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Michael Ilg  
Imposing Self-Interest: Behavioural Law and Economics, the Ultimatum Game, and Value Possibilities

With the recent emergence of the behavioural approach to law and economics, there is now a systematic critique of law and economics which remains sympathetic to its overall objectives. Rather than seek to undermine traditional law and economics, the intent of the behavioural approach is generally to augment it, and render its formulations more representative of reality. Drawing upon experimental evidence and well-known examples of anomalies within economic theory, behavioural scholars claim that the law needs to better account for instances of individual irrationality. Having identified the situations when rational maximization does not hold, behavioural scholars are then able to propose ways to help individuals "get it right," or maximize properly. Unfortunately, the conservative ambitions of the behavioural scholars have not done justice to their source material. There is more to human endeavour, and the regulation of it, than varying degrees of correspondence to market rationality. Evidence reveals that individual values are independent of both the market and government, with the potential for fairness existing alongside self-interest in the thought patterns inherent to individuals. In using a prominent example from the behavioural catalogue, the ultimatum game, the author argues that rationality and irrationality do not occupy a binary relationship, as in either present or not present, but may instead be fluid within the same context. In the ultimatum game, self-interest is both dependent upon, and also secondary to, the availability of fairness considerations. To grasp this reality requires a theoretical framework more expansive than the maximization universe of law and economics, behavioural or otherwise.

Dans la foulée de l'émergence récente de l'approche comportementale du droit et de l'économie, on assiste à l'expression d'une critique systématique de ces deux disciplines qui reste néanmoins sympathique aux objectifs globaux de cette nouvelle approche. L'approche comportementale ne cherche pas tant à ébranler le droit et l'économie traditionnels qu'à les enrichir et à faire en sorte que leurs formulations soient plus représentatives de la réalité. S'inspirant de l'évidence expérimentale et d'exemples bien connus d'anomalies dans la théorie économique, les spécialistes du comportement avancent qu'il est nécessaire que le droit tienne mieux compte des cas d'irrationalité individuelle. Ayant défini les situations où la maximisation rationnelle ne s'applique pas, les spécialistes du comportement sont ensuite en mesure de proposer des moyens pour aider les individus à adopter un comportement correct ou à maximiser leur compréhension. Malheureusement, les ambitions prudentes des spécialistes du comportement n'ont pas rendu justice aux données initiales utilisées. Le comportement humain, et sa réglementation, est beaucoup plus vaste que les divers degrés de correspondance à la rationalité des marchés. L'évidence révèle que les valeurs individuelles sont indépendantes tant des marchés que des gouvernements, et que le potentiel d'équité côtoie l'intérêt personnel dans le schéma de pensée inhérent à chaque individu. Utilisant un exemple bien connu tiré du registre des comportements, le jeu de l'ultimatum, l'auteur cherche à démontrer qu'il n'y a pas, entre la rationalité et l'irrationalité, une relation binaire comme celle qui existe entre présence et absence, mais que cette relation peut être fluide dans le même contexte. Dans le jeu de l'ultimatum, l'intérêt personnel est à la fois tributaire de l'existence de considérations en matière d'équité et secondaire à ces considérations. Pour saisir cette réalité, il faut un cadre d'action théorique plus vaste que l'univers de maximisation du droit et de l'économie, comportemental ou autre.
Introduction

I. Methods of Scepticism
II. From Normative to Descriptive Challenges
III. Behavioural Evidence
IV. Regulating Irrationality
V. The Ultimatum Game and Simultaneous Values

Conclusion

Law and economics scholars tend to rely upon a notion of individuality incorporated from economic theory, which assumes that individuals are rational maximizers of their own self-interest. A straightforward definition of self-interested maximization is given by Richard Posner as simply "choosing the best means to the chooser's ends." While the rationality assumption has been controversial since its introduction to legal analysis, it has also lent law and economics much of its theoretical coherency and force. Individual rationality supports both the abstract calculations from which modern law and economics currently expands, and the broader normative justifications for a system said to reflect free choice in the market. In an ideal sense, if rationality characterizes choice, then individual actions within a marketplace become an aggregation of free will; a democratic collection of personal valuations and choice. The question posed here is...

1. Richard A. Posner, "Rational Choice, Behavioral Economics and the Law" (1997-1998) 50 Stan. L. Rev. 1551. Generally, individuals are thought to be rational maximizers of their own self-interest to the extent that they pursue preferences, economic or otherwise, which are consistent or relatively constant. Simply, the definition of rationality need only demand that individuals are not internally sporadic in what they desire, and that they seek the most effective means to achieve these desires.
4. The essential joining of free markets, and especially private property, with the promotion of individual liberty is often associated with the University of Chicago, and the neo-liberal philosophy espoused by the likes of Milton Friedman and Friedrich Hayek. See e.g., Friedrich A. von Hayek, The Road to Serfdom (University of Chicago Press, 1972). Hayek offers a defense of Lockean rights and neutral individual liberty, equating government regulation with the threat of totalitarianism. For an interesting discussion of the academic connection between rational choice and the politics of the Cold War, see S. M. Amadae, Rationalizing Capitalist Democracy: The Cold War Origins of Rational Choice Liberalism, (Chicago: University of Chicago Press, 2003).
whether it is valid to make this move from individual rationality to market conclusions. If individuals do not always favour self-interest, as evidence suggests, it does not necessarily follow that market solutions reflect voluntary choice and valuations. Indeed, assuming an overly narrow view of rationality may have the unintended result of imposing arbitrary ends upon individuals.

