REMARKS ON THE LEWIS & CLARK LAW SCHOOL BUSINESS LAW FORUM: BEHAVIORAL ANALYSIS OF CORPORATE LAW: INSTRUCTION OR DISTRACTION?

by
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Law and economics is an evolving subject. That is one of its great attractions and strengths. We have seen it grow from being a brash intruder into legal education to becoming an important, if not the default, method of examining most legal issues. Originally, much of the explanatory power of law and economics lay in its application of the standard rational choice theory of microeconomics. The advances in legal understanding that flowed from that application were huge.

Then in the 1990s some legal scholars, including some who were adept at law and economics, discovered that there was a body of work critical of rational choice theory and sought to bring it to bear on some of the conclusions that had been reached in the law-and-economics literature. I prefer to see this body of work, which is still evolving, as a natural outgrowth of the earlier, rational-choice-theory-based law and economics. And as a result, I am thoroughly confident that ultimately there will be a sensible accommodation made between rational choice theory and the behavioral criticisms of rational choice theory.[1] But that accommodation is still some years away. At the moment, there is much uncertainty in the profession about the appropriate relationship between law and economics based on rational choice theory and that based on behavioral analysis. It is far too early in the debate to declare a winner or even to speculate about a middle course that somehow melds rational choice and behavioral insights.

The papers in this marvelous symposium demonstrate the maturity of the debate between the two camps—those who think that behavioralism will carry

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[**] I want to thank Jennifer Johnson, Geoff Manne, Dean Jim Huffman, Shirley Johansen, Lisa LeSage, and all the others who put together this wonderful conference and, nonetheless, invited me. I also want to say what an honor it is to be sitting at the same table with Dean Manne. He bears the stigma of having introduced me to this subject 25 years ago. And as everyone should know, he did more than almost anyone else to get the field of law and economics up and running. I certainly owe him my profound thanks for all that he has done for me and for this marvelous field of legal scholarship.

[1] I do not want to give much weight to the view—one that I consider to be naïve, at best, and loopy, at its worst—that behavioral analysis will be the death of law and economics.

the day and those who are skeptical of its explanatory powers. Most of the papers that we have had the great pleasure to hear today sound a cautionary note about the use of behavioral analysis in legal scholarship generally and in the analysis of corporate law particularly. In these brief remarks, I want to climb to a perch above the particular issues raised in the papers—which are so eloquent that they speak clearly for themselves—and address the overarching issue posed in the symposium's title.

Let me begin with a word about the history of behavioral analysis, particularly as it applies to the study of law. As you no doubt know, behavioral analysis began in cognitive and social psychology where its origins were not so much to provide a coherent theory of human decision making as to subject some of the predictions of rational choice theory to empirical testing. And what Kahneman and Tversky and others found was that the empirical tests showed that in many circumstances rational choice theory did not accurately predict decision making. People were over-optimistic; they relied on easily available evidence, not objectively verifiable evidence; they suffered from "hindsight bias;" and rather than ignoring sunk costs as bygones (as economists thought rational people would), people pay close attention to sunk costs in making current decisions.

Behavioral analysis of that sort was seized upon in legal analysis, I believe, for two reasons. One laudable reason was that the behavioral results seemed to provide us the beginnings of a more comprehensive or more enriched theory of human decision making than the mechanical one in rational choice theory.[2] So far what has been provided is not at all complete; there is still a lot of work to be done; but, nonetheless, there are reasons for thinking that behavioral results show a great deal of promise (particularly if we recognize that ultimately there will have to be room made for some aspects of rational choice theory).

The bad reason that I think that many legal scholars seized on behavioral analysis was that it was a stick with which to beat law and economics about the head and shoulders. Alas, there are still a large number of people within the legal academy who do not like law and economics for a whole host of reasons, most of them dead wrong. One of the more plausible reasons for disliking law and economics is that, to the extent that it relies on rational choice theory, law and economics seems to imagine a race of decision makers whom the critics have never observed in the real world. Although I have characterized this as a "plausible reason," it nonetheless strikes me as being fundamentally anti-intellectual. I'll elaborate in a moment on why I hold this view, although I am going to stress the more positive issue of where the profession is likely to go with this controversy.

