profit level, by condition (breach vs. cancellation), Buyer scenario.

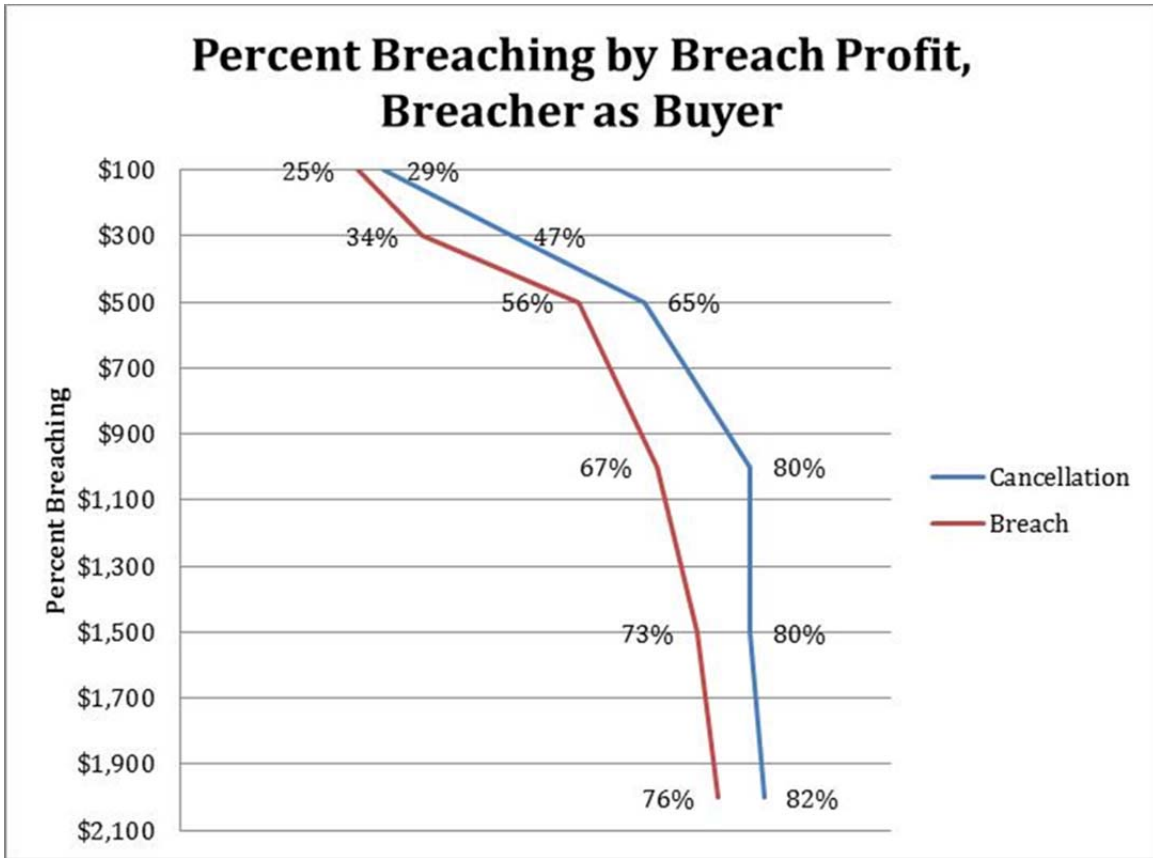
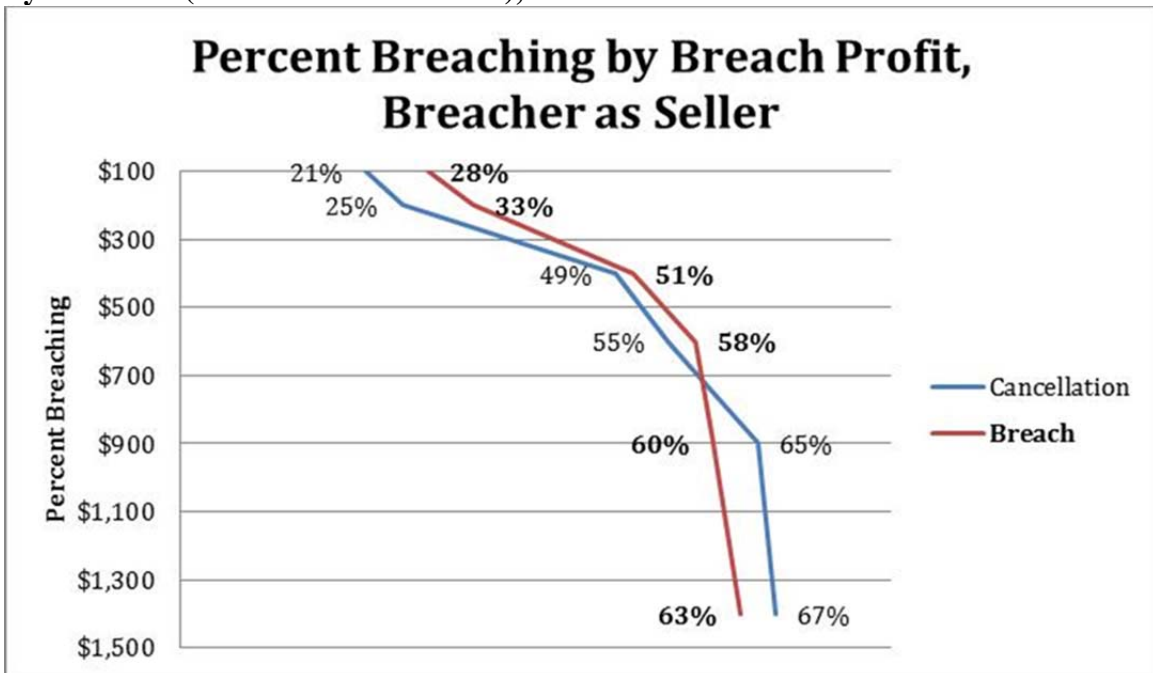