While the most virulent, and often the most poignant, critiques of law and economics have involved normative challenges to its assignment of social priorities, more recent developments in the literature question its descriptive accuracy. Drawing upon experimental evidence and well-known examples of anomalies within economic theory, a new "behavioural approach" attempts to augment law and economics so as to account for instances of individual irrationality. Irrationality, and with it rationality, have been subsumed within the greater economic view of law, aligning irrational behaviour with motivations that do not afford with self-interest. The terms and definition of rational behaviour have been set by the economic approach to law, and behavioural law and economics scholars enter the field to revise within the parameters already determined. Therefore, if traditional law and economics posits that individuals maximize, the behavioural response may be characterized as conforming to the "yes, but" variety – seeking to identify the situations when rational maximization does not hold and then orchestrating regulation to help individuals "get it right."

Unfortunately, the conservative ambitions of the behavioural scholars have not done justice to their source material. In using experimental evidence to argue for bureaucratic tinkering to achieve the same ends as law and economics efficiency, the behavioural approach obscures the extent to which these experimental results point to different individual ends. There is more to human endeavour, and the regulation of it, than varying degrees of correspondence to market rationality. Evidence reveals values to be independent of both the market and government, with the

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5 The most notable is perhaps the liberal critique, which generally argues that furthering the systemic goal of economic efficiency, by equating ability to pay with an equality of desire, does not treat individuals as "ends in themselves." See Ronald Dworkin, "Is Wealth a Value?" (1980) 9 Journal of Legal Studies. For more on the incompatibility of ability to pay with the assumption of voluntary preferences, see e.g., Guido Calabresi, "The Pointlessness of Pareto: Carrying Coase Further" (1990-1991) 100 Yale L. J.; Jules Coleman, Efficiency: Utility, and Wealth Maximization, in Markets, Morals, and the Law (Cambridge: Cambridge University Press, 1998) at 95-132; (which argues that there can be no cardinal, or one to one, correspondence between ability to pay and individual measures of desire, happiness, etc. Therefore, though law and economics espouses maximization in the utilitarian sense, it does not meet the standard of utilitarianism and the promotion of a sum good of happiness, or whatever value).
potential for fairness existing alongside self-interest in the thought patterns inherent to individuals.

In what follows I argue that anomalies of self-interest may signify much more theoretical import than behavioural scholars have thus far demonstrated. My object is to show that the structure of competitive rules influences the availability and likelihood of certain inherent values, such as fairness, manifesting themselves in individual behaviour. The implication is that, regardless of the normative priorities of a legal system, the status quo may not be said to reflect a natural state of individual preferences, nor human nature as a given constant. Even though the law may often favour a priority of individual self-interest, this need not mean that it must do so exclusively, or that it should do so.

In using a prominent example from the behavioural catalogue, the ultimatum game, I wish to demonstrate that rationality and irrationality do not exist in a binary relationship, either present or not present, but may instead be fluid within the same context. There are instances, as my discussion of the ultimatum game in part V will show, when a similar context may yield differing value choices of individuals based on the structure of competition. In the ultimatum game, self-interest is both dependent upon, and also secondary to, the availability of fairness considerations. To grasp this reality requires a theoretical framework more expansive than the maximization universe of law and economics, behavioural or otherwise.

That individuals act contrary to economic theory, and act in accordance with general principles of fairness, need not be taken as merely a correctable anomaly. The inefficient instances of individual choice, or sub-optimal games, may be seen as constraints on individuals' freedom to choose otherwise; to articulate inherent principles not recognized by the market. The continuing relevancy of non-economic concerns should at the very least point toward the desirability of designing legal rules that recognize both self-interest and social fairness. Both descriptive and normative elements of the law could well be improved if individuals are free to manifest their preferences in different ways, across theoretical categories.
I. Methods of Scepticism

As with the economic theory that inspires it, law and economics is often clothed in the congratulatory rubric of science. The economic field's foremost methodological expression remains Milton Friedman's famous essay "The Methodology of Positive Economics," which articulates a Popperian standard of falsification. In keeping with Popper's ideal of scientific inquiry as providing falsifiable claims, Friedman argues that the measure of economic theory should not be the accuracy of its basic assumptions but the accuracy of its predictions—its testability. Specifically, in Friedman's words: "[v]iewed as a body of substantive hypotheses, theory is to be judged by its predictive power for the class of phenomena which it is intended to explain." 

Whether individual maximization is in fact the prime motivator of human behaviour is secondary to the ability of this conception to further the practical objectives of society. Economic prediction is thus seen as analogous to that of science, providing insight into how observable results come about, and how forces react and join into future outcomes. If market exchange is conceived of as the current paradigm, or predominant worldview within western society, individual maximization is then held out to be the best explanation for why collective market outcomes occur.

The foundational assumption upon which economic formulations and abstractions are built is individual rationality, or the model of rational choice. Though rational choice theory is a widely used and often imprecise label, its application to legal analysis generally conforms to the market view of individual behaviour espoused by Gary Becker, an approach summarized in his aptly titled Nobel acceptance article "The
Economic Way of Looking at Life." Becker's influential attempts at so-called economic imperialism, or the extension of the economic method to traditionally non-economic fields, is justified with the claim that the existence of three simple criteria within areas of social behaviour merits an economic perspective. These criteria may be described as: individual maximization, stable preferences, and general equilibrium. The first two criteria may be seen to describe a model of rational choice, joining the self-interested pursuit of atomistic goals with the rationality of doing so in a consistent manner. The third criterion, that of general equilibrium, describes the systemic outcomes of rational choice, in which competition is the sum of disparate strategies that combine into predictable trends, such as the inverse relationship between supply and price.