Let me take a moment to elaborate very briefly on two matters so as to illustrate how early we are in the process of making lasting use of behavioral analysis in understanding issues in the law.

[2] One of the shortcomings of rational choice theory, I believe, is that it does not have a credible account of how people might make mistakes, as they clearly do.

The first point is that behavioral analysis has not yet adequately sorted out which of these biases and judgment errors are hard-wired into us and which are mere software problems. By "hardware problems" I mean to indicate issues that are an innate, a physical part of the manner in which our brains work and our consciousness is constructed. We have physical limitations. We see only a portion of the light spectrum and hear a limited range of sounds. Presumably, we have limitations in our abilities to reason, too. Not only are there hardware limitations on our abilities to draw inferences and reach judgments, but I strongly suspect that there are two further, related problems. First, our hardware—that is, our brains—may change in the course of our lives (not because of trauma but because of normal growth and development) in ways that predictably alter our reasoning and inferential abilities. Second, these physical or hardware limitations vary across individuals in ways that we do not yet fully understand. Some people seem to be more creative than others; some seem to be able to reason better than others; and so on. The point of identifying these physical or hardware problems is that because it may be the case that behavior that is hard-wired into our brains may be changeable, but only changeable by the exercise of a great deal of force.[3]

A wonderful example of the problem of changing hard-wired behavior comes from the work of Owen Jones.[4] Professor Jones notes that there is a profound difference between the likelihood that a natural parent will abuse his or her children and the probability that a stepparent will abuse a stepchild. Specifically, the latter probability is forty times greater than the probability that a natural parent will abuse a natural child. No one is yet certain why this great difference exists, but it seems reasonable to speculate that it is due to something profoundly deep within our animal nature. Assume for the sake of argument that the statistic is true and that its cause lies buried deeply within the physical and mental (not the "socially constructed") meaning of parenthood. Then, I think you can see that changing the behavior of child abusers as between one group of individuals (natural parents) and another (stepparents) may require a much different sort of exertion of legal regulation and control than would be the case if the abusive behavior was not hard-wired.

I referred above to "software problems" in behavioral analysis. By "software problems" I mean to distinguish behavioral issues that are contextual, cultural, and learned. Pursuing the analogy, software is much easier to change than hardware. So, behavior that is the result of learning can, in theory, be unlearned. And all other things equal, the costs of correction through unlearning are likely to be much less than those of correcting hardware or hard-wired problems. One of my favorite examples of a software problem is the difficulty that the vast majority of people have in seeing the correct solution to

[3] Naturally, as our understanding of these matters increases, technological change may make it trivially easy to change hard-wired behavior by altering the brain's structure.

[4] *See* Owen D. Jones, *Time-Shifted Rationality and the Law of Law's Leverage: Behavioral Economics Meets Behavioral Biology*, 95 NW. U. L. REV. 1141, 1195 (2001). *See also* Owen D. Jones & Timothy H. Goldsmith, *Law and Behavioral Biology*, 105 COLUM. L. REV. 405, 464 (2005).

the Monty Hall three-door problem. It seems like a tremendous mystery to most people, but they can be reasoned into seeing it, even though the solution is deeply counter-intuitive.[5]

So, point one is that there is much left to learn about whether cognitive biases and common errors in inference and judgment are hard-wired in our brains and, therefore, difficult to change, or learned and, as a result, capable of being unlearned and thereby corrected.

The second thing to which I want to draw your attention so as to illustrate the point about how early on we are in our understanding of behavioral matters relates to something that I was struck by when I was listening to Jill Fisch's wonderful paper this morning.[6] And that is the relatively unexplored subject of the reflexive aspects of our knowledge of our own cognitive short-comings. We all know that we have short-comings, and we all can take some corrective actions to try to make ourselves become less the sport of these biases and judgment errors that we're subject to.

There is a famous example of this self-knowledge. Suppose that a person knows that she has a difficult time awakening in the morning. Even if she sets an alarm clock, she knows that she might simply hit the snooze button on the top of the alarm clock, continue sleeping, and miss the appointment that she set the alarm clock in order to keep. To protect herself from herself, she puts the alarm clock across the room. And in this way she prevents herself from being held hostage by her own cognitive biases or short-comings.