Figure 3: Proportion of subjects indicating willingness to breach at each profit level, by condition (breach vs. cancellation), Seller scenario.



These results are largely consistent with the results in Study 1. To generalize: around a quarter of subjects seem willing to breach for a relatively small amount relative to the contract price, and another quarter report that they are unwilling to breach even for a very large premium, with the rest of the subjects arrayed in between—willing to breach for some amount but not just any amount.

These scenario studies offered each vignette in two possible versions, one in which there is a legal consequence to breach, and one in which there is not. The primary purpose of these different versions or conditions was to find out if the general pattern would be consistent with and without the constraints (legal, financial, and psychological) of an applicable legal rule. Because subjects were randomly assigned to one or the other condition (breach or cancellation), I can also assess the effect of the penalty on willingness to breach responses.⁷ In the Buyer scenario, subjects do seem slightly less willing to breach than they would be to cancel. The median premium required in the Breach condition was \$1,500; in the Cancellation condition it was \$1,000, a marginally significant difference ($W=5775$, $p=.054$). There were no significant differences in the Seller scenario; the median was \$600 in both conditions.

Study 2 provided more real-world context, but of course made the stakes purely hypothetical, meaning that subjects could report whatever they wanted without suffering any material consequences of their decisions. By asking the same question from both a

⁷ This is admittedly a rough comparison with a few problematic confounds. Most glaringly, in the Breach condition, the numbers are bigger and some arithmetic is required to determine the profit. Nonetheless it may be useful to explore different patterns of breaching vs. cancellation here at least to set up hypotheses for future research.

buyer and seller perspective, with and without legal consequences, and, indeed, in both an incentive-compatible and a hypothetical scenario, we can be increasingly confident about the robustness of this finding in at least some contexts.

V. Discussion and Conclusion

The results from Studies 1 and 2 suggest that the notion of a demand curve for breach is a reasonable way to map the breach/perform decision. In both studies, for some respondents the decision was dominated by a preference for wealth, for others by a preference for moral behavior, and for others some kind of tradeoff between the two.

Tradeoffs between moral and financial preferences are typically implicit. Here, though, some subjects articulated their decision-making precisely in terms of these tradeoffs when asked if they had any comments at the conclusion of the studies. One subject, who was willing to breach in Study 1 when the payout was \$24 or greater, wrote, “I just paid rent and could use a big payoff, but I wouldn't do it unless the payoff actually made a difference (20+ dollars) because it would mean going back on what I said I would do.”