Evident in Becker's characterization, as with economic theory in general, is an explanatory interdependence between individual and system. A unique relationship exists between the individual agent and the prediction of system operations; as the conception of individual maximization permits for abstract predictions of the whole, the system also determines the parameters of individual interest perception. Therefore, the assumption of individual maximization is a dependent theory of the self, for its descriptive content relies on market results to validate a conception of individual behaviour (or human nature). Individual behaviour, even that of the rational maximizing kind, is not measurable objectively, or separate from human influence, in the same way that physical phenomena are. Where physics students may predict the behaviour of a moving body based upon the surrounding environmental forces that impact upon it, such as friction or gravity, those engaged in human study are observing the effects of factors which are dependent to a large extent upon social determination.

From the assumption that most human behaviour conforms to market rationales, since individuals maximize their consistent preferences, has developed the central law and economics tenet that rules act as prices on behaviour. Again, the object is to predict how external signals that enter individual contemplation, whether rules or other forms of prices, effect individual strategies and coalesce in collective outcomes. While the study of rules as prices uses a unique economic nomenclature, it is not a particularly radical approach. Indeed, studying the impact of law upon behaviour has long been a staple of law and society. The radical departure


of law and economics occurs through its reliance upon, and often explicit embrace of, the ideology of neo-liberal economics.

While a powerful explanatory tool is undoubtedly provided for by economic theory, it is contingent upon society's continued allegiance to neo-liberal economic norms. Friedman's methodological statement implicitly acknowledges as much. The claimed correspondence between economic theory and the Popperian ideal of scientific falsification is the primary justification, but Friedman's view contains an additional, and perhaps inconsistent, reliance on a Kuhnian concept of paradigms. For though Friedman claims that no single theory can explain the complexities of the entire economy, or arrive at the truth (as with Popper), he also acknowledges that the determinant of economic predictions is social. On the one hand, objectivity is held out to be possible on the basis of the testability of economic predictions, while on the other, the social composition of the economy is a matter of public policy and debate. Friedman's scientific aspirations for economic theory may be seen to proceed along the following lines. First, if an accurate picture of human behaviour is not provided for by the narrowing of individual experience that occurs with the assumption of rational maximization, at least economic theory provides testable predictions on how individual behaviour will manifest itself in the market. Second, even if the predictive ideal should falter, economic theory has yet to be replaced as the dominant explanatory model for a market-based society. Justification thus moves from an independent ideal of scientific inquiry, testability or falsification, to rest upon a general correspondence to what most people currently accept as true.

Friedman's expression of methodology has perhaps been so persuasive within the economics community because of its categorical approach, which has in turn been very influential upon the law and economics school's most categorical proponent, Richard Posner. Posner's voluminous output contains not only an expression of sympathy to Friedman's views, but also signals a more profound shadowing of its intellectual progression. First, Posner shares with Becker a view of individuals as maximizers of

13. Kuhn's arguments on the social determinants of research popularized the notion of "paradigms," and the idea that science is composed of revolutionary breaks rather than linear or constant progress. "For Kuhn science is always dominated by one paradigm that its members pursue religiously until it runs up to limits of its puzzle-solving capabilities." Steven Fuller, Kuhn vs Popper (Cambridge: Icon Books, 2003) at 55. Central to Kuhn's notion of a paradigm shift was academic hierarchy, and the elite within a discipline that would lead the acceptance of new research programs. See generally, Thomas S. Kuhn, The Structure of Scientific Revolutions, 3d ed., (Chicago, University of Chicago Press, 1996) at 10. A paradigm was revolutionary, not solely because of its empirical accuracy, but in part because it was "sufficiently open-ended to leave all sorts of problems for the redefined group of practitioners to resolve."

their preferences, broadly conceived of as self-interested advancements of desire not limited to pure market transactions. Predicting behaviour, in the Popperian fashion, is thus possible because of the consistency of individual maximization. Second, Posner claims that since we live within a market economy, increases in market size, or wealth maximization, ought to be law’s object. Therefore, Posner, as with Friedman before him, offers a formalized version of economic quasi-science, only to ultimately rely upon the social acceptance of the current paradigm of economic competition to justify his position. And so it is that Posner may claim allegiance to both Popperian science, and the pragmatic justification of representing the dominant paradigm of the day.

The scientific aspirations of economic theory make for an interesting sociological study of academic influence and fashion, but also provide a ready division for how critiques of law and economics are addressed. The distinction between Popperian and Kuhnian views, even in the gross oversimplification given here, involves more than a debate over the nature of scientific history, or how science has progressed; it invokes an implicit consideration as to how a dominant worldview might be challenged. It could be said that a specific questioning of a theory’s predictions is Popperian in nature, while a systemic challenge to a dominant thought system endorsed by a social group, or paradigm, represents a Kuhnian-style challenge.

II. From Normative to Descriptive Challenges
Initially, legal scholars opposed to the law and economics approach, or least its normative and philosophical pretensions that extended beyond law and society-type analysis, were apt to reject a market conceptualization of law. The most forceful critiques of the past tended to attack law and economics for its assumptions that individual ends are represented by market transactions, as if reflecting a sum equation of happiness in a weak version of utilitarianism. Despite the force of these critiques, however, the arguments have been susceptible to the impasse faced by

16. Also termed potential Pareto improvements, or Kaldor-Hicks efficiency, see, e.g., Mercuro & Medema, supra note 6 at 13-21; Calabresi, supra note 5; Coleman, supra note 5.
18. Posner, supra note 1 at 1560.
21. See e.g., Coleman, supra note 5.
most normative challenges: namely, since it is not fact-based, and does not point to distinct factual contradictions, it may be ignored as safely external to society’s dominant structural assumptions. So if law and economics may be challenged for deriving an ought from an is, it may equally be said that challenging an ought with another ought is unlikely to prove persuasive to those intent on maintaining the status quo. Put differently, the claim that another paradigm ought to hold sway, and that another constellation of values ought to inform public life, is easily ignored for not corresponding to what currently is. The idea that “what is, ought to be” may not be overly imaginative, but it is nonetheless difficult to supplant.