I do the same sort of thing with regard to the grading of end-of-semester exams, something I hate worse than death and taxes. I know myself well

[5] The Monty Hall three-door problem is a problem in the application of Bayes' Theorem, a famous proposition in the manipulation of conditional probabilities. Here is the problem. You are a guest on *Let's Make a Deal* and have been selected by the host, Monty Hall, to play the final prize game. There are three closed doors on the stage. Behind one of those doors is $60,000 in cash. Behind the other two are goats. The prize has been placed secretly; Monty knows where the prize is but has no incentive to reveal or conceal from you where it is. You will receive whatever is behind the closed door that you select. Monty invites you to select one of the doors. Suppose that you select Door 1. Monty turns to his assistant and says, "Please open Door 3." She does so to reveal a goat. Now, Monty turns to you and says, "There are two doors still closed: Door 1, your original selection, and Door 2. Before we proceed further, would you like to keep Door 1 or would you like to switch to Door 2?" "Why bother?" you're thinking. Most people reason as follows: before making my initial selection, there were three doors, which were equally likely to hide the $60,000 prize. So, it didn't really matter which door I chose. The probability that any door hid the prize was 1/3. As it happened, I chose Door 1. When Monty had his assistant open one of the two doors I did *not* select to show that there was a goat behind that door, there are two doors left—the one I originally chose and the other one. Isn't the probability that the prize is behind either of those two doors simply 1/2? If so, why change?

But that reasoning is incorrect. The probability that the prize is behind the door that you did not originally choose and that Monty's assistant did not open is 2/3, not 1/2. As a result, if you switch to the other closed door, you will win the money 2/3 of the time. If you would like to receive a copy of a lengthy explanation of the answer to this marvelous problem, please send me a note at tulen@law.uiuc.edu.

[6] Jill E. Fisch, *Regulatory Responses to Investor Irrationality: The Case of the Research Analyst*, 10 LEWIS & CLARK L. REV. 57 (2006).

enough to know that if left to my own excuse-making, I'll postpone the grading until the last possible moment, making the last few days of the semester break a nightmare for me and those around me. So, I make myself start reading the instant that the exams come in, because I know that if I don't, I will adopt the rational theory of procrastination that says, "There's no sense on earth to have spent the last couple hours of your life grading exams, and you might die at any moment. You ought to postpone this distasteful task for as long as you possibly can."[7]

Jill speculated that these same self-protection actions might apply to individual investors. They might know that they are not particularly good at assessing the likely returns on either individual stocks or a portfolio of financial instruments. And if they know that, then they can protect themselves—like the person who places the alarm clock across the room—by turning their investments over to a professional, placing them in a blind trust, purchasing index funds, or diversifying.

Not only can one protect oneself against one's own predictable failings by taking precautionary action, but one can also do so through the use of market insurance. For example, we all know that we are intermittently inattentive and that this inattention can lead to accidents or to mistakes at work. We can protect ourselves against these failings by means of both self-protection, in the form, say, of being attentive and getting enough sleep, and liability insurance or comprehensive general liability insurance.

I do not know how widely available these opportunities for taking self-corrective actions in knowledge of our own cognitive biases and judgment errors are. Nor do I know how extensively people give cognitive error as a central reason for purchasing insurance. But I suspect that both self-protection and market insurance are fairly common responses to our own worries about our short-comings. I do not think that we have sufficiently explored those possibilities. And it is clearly important that we do so. The thrust of the modern literature is that once one identifies a cognitive bias or error in inference or judgment, one has made a strong case for government intervention in private decision-making. But before that case for intervention is made, one ought to investigate the extent to which private individuals take self-protective action and can insure themselves against adverse consequences of cognitive biases and errors in judgment. This is an implicit theme in all of the papers presented here today.