From another subject who would breach for \$24 or more:

I thought about the other person in the room who made the decision to send their coins to me. I thought about the amount of money and how in the larger scheme it's fairly nominal to me. If I were to walk out of the room today with more than

\$6, the other person would walk out with \$2 and the feeling of betrayal. Betrayal, for the most part, was not worth 4-15 extra dollars.

Even in the second study with hypothetical incentives, one subject wrote:

I think that the majority of my decisions were to try to accommodate my agreement as best as possible, even if I was legally able to profit more by getting out of agreements within a grace period. But if the offer was substantial enough then I would take it just because it's the most logical choice. But for a few hundred more, I'd rather keep my word and give someone something I promised.

Empirical validation of the idea of an attitude toward breach that is sensitive to both financial and intangible incentives helps to explain some economic and legal phenomena that have puzzled commentators, especially in the efficient breach literature. Mostly, though, these results set up a foundation from which to form more fine-grained hypotheses. I conclude this paper by identifying four distinct but related areas of inquiry implicated by the findings above, and suggest directions for future studies.

A. Characteristics of the Breacher and the Breach

A commonsense view of breach of contract is almost certainly going to be responsive to the motives of the breacher, even in a strict liability regime like American contract law. One question for future research is whether some kinds of breaches are more acceptable

than others. There is some suggestive evidence here that this may be the case. In the laboratory study here, the Receiver breaches in order to make more money. The same is true in the Seller Breach scenario from Study 2. In the Buyer Breach scenario, however, the motivation for breach is saving money (not losing) rather than making money (gaining). Although the scenarios are not directly comparable by any kind of rigorous statistical method, a quick look shows that there are noticeably more subjects willing to breach for \$1,000-\$1,500 in the Buyer scenario than in the seller scenario. One explanation for this difference is that the demand for breach is greater in the context of saving than in the context of making additional money. Indeed, this phenomenon is likely overdetermined. First, saving has its own normative status, associated as it is with prudence and care. Increasing profit, on the other hand, is more easily understood in terms of greed—even the most extreme penny-pinchers are not accused of being greedy. Furthermore, at a more general level, people tend to think of losses and gains differently; this is one of the core propositions of Kahneman and Tversky's prospect theory (1979). A buyer is in a loss frame, in the sense that he will pay money for the good. A seller is in the gain frame, and will receive money for a good. Many people share the intuition that the buyer will (and in fact *should*) be more sensitive to the price than the seller, insofar as losses loom larger than gains. Indeed, this hypothesis is in line with findings from Wilkinson-Ryan and Baron (2009), finding that intuitions about how to punish breachers was sensitive on whether the breacher trying to save money or trying to make more money. Most people interact with contract law as consumers most of the time, making the buyer/seller distinction one with implications for real-world contracts.

B. Characteristics of the Non-Breaching Party

It is one thing to refuse to leave a fellow student, or even a local salesman, in the lurch—but we might question whether we would feel the same way about a breach that affects Comcast, or Visa, or USAirways. A transaction with a counterparty whose motives and *raison d'être* are entirely commercial, whose physical location is remote, and whose identity is diffuse and impersonal seems less likely to cue up the kinds of moral intuitions that deter breach. In both the laboratory experiment and in the two scenario studies described here, the non-breaching party is, if not an individual person, at the least a recognizable and reasonably local party. One important question for future research is the extent to which breach elasticity differs as a function of the characteristics of the non-breaching party. This may also be a particularly interesting way to get at the mechanisms at play in reluctance to breach. The subjects in the first study reported that keeping their word was a primary consideration. If this is true, it would suggest that the identity of the counterparty is irrelevant, because the nature of the moral harm is purely in the promisor's betrayal. More likely, though, is that the preference for keeping one's word is stronger or weaker depending on the consequences of breach. There is evidence in the mortgage context, for example, that the characteristics of the lender (remote vs. local, benign vs. greedy) affect perceptions of the moral acceptability of strategic default (Wilkinson-Ryan 2011). The identity and nature of the promisee are constituted by independent variables worthy of serious inquiry in an effort to understand the role of moral intuitions about contracts in high-stakes contexts like commercial contracts, mergers and acquisitions, and consumer transactions.