Exceptions to the descriptive validity of law and economics, which avoid the moral indeterminacy of prior normative challenges, have grown in frequency within recent years. Part of this growing descriptive debate may be explained by the direction of law and economics itself. As Russell Korobkin and Thomas Ulen have observed, law and economics has steadily been devolving into a sub-discipline of applied economics, with the desire for mathematical elegance taking priority over usefulness to legal study. The pressure for law and economics scholars to arrive at new, mathematically driven applications has resulted in a form of nominal legal analysis which is inscrutable to those whose training and professional focus remains tied to a more pedestrian notion of law. While the application of topology or invariance theory to widget regulation would no doubt awe the editors of law and economics journals, the relevance to legal study would likely remain obscure to mathematical novices.

The increased abstraction and formalization of law and economics scholarship has only served to make its lack of descriptive engagement with legal reality more overt. As legal scholars have become more conversant with the anomalies within the economic model of rationality, long known to economists, they have seemingly become more secure in challenging law and economics scholars’ monopoly on economic rationality. Drawing upon experimental evidence gathered from behavioural sciences, psychology, and the fringes of economic theory, a new behavioural approach has attempted to reform law and economics so as to account for instances of individual irrationality. Having entered the fray, the question becomes: what use have behavioural law and economics scholars made of their newfound knowledge of human behaviour? Has it led to new tools, or a fixing of the old?

23. These forms of mathematical study were chosen randomly and hypothetically.
The lessons from the descriptive inadequacies of economic theory may be interpreted in different fashions. In addressing the scientific pretensions of economic theory, the adopted view of scientific inquiry may indicate the likelihood that initial scepticism of the economic program may lead to its outright rejection as a valid theory. On the one hand, a Popperian concern with scientific falsification, and the testability of empirical observations appears to represent the scientific ideal, yet, it also permits a more incremental, or even conservative, approach. The concern about specific factual inaccuracies, as when a descriptive hypothesis is offered and then compared with observable results, may be advanced in a piecemeal fashion, with only the most overtly inconsistent parts of the theory rejected.

As behavioural law and economics illustrates, when one begins with the assumption that a theoretical framework should be retained, the object becomes incorporating new information, or techniques, to compensate for obviously incorrect conclusions – in effect, resuscitating the most flagging points of the theory. But this specific form of theoretical accommodation may be more socially determined than is commonly assumed. A more cynical social critique would find that specific accommodations are often nothing more than an attempt of scholars to retain their professional investment in a theory, even in the face of its apparent inconsistencies and ripeness for replacement. In this way, the move toward greater abstraction on the part of law and economics scholars may be read as ignoring empirical inconsistencies for the sake of theoretical sustenance alone.24 With careers tied to the continued prevalence of a research program, the ideal of scientific objectivity may not always apply to the physical sciences, much less to economics.

The social determination of science usually invokes a pragmatic, or competitive theory of scientific progress.25 Scientific knowledge, then, is seen as the reflection of what most people within a given community, in this case a scientific discipline such as physics, believe to be true at a given time. The essential ingredient becomes acceptance and use by the majority, not objective truth. Therefore, from Kuhn’s discussion of scientific communities extends the hackneyed notion that it “takes a theory

25 The social definition of truth plays not only a part in the work of those such as Kuhn and Lakatos, it is also reflected in the philosophy of pragmatism, and subsequently, legal pragmatism. See generally Brint & Weaver, supra note 19.
to beat a theory." 26 Although the requirement that a successful argument must advance an alternative theory to the status quo is not particularly nuanced, 27 the idea does bear some relevance to the present treatment of behavioural law and economics. The lack of theoretical framework on the part of behavioural approaches given to date is not a secondary consideration. Advocating for the inclusion of the anomalies of rationality within the traditional school of law and economics is a significant choice, meaning that the reading of these findings is not to threaten the wider principles upon which the classical paradigm rests. Since the behavioural approach begins explicitly from the assumption that the law and economics program should be supported and augmented, 28 the question becomes whether a meaningful contribution can be made from this start position. The following section summarizes the basic form of the behavioural evidence, and then discusses the implications of its given treatment in the hands of the behavioural scholars to date.

III. Behavioural Evidence

Arguments for a behavioural approach to law and economics have generally proceeded in the following manner: evidence of rational inconsistencies within the classical paradigm are trotted out, and it is then argued that this evidence demands inclusion within the law and economics program. 29 Evidence from the behavioural sciences often shows individuals in a light distinct from the self-interested choosers who are able to make neutral assessments of the world around them. Essentially, individuals often display preferences that are not in keeping with rational assessments of either value or risk.

First, in terms of valuation, individual behaviour may often correspond with the endowment effect, in which individuals tend to prefer their current holdings above what their exchange value might be. 30 A common example of the endowment effect is a ticket to a sought-after event or performance, in which individuals are seen to be unwilling to sell their ticket for an amount that they themselves would be unwilling to pay to replace the ticket. For example, a ticket-holder who purchased their ticket for $50 might be unwilling to sell it for $500, even though they would

26. See Schroeder, supra note 24
27. Ibid.
29. As the approach is yet young there can be no categorical pronouncements. I refer here, then, to the beginnings of an approach. The works of JST and Korobkin and Ulen may be said to be fairly representative, and the most comprehensive expressions of this new school of law and economics.
30. A good discussion of endowment effect may be found in Issacharoff, supra note 3, as well as JST, supra note 2.
not pay $500 for the same ticket. In this instance of unwilling scalping, individuals will neither realize the profits of their tickets' appreciation, nor themselves value the ticket at that appreciated amount were they without it. This is contrary to rational predictions of maximization, and the law and economics tenet that initial distributions have no impact upon final allotments, as it leaves an unaccounted-for valuation that is biased toward current possession. Law and economics, following the Coase theorem, predicts that goods will always move to their most efficient usage, and to the party who is willing to pay the most to use or possess the resource.\textsuperscript{31}

What the endowment effect illustrates, however, is that individuals do not always surrender themselves to market incentives, and in doing so prohibit markets from "clearing," or allocating goods in the most profitable manner possible.