Let me conclude with some very general remarks about the place of behavioral analysis in the study of law. This is a topic about which I have thought a great deal in the last ten years or so. Is behavioral analysis a distraction from the real business of legal analysis, or is it a vital tool in crafting legal policy? To answer that question appropriately necessitates, I believe, our standing back from that immediate issue and taking a look at the state of legal scholarship. Thinking about the law in a scholarly fashion is such a new enterprise that I think that we are exhibiting some of the errors of youth. And of

[7] My friend Alan Schwartz tells me that this delay is not a sign of any failing in my makeup but, rather, a sign of rational behavior.

those errors I am most annoyed by the tendency to simply borrow findings from other disciplines. There is, of course, something to be learned from other disciplines. But legal scholars have, for at least the past 25 years and perhaps longer, tried to learn things from other disciplines (such as economics, psychology, physics—the Heisenberg uncertainty principle, mathematics—Gödel's incompleteness theorem, game theory, and so on) but without altering any of those findings to suit the special problems with which law is concerned. We have taken the findings from other disciplines into our own house without changing them, massaging them, or redoing them to suit our own purposes. We assume that knowledge in other fields is settled and unchanging and perfectly applicable to the law. If you stop to think about that for a moment, you will realize how preposterous that notion is.

Scholarship is a dynamic process and the scholarship that we are borrowing from behavioral psychology, from cognitive and social psychology, is being crafted as we speak; it has not reached many settled conclusions yet; it is still going forward. We who are concerned to explain the law cannot wait for those settled conclusions to appear. We have got to do more in the legal academy than simply borrowing other people's tools to hack away at the weeds in our own garden. We have got to develop our own tools to answer the questions that are specific to legal analysis. I think this is a trivial thing to say, but I hope that you will recognize its force: The questions that we are concerned with about the law are different from the questions that the psychologists are interested in.

I will give you what I think is a wonderful example of this last point. I have recently been reading a lot of literature about happiness studies. And one of the marvelously intriguing findings of that literature is that in thinking back about experiences that people have had, Kahneman and his co-investigators have formulated two propositions about how we remember events that we actually experience. The first is what he calls "duration neglect;" the second is what is called the "peak-and-end rule."[8]

Duration neglect refers to the fact that in thinking about events that we have experienced ourselves, we tend not to pay attention to how long the experience lasted. So for example, whether you had a vacation that was miserable and lasted two weeks or was miserable and lasted three weeks, the fact that three weeks of misery is worse than two weeks of misery does not result in a less favorable memory. Kahneman and his co-investigators assert that people simply do not register duration in forming an overall impression or memory of past events.

Second, the "peak-and-end rule" says that in remembering our past experiences we tend to pay attention to the peak experience that happened in the episode that we are recalling and what happened at the end. So for example, if you went on a two-week vacation to the Caribbean that was fabulous (the food was wonderful; the weather was perfect; the seas were serene), but on the

[8] *See* Daniel Kahneman, *Objective Happiness*, *in* WELL-BEING: THE FOUNDATIONS OF HEDONIC PSYCHOLOGY (Daniel Kahneman, et al. eds., 1999).

way home the airline lost your luggage, your overall impression, your memory will be that the vacation was not pleasant.

To show you what I think is inappropriate borrowing from another discipline, consider a recent paper by Paul Robinson and John Darley, two very distinguished students of criminal law and pioneers in the use of psychology—Darley professes psychology at Princeton—to examine criminal law issues. Robinson and Darley have recently suggested that it is unlikely that we can deter criminal behavior by lengthening the sanctions that we impose upon criminals because of the psychological phenomenon of duration neglect.[9] The suggestion is that it does not matter whether we put people into some sort of unpleasant confinement for a year, three years, or five years; that is not what they are going to remember about their incarceration. Rather, they are more likely to remember the "peak-and-end" experiences. As a result, they argue, making punishment more certain or more severe is not going to have any deterrence effect on criminals.

That conclusion strikes me as far-fetched, to say the least. And it also suggests that if they wanted to pursue this further, then we ought to confine criminals, no matter how hideous the crime, for a relatively short time (thereby saving valuable resources), but make sure that on their way out of prison we beat the daylights out of them so that the last thing they remember is something extremely unpleasant. So, no matter how long the imprisonment lasted, the now-released prisoners do not want to repeat it again—just as the vacationer does not want to return to the Caribbean, no matter how nice the vacation truly was, if the central memory he has of that trip is of lost luggage. Now, that seems to me a facile application of what is a potentially very interesting psychological finding.