C. Consequences of Breach

Although often related to the identities of the parties, the effect of the predicted consequences of breach on the decision to breach is a distinct research question. In Gneezy's (2005) study of the role of consequences on lying behavior, he found not only that people were more likely to lie when lying was more profitable, but also that they were less likely to lie when it hurt the other party more. This particular avenue of research is multi-faceted. First, there is the straightforward hypothesis that willingness to breach will go up as the harm from breach goes down, holding constant the breacher's profit. Second, in order to probe the effect of a breach's harm, we will need to know more about perceptions of harms from breach. For example, there is mounting evidence that many people do not view expectation damages, even full expectation damages, as equivalent to performance (Lewinson-Zamir 2014; Wilkinson-Ryan & Hoffman 2010). The harm in breach is sometimes the violation of trust or the implicit insult, meaning that people may perceive serious harm even when the financial consequences of breach are minimal. In the other direction, we may find that some financial harms are discounted because the consequences are so diffuse or indirect—the failure to pay Chase Bank \$50 may seem less harmful than the failure to pay the my plumber \$50, because the loss to Chase Bank is tiny in the scheme of things and the experience of the harm is spread out over multiple people. And, indeed, perceptions of harm to the non-breaching party are likely to be affected by availability biases (how easy is it to picture the harm?) and motivated reasoning (how much do I want to believe that the harm is small?).

D. Preference Endogeneity

Finally, this research opens up a promising avenue of inquiry into the role of legal norms in the formation of moral preferences. Behavioral law and economics scholarship often juxtaposes legal rules and moral intuitions, and sometimes scholars cite divergences as motivation for legal reform. The under-explored phenomenon, though, is how legal rules shape intuitions about the good. Although the results are only suggestive, one possible explanation of the different willingness to breach curves in the buyer scenario from Study 2 is that subjects perceived breach as more morally wrong when it was associated with a legal penalty—e.g., if the law thinks it’s bad enough to sanction, it must be bad. This research will take at least two forms. The main question is how substantive legal rules affect moral norms. For example, some commentators (e.g., Shiffrin 2007) have suggested that by failing to require breachers to specifically perform, the law degrades the moral culture of promising. Legal scholars often cite the expressive function of law, which includes the implicit claim that the law is intended to affect citizens’ views of justice. Whether it does in fact do so is a testable proposition, and one that deserves more empirical attention.

A secondary consideration in this area is how the form of legal rules affects moral norms. In earlier work, I found that when a damages remedy was specified in a contract, subjects viewed breach as less immoral than when the same damages remedy was specified by the background rule of expectation damages (Wilkinson-Ryan 2010). Other scholars have

begun to investigate the differential effects of rules and standards (Sheppard and Cushman 2010) and statutory damages minimums vs. caps (Feldman 2014). More generally speaking, empirical legal decision-making research is very well-suited to investigations of how people form moral preferences, an inquiry with broad implications for legal scholars, policy-makers, and psychologists, among others.

CONCLUSION

This research takes a first step toward collecting real evidence of moral/financial tradeoffs in a legal context, beginning with a context that has historically been characterized by the all-or-nothing approaches of efficient breach theorists and promise-centric philosophers. Overall, this paper presents relatively intuitive findings; most people have to weigh non-monetary values against financial incentives many times per day. The fact that preferences are heterogeneous across the population, and that greater financial incentives are more likely to overcome moral compunctions than lesser financial incentives—these are not necessarily surprising results. But by making explicit the fact that individuals' choices reflect both economic and non-economic preferences, we can begin to investigate in a systematic way how individuals make decisions in the face of competing norms.