Individual value assessments may also be irrational in the treatment of costs already incurred, or "sunk costs." In a similar vein to the endowment effect, the well-known fallacy of sunk costs reveals that individuals favour possessive impulses above purely neutral calculations. Economic theory predicts that individuals ought to ignore sunk costs for the logical reason that they are costs already incurred, and therefore, should not inform present decisions. Returning to the theme of tickets, an example would be the season ticket-holder to the theatre. The annual subscriber who feels reluctant to venture out for an evening of entertainment should consider this impulse in isolation, without regard to the costs incurred in the past since that money is already spent and gone. However, evidence suggests the contrary, as individuals tend to think that they will lose their investment, or that their money will have been wasted, if they do not attend the performance.\textsuperscript{32} This example, perhaps more than most, displays the limitations of rational choice theory. Whereas maximization only looks to the money involved - money spent on a season's subscription is money gone, so individuals should move on and think not of it again - individuals are often found to equate money with its underlying purpose of exchange. The subscriber paid their money to see performances, maximizing some artistic interest perhaps, and will continue to view their sunk costs in terms of this equation between their initial outlay and their initial object. Even though the artistic performance will not register in a monetary sense, as the costs are sunken or lost, individuals will still think of honouring their prior intent. In this regard, their obligation shifts from market forces, of getting

\textsuperscript{31} Ronald Coase, "The Problem of Social Cost" (Oct. 1960) 3 J.L. & Econ. 1; see also, Calabresi, supra note 5.

\textsuperscript{32} For further discussion of this example, as well as potential rational choice responses, see Korokhin & Ulen, supra note 22 at 1107.
ahead in the usual manner, to revolve around the question of whether or not to maintain the goal they marked out for themselves earlier.\footnote{Ibid.}

The second major form of irrational valuation concerns individuals’ assessments of risk, and their own relation to it. Generally, individuals are likely to favour themselves in calculations of risk, often to their own detriment. For example, a high percentage of individuals might think of themselves as above-average drivers.\footnote{Claire A. Hill, “Beyond Mistakes: The Next Wave of Behavioural Law and Economics” (2004) 29 Queen’s L. J. 567.} Obviously, statistical reality disproves most people’s complimentary assessments of themselves, driving or otherwise, and denotes that most people are, well, average. Individuals, then, might not make rational decisions, by improperly weighing certain risks involved in their behaviour for example, when they overestimate their own abilities or predilections. The case of retirement savings is a common example. Individuals may think of themselves as rational in the long-term, and assume that they will make regular contributions to their retirement savings, while in the short-term they may continually forsake those same instalments for other expenditures that more readily promote their present enjoyment. Mandatory retirement plans are thus seen as a way to mitigate individual impulses and overcome a lack of rational discipline. A difficulty of course would be distinguishing when the adoption of mandatory investment should be voluntary, and undertaken privately, and when government should mandate such a scheme for everyone, spendthrifts and misers alike.

Apart from the individual’s preference for favouring their abilities above rational calculations, there also is the phenomenon of individuals favouring that which is nearest to their own experience. Events tend to become distorted from their actual statistical probability when considered by most individuals. Specifically, an event that is known to have occurred may lead to an incorrect assessment of the likelihood that a similar event will occur again, or even to an incorrect assessment of that event’s likelihood of occurring in the first place. These skewed assessments of immediate experience are characterized as the “hindsight bias.” On the one hand, this tendency is particularly relevant for regulatory scrutiny, as public demands for protection often are a response to the last catastrophe given widespread media attention; meanwhile more dangerous, and more everyday, concerns are overlooked.\footnote{JST, supra note 2 at 1518-21.} On the other hand, this tendency is relevant for common law determinations of tortious liability in that individuals, in the form of juries and judges, tend to equate a chance occurrence with its inevitability.
That an accident did occur tends to prejudice a later view of the probabilities as they appeared to the individual considering what course of action to take.\textsuperscript{36} Where there might have been a twenty per cent chance that an omission would lead to an accident, when an accident occurs, and people are later scrutinizing that same choice, there is a tendency to increase instinctively the likelihood of the accident happening. In this regard, the hindsight bias serves to impute what we do know into what should have been known. Taken together, the evidence suggests that it is difficult for individuals to transcend their situation rationally; to either ignore what has occurred most sensationally and recently, or to consider the statistical probabilities present before an event came about.

IV. Regulating Irrationality
The most significant issue arising from the potential application of the behavioural sciences to law is not whether these situations of irrationality are accurate, or involve important fields of regulation, but how a systemic approach to the law may be developed from these findings. Even the most unyielding proponent of classical law and economics would acknowledge that the model of rationality is derivative and open to exceptions. Indeed, the classical approach is derivative by design, in the stated cause of providing testable predictions of human behaviour. But if a model of individual behaviour is to arise from evidence of irrationality,\textsuperscript{37} a difficult move from specific instances of irrationality on the individual level to theoretical coherence on the systemic level must be made. As yet, a principled argument for making such a move has not been articulated. This conceptual flaw exists, it is suggested, because a theoretical framework for regulation may not extend from the incoherent view of individuality which underlies the behavioural approach.