What might we learn from this example? My deep hope is that those who study law will cease simply borrowing and will begin to develop their own body of interesting materials. So, when we come across interesting work in disciplines contiguous to law, we can bring that work within the legal orbit but do so critically and with a view to applying it sensibly to the particular questions with which the law deals. Is the duration of a colonoscopy (the original subject of Kahneman and Redelmeier's study of duration neglect[10]) or the lost luggage at the end of a vacation really analogous to years of lost freedom in a prison?

To illustrate that there is a precedent for academics doing precisely this sort of thing, let me cite two examples. Consider the field of economics, which, I think, illustrates the progression that I think the study of law is going through at the moment, from a localized, jurisdiction-bound study to something that is much more universal and shares the same scholarly values and aspirations as other disciplines within the modern university. And in particular consider the

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[9] *See* Paul H. Robinson & John M. Darley, *Does Criminal Law Deter? A Behavioural Science Investigation*, 24 O.J.L.S. 173 (2004).

[10] Donald A. Redelmeier & Daniel Kahneman, *Patients' Memories of Painful Medical Treatments: Real-Time and Retrospective Evaluations of Two Minimally Invasive Procedures*, 66 PAIN 3 (1996).

specialty of econometrics. Econometrics, as you probably know, is statistics as applied to the study of economic issues. Econometrics is a relatively late development in the history of economics, not really coming into the core curriculum until the 1960s. One of the things that retarded the development of the empirical study of economics was that there was little data to which to appeal in testing economic propositions. It took some considerable effort on the part of various people to collect data (and to ensure that it would continue to be collected). Most notably, Simon Kuznets, a Russian immigrant who came to Yale, won the third Nobel Prize in Economics for his efforts in encouraging the development of data that could then be used to perform statistical tests in economics.

Similar problems plague empirical studies of the law. The principal form of data that we use are the opinions of appellate courts. However useful that data may be for doctrinal scholarship, it is not useful for doing empirical work of the kind that our flirtations with economics, psychology, game theory, and the like have made attractive. We need to have more data about contracts, torts, property, and other areas so as to be able to perform studies that tell us what we would like to know about law's effectiveness. There is wonderful data in the criminal and commercial areas, and there have been some spectacularly interesting empirical studies in those areas.[11] But we need to roll up our sleeves and make sure that we have a steady stream of data for all other areas of the law. This will not prevent legal scholarship's inappropriate use of results from other disciplines, but it will certainly be the beginning of our focusing our attention on developing and using our own data and ideas, not merely borrowing those of others.

The second point I want to make to you about this has to do with the statistical techniques that an economist uses to examine economic issues, and what lesson I think that might tell us about how legal scholars ought to use results from other disciplines. Economists have developed their own statistical techniques for answering the questions that are of interest to economists. They have not relied solely on what statisticians are interested in. In fact, econometrics is a separate subject because it was developed to address economic issues.

I think we've got to do exactly the same sort of thing within the law. Today if a young law student or professor would like to learn how to do empirical research, we might be inclined to send her to the economics department to take a class in econometrics. But that will not do. Economists developed econometrics because the techniques that they were learning in departments of statistics were not terribly helpful in answering economic questions. The same issues are bound to affect the empirical study of law. Legal scholars have specific issues in which they are interested, and the empirical techniques that serve psychology, economics, and the medical field do not necessarily apply to the study of law. No doubt, legal scholars will need

[11] *See, e.g.*, Steven D. Levitt, *Understanding Why Crime Fell in the 1990s: Four Factors that Explain the Decline and Six that Do Not*, 18 J. ECON. PERSP. 163 (2004).

to craft some special statistical techniques or, possibly, experimental techniques to deal with their issues.

I may have seemed to have strayed from the topic of behavioral analysis and whether it is of use in the study of corporate law. But I hope you will recognize that what I have been discussing here is really related to the topic of this symposium. Modern legal scholarship is interdisciplinary, but it is young and needs to find its own voice and its own techniques for the study of law. When it does so, then legal scholars will be able to find the topics within behavioral analysis that need to be adapted to the study of specific legal topics. And when we have the scholarly maturity to make those studies ourselves, then we will have some fascinating results with which to craft legal policy. We cannot simply rely upon the findings that psychologists find of interest. We have got to ask questions and find answers that are of interest specifically to legal questions. Then that will require us to stop simply borrowing and to develop that information ourselves through careful experimental and empirical work. Thank you.