REFERENCES

- Baron, Jonathan & Mark Spranca. 1997. Protected Values. 70 *Organizational Behavior and Human Decision Processes*. 1-16.
- Baron, Jonathan. 1997. Biases in the Quantitative Measurement of Values for Public Decisions. 122 *Psychological Bulletin* 72-88.
- Baron, Jonathan & Tess Wilkinson-Ryan. 2009. Moral Judgment and Moral Heuristics in Breach of Contract. 6 *Journal of Empirical Legal Studies* 405.
- Becker, Gordon, Morris Degroot and Jacob Marschak. 1964. Measuring utility by a single-response sequential method. 9 *Systems Research* 226–232.
- Ben-Ner, Avner, Amit Kramer & Ori Levy. 2008. Economic and Hypothetical Dictator Game Experiments: Incentive Effects at the Individual Level. 37 *The Journal of Socio-Economics* 1775-1784.
- Berg, Joyce, John Dickhaut, & Kevin McCabe. 1995. Trust, Reciprocity, and Social History. 10 *Games and Economic Behavior* 122.
- Eigen, Zev. 2012. When and Why Individuals Obey Contracts: Experimental Evidence of Consent, Compliance, Promise, and Performance. 41 *Journal of Legal Studies* 67.
- Feldman, Yuval, Amos Schurr & Doron Teichman. 2014. Anchoring Legal Standards. Available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2408193.
- Fischbacher, Urs. 2007. z-Tree: Zurich Toolbox for Ready-made Economic Experiments, 10 *Experimental Economics* 171-178.
- Fried, Charles. 1982. *Contract as Promise*. Harvard University Press.
- Gneezy, Uri. 2005. Deception and the Role of Consequences. 95 *American Economic Review* 384-394.
- Hoffman, David A., & Tess Wilkinson-Ryan. 2013. The Psychology of Contract Precautions. 80 *University of Chicago Law Review* 395.
- Kahneman, Daniel & Amos Tversky. 1979. Prospect Theory: An Analysis of Decision Under Risk. 47 *Econometrica* 263-291.
- Kahneman, Daniel, Jack Knetsch & Richard Thaler. 1986. Fairness and the Assumptions of Economics. 59 *Journal of Business* S285-S300.
- Mitchell, R.C. & R.T. Carson. 1989. Using Surveys to Value Public Goods: the Contingent Valuation Method. *Resources for the Future* 89.

- Posner, Richard A. 1979. Utilitarianism, Economics, and Legal Theory. 8 *Journal of Legal Studies* 103-140.
- Schwartz, Joanna. 2013. A Dose of Reality for Malpractice Reform. 88 *New York University Law Review* 1224.
- Shavell, Steven. 1980. Damage Measures for Breach of Contract. 11 *Bell Journal of Economics* 466-490.
- Shen, Francis. 2013. Mind, Body, and the Criminal Law. 97 *Minnesota Law Review* 2036-2085.
- Sheppard, Brian & Fiery Cushman. 2010. Evaluating Norms: An Empirical Analysis of the Relationship Between Norm-Content, Operator, and Charitable Behavior. 63 *Vanderbilt Law Review* 53-104.
- Shiffrin, Seana. 2007. The Divergence of Promise and Contract. 120 *Harvard Law Review* 708.
- Simon, Dan & Nicholas Scirich. 2011. Lay Judgments of Judicial Decision Making. 8 *Journal of Empirical Legal Studies* 709-727.
- Tinghog, Gustav, David Andersson, Caroline Bonn, Harald Bottinger, Camilla Josephson, Gustaf Lundgren, Daniel Vastfjall, Michael Kirchler & Magnus Johannesson. 2013. Intuition and Cooperation Reconsidered. 498 *Nature* E1-E2.
- Wilkinson-Ryan, Tess. 2011. Breaching the Mortgage Contract: The Behavioral Economics of Strategic Default. 64 *Vanderbilt Law Review* 1547.
- Wilkinson-Ryan, Tess. 2012a. Legal Promise and Psychological Contract. 47 *Wake Forest Law Review* 843.
- Wilkinson-Ryan, Tess. 2012b. Transferring Trust: Reciprocity Norms and Assignment of Contract. 9 *Journal of Empirical Legal Studies* 511.
- Wilkinson-Ryan, Tess, & David A. Hoffman. 2010. Breach is for Suckers. 63 *Vanderbilt Law Review* 1003.