While many behavioural scholars have thus far limited themselves to vague calls for the incorporation of knowledge from the behavioural sciences into law and economics, a few have been bold enough to extend their treatment into calls for actual impact. In their excellent article, "A Behavioral Approach to Law and Economics," Christine Jolls, Cass Sunstein, and Richard Thaler ("JST"), combine a comprehensive treatment of rational anomalies with an ambitious call for the development of a behavioural model that would contain both descriptive and prescriptive elements.\textsuperscript{38} The prescriptive element of their work may be taken to be representative of the behavioural approach, which they take to its logical

\textsuperscript{36} Ibid at 1525-6.
\textsuperscript{37} For example, model building is the stated object of JST, ibid. at 1475.
\textsuperscript{38} Ibid
conclusion. Here the scientific themes mentioned above are particularly relevant, for it is not rejection but reform that is indicated, and reform in this instance can only mean government intervention. For present purposes let us assume that government intervention in the market is capable of doing good, ignoring ideological statements to the contrary for the time being. Assuming this presumptive good of intervention allows for a clearer analysis of what exactly is so troubling about the implications of following the behavioural approach to its logical and systematic conclusion. Namely, it is impossible to derive consistent principles of regulation from a haphazard definition of individuality.

The most common criticism of the proposed behavioural approach has been, unsurprisingly, that it does not offer a theory of individual behaviour. Even though evidence which contradicts individual rationality is often accepted by both critics and proponents of economic theory alike, anomalies of rational self-interest continue to be seen as largely exceptions to the rule. The inability of behavioural scholars to offer a coherent theory has been claimed to leave them offering nothing more than a "laundry list" of quibbling exceptions to a useful and powerful rule. Yet, apart from the predilection of academics for straightforward, or even axiomatic, theories, the lack of behavioural theory is emblematic of the unprincipled direction of its approach. While I do not presume that it "takes a theory to beat a theory," the behavioural case may indicate that an augmented half-theory is worse than no theory at all. The behavioural approach is an unfortunate half-solution: it is neither consistent with free-market liberalism, nor is it premised upon principles of individuality that are non-economic in nature.

Behavioural scholars wish to maintain the market ends of law and economics, but in qualifying its assumptions of individuality the justificatory basis for market coordination is lost, and is not replaced by any other principle. The prescriptive behavioural model seeks to advance the utility of everyone, but misses the essential presumption of economic liberalism which sees the best results occur by each pursuing their own free and self-interested choice in the market. By assuming the government can approximate this utility of welfare, the behavioural approach is open to the charge that it offers regulation without guidance, or coherence. Without a distinct conception of individuality, or of any social good that would take priority over it, the behavioural view of pragmatic regulation may

39. See e.g., Posner, supra note 1 & Issacharoff, supra note 3.
40. The term "laundry list" is taken from Colin Camerer, Samuel Issacharoff, George Loewenstein, Ted O'Donoghue & Mathew Rabin, "Regulation for Conservatives: Behavioral Economics and the Case for "Asymmetric Paternalism,"" (2003) 151 U. Pa. L. Rev. 1211; (which refers to the common complaints leveled against the early behavioural economics).
be everything and nothing at once. Individuals are rational sometimes, irrational at other times, and a paternalistic government should decide when individuals need help in getting their own self-interest right. The rational choice model is consistent in ways that the behavioural approach cannot hope to be, for how can one reject the notion that individuals are rational maximizers of their preferences, and then argue for government to regulate as if individuals are, or worse, should be, maximizers of their under-appreciated interests?

While behavioural scholars are justified in criticizing classical law and economics for deriving an ought from an incorrect is, they paint themselves into a conceptual corner by maintaining the theoretical ends of maximization. The wider system of economic liberalism is thought to properly inform social objectives, the ultimate good as it were, but government intervention is required in instances of individual irrationality in order to help people choose in accordance with what ought to be in their best interest. If government regulation is better in certain instances, how is it to proceed, or be articulated, from a vacant conception of individuality? What is to inform, and what are to be the priorities, of this government intervention? And most significantly, what justification is there for irrational individuals being led to different ends than those of their own choosing by equally irrational bureaucrats? As Posner observes insightfully, the behavioural approach, when offering a regulatory guide, is premised upon a logical inconsistency. For if individuals are conceived of as irrational in nature, what is the sense in relying upon equally irrational individuals in bureaucratic roles to correct these instances of irrationality?

The central assumptions of economic theory, which sees atomistic individuals competing separately as the best possible means of attaining proper social distributions, are discarded by the behavioural approach in an incongruous attempt to retain the outcomes of free-market competition. A logical inconsistency thus occurs as behavioural scholars advocate systemic ends that are not supported by any sensible justification premised upon a notion of individuality. Whatever its faults, at least classical law and economics has a consistent connection between assumptions about individual behaviour and the desired form of competition. Behavioural law and economics, on the other hand, simply assumes the systemic ends of the classical paradigm without any thought to the need to have principles of individuality consistent with the regulation of individuals.

41 Posner, supra note 1.
42 Ibid. While Posner is responding to JST specifically, the argument would seemingly hold for any attempt to reform law and economics in the same prescriptive manner.
Whereas classical law and economics offers a dependent theory of the self, explaining behaviour as a dependent part of a system of market exchange, the behavioural approach introduces an unsupported faith in bureaucratic tinkering. The behavioural approach leads to an admittedly paternalistic model of governance, with JST suggesting an ideal of regulatory bodies that are insulated from populist expressions of public opinion. This paternalism is decidedly Keynesian in character, reflecting a previous era's faith in the ability of enlightened civil servants to regulate the great and uneducated mass. But free market ends without free market assumptions are simply paternalism in the most negative sense of the term. In this one respect, it is not difficult to be sympathetic to Posner's preference for a system which assumes individual rationality, despite its undeniable failures, over a system premised on the notion that individuals do not know what is best for themselves and require others to correct their misapprehensions. Unless and until paternalistic drives are bound to principled values inherent to each individual, assumptions on the benign wisdom of bureaucrats are at best naive, and at worst authoritarian. For without a principled standard that is said to emanate from an individual's innate uniqueness, and thereby forming the limits of government interpretation, the relativistic claims of what is best for each are irretrievably arbitrary.

It is not difficult to imagine a world guided by behavioural law and economics, for it would most likely mirror the current state of affairs. One need only imagine a world where markets determine most relationships and valuations, in which sporadic government action attempts to correct the market in the most socially egregious, or politically profitable, areas. With no other ends than a vague goal of making the current status quo work better, the result is predictably haphazard, or worse: it may be a distorting practice of influence-peddling. When considering a system of enlightened bureaucracy, as with Keynes and the behavioural scholars, those of a cynical frame of mind might be forgiven for thinking immediately of public choice economics and its sceptical view of government regulation. Under the theory of public choice, political actors are thought to act as economic actors do, maximizing their political self-interest. This political maximization manifests itself in the furtherance of that which increases the possibility of continued electoral success; and in these times

43. JST, supra note 2 at 1544.
44. This generally describes the tenor of Posner's critique of JST, Posner, supra note 1. For JST's response, see their "Theories and Tropes: A Reply to Posner and Kelman" (1997-1998) 50 Stan. L. Rev. 1593.
of expensive campaigning, this corresponds increasingly with catering to sectoral interests. The great insight of public choice is the contrast between diffuse and specific economic interests. Issues that may be of minor concern to most may be of intense interest to a few. This inevitably leads to a distorting influence of lobbying. The relatively minor impact of dairy subsidies on the population at large in the form of a few cents per person, contrasted against the tremendous profitability that accrues to the business that benefits from this aided competition serves as a good illustration. The sectoral interest thus benefits from the relative unconcern of the many, even as it is contrary to their self-interest, and the relative ease of civil servants in catering to the monied lobbying of the intense and specific. Within this cynical view of government procurement, there exists a potentially fatal exception to the hyper-rational bureaucrat who is supposedly able to further the best interests of citizens in a selfless and altruistic manner.

The merits of government intervention in the economy should be by no means rejected outright, as the most extreme libertarians would have it, but it is inconsistent to premise that intervention on nothing more than helping individuals act consistently with what their self-interest should be. Quite simply, if individuals do not act in accordance with notions of economic theory, why impose this behaviour? The behavioural approach, in seeking to only qualify a system of rational maximization, have joined the best of intentions with an unsupportable conclusion of regulatory corrections. Were it to be more, the behavioural approach would need to step out from under the assumptions of classical theory and consider how the evidence of irrationality signals something separate from the systemic status quo. Until and unless a new direction of individuality is signalled, behavioural law and economics risks being safely ignored as the manifestation of an academic fad of limited time and use.

V. The Ultimatum Game and Simultaneous Values
The ultimatum game is well on its way to catching up to the famous prisoner's dilemma as the exemplar of behaviour inconsistent with rational maximization. Despite its prominence, however, the ultimatum game remains grouped in the same class as other instances of irrationality, such as those mentioned above. Yet it is not its popularity, but the uniqueness of the ultimatum game that deserves special attention; and the following section attempts to remedy this deficiency.

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In looking to the ultimatum game, the missed potential of the behavioural approach becomes most evident. Unlike many instances of individual irrationality, the ultimatum game reveals a continuum of value preferences within individual choice and behaviour – it is not just a case of individuals giving undue preference to stubborn and uninformed assessments of themselves within the market. Rather, the ultimatum displays self-interest as a significant, but conditional thought. Values other than self-interest, namely concerns for fairness, may influence individual behaviour given the opportunity. Therefore, it is opportunity that is the most important feature in the determination of individual behaviour and the articulation of group values. In the following discussion of the ultimatum game, the well known results of past and oft-repeated experiments will be considered with a new view to opportunity, and the dependent constellation of value preferences.

Although the implications of the ultimatum game are complex, the game itself is very straightforward. Two individuals play a game of offer and acceptance. Person A, the proposer, is given a sum to be shared with player B, the responder. A may divide the sum in any way she chooses, but with the important caveat that B must approve of the distribution. Should B accept A’s offer they each keep their agreed-upon share. Most significantly, if B rejects the offer neither play gets anything – the sum returns to the “house,” or whatever entity is controlling the game, usually a university professor. Suppose A is given ten dollars, and subsequently decides to offer B two. If B accepts, then A = 8 and B = 2. If B declines A’s offer, the result is 0,0. Therefore, the rational object for A is to predict, and then offer, the minimum amount that is likely to be acceptable to B. B’s rational strategy is much simpler in a one-round game, only requiring a decision as to whether they would be better off accepting the offer.

The conclusion of these rational strategies, as predicted by economic theory, should be as straightforward as the game itself: A should offer as close to zero as possible, say one cent, and B should accept it, always. The reasoning is simple enough, for one cent is greater than zero - what B had before the game and would have should they reject A’s offer. However, experimental evidence reveals economic theory’s prediction to be a very bad one. In the study conducted by JST responders (party B) were typically found to reject offers that were less than twenty percent of the total sum, while on average they claimed that an amount between

47. Richard Thaler gives a good account of the ultimatum game, including the efforts of some game theorists to ‘rescue’ the rationality assumption by directing their subjects toward it. Richard Thaler, “The Ultimatum Game” (1998) 2 J. Economic Perspectives 195.

48. Two and multiple round versions have been devised as well, see Thaler, ibid.
twenty and thirty percent is the minimum that they would accept. As it is highly unlikely that the test results may be explained by subject’s lacking the mathematical sophistication to grasp that .01 is greater than zero, one must assume that there are considerations more important to responders than pure maximization. Additionally, JST observe that the participants’ desire to arrive at results they perceive to be fair is quite resilient, even as conditions are altered to be more conducive to accepting less by either enticing with larger sums or ensuring anonymity.

One of the most interesting dynamics of the ultimatum experiments occurs through the introduction by JST of an increased possessive stake in the distribution. JST ran a second version of the game that saw the ten dollar amount contributed equally by players A and B, instead of the game’s administrator. In this second game, the minimum demands of B increased dramatically. As JST predicted, when individuals contributed their own money they acted as if they had a greater “entitlement” to a fair distribution than when the game was more hypothetical. Accordingly, the minimum demands of B in this second version were much higher; with a significant percentage demanding five, and the average moving from just below two to over four. While imputing a greater element of possession, or entitlement, into the ultimatum game was a brilliant move on the part of JST, it could be said that the implications are under-utilized by the idea’s authors. JST treat the increased average demands by responders as strengthening the case against rational maximization, and further supporting the evidence of fairness considerations in decision-making. But this can readily be agreed to and still leave much unsaid.

JST seem to conceive of fairness and self-interest as separate, and mutually exclusive values. This may explain their object of illuminating the cases when maximization does not hold while acknowledging the greater systemic legitimacy of maximization. Rational self-interest in this way occupies a binary relationship, as in on-off, with irrational values such as fairness. In this behavioural world there are times that self-interest works, and times that it does not, period. But while the ultimatum game undermines the rationality precepts of economic theory, it does not do so completely. It is significant to note that while the responders B would not accept any amount, as predicted by economic theory, neither do they demand an equal share, say five dollars out of ten. At some point between

49. JST, supra note 2 at 1490.
50. "People will often behave in accordance with fairness considerations even when it is against their financial self-interest and no one will know." JST, ibid. at 1492.
51. ibid. at 1491.
52. Ibid
53. Ibid
five dollars and one cent, rational self-interest is supplanted by concerns for fairness. But fairness does not hold completely, for if it did individuals would accept nothing less than a equal sharing of five dollars; nor does rational self-interest, since responders on average will not accept anything below twenty percent, or two dollars. So if A offers three dollars and B accepts (as experiments indicate they would), A is able to keep seven dollars. Self-interest would explain B’s decision while pure fairness would seemingly not. Alternatively, if A offers two dollars, and B rejects it, fairness may then replace financial self-interest as the rationale. Similarly, while I have concentrated on the responder alone, should A offer five, this would correspond with fairness considerations rather than pure self-interest.

The simultaneous spheres of interest perception revealed by the Ultimatum game may be imagined along a simple continuum. In the case of the ten dollar game, minimum demands which are closer to zero than five, say one, display a self-interest priority, while those that approach an even distribution reflect fairness priorities. Perhaps the most significant implication of the Ultimatum game is that the simultaneous spheres of interest perception are not fixed, but fluctuate along the continuum when the context of the game is changed. Altering the game so as to promote individual identification with the sums involved revealed a greater space for fairness along the continuum (roughly from 2.5 to 4 in the JST study). If spheres of interception may fluctuate to the benefit of fairness, or whatever ‘irrational’ value inspires people to act contrary to maximization, it follows that the reverse may also be true. Although not covered in the study by JST, it might be worthwhile to question if the game’s structure could not be altered to all but eliminate fairness from the continuum of interest perception. Suppose that once again the dollar amounts are not contributed by the participants, but that this time the subjects change from students at prestigious American universities (the subject pool for JST’s study54) and are instead individuals suffering from abject poverty. And though experimental work in this area would no doubt be beneficial, it is not difficult to imagine that extreme material want would constrain the ability of an individual to reject monetary offers for the sake of fairness. In this sense, the intensity of material want would render concerns for fairness an impossible luxury.

The most interesting aspect of the JST variation, in my opinion, is that it displays movement. More than simply indicating the strength of fairness concerns, as JST claim, the second variation reveals the importance of game rules on individual perception. JST allowed, or promoted, greater
identification with the sums involved, and fairness impulses were indicated. But promoting greater identification with the sums, as with individuals in desperate need of any basic amount, could equally send results in the other direction. Comparing these two different forms of external influence indicates that the surrounding context or starting position of the game dictates the likelihood that certain values may manifest themselves in behaviour. Affluent students were both encouraged, and able, to exercise a strategy contrary to maximization for the sake of fairness, or some principle known only to them. Destitute subjects would not have the same opportunity. Self-interest or fairness could equally appear in the same game depending upon the contextual opportunities of participants.

Conclusion

If individual behaviour is not binary and exclusive in nature, but is instead simultaneous and situational, then the premise of the behavioural approach is flawed. By taking an instrumental view of competition, and adopting the limited aim of helping individuals get it right within the existing theory of maximization, behavioural scholars have missed the potential of their own source material. The behavioural approach is directed toward varying forms of regulation, as when rationality does or does not hold, but in keeping the same ends as law and economics no real variation is possible. The potential displayed in the ultimatum game, that individuals contain simultaneously different value priorities, is therefore lost in conforming to neo-liberal assumptions. No distinct pattern of thought is furthered when the highest ideal of regulation is correcting irrational behaviour. By looking to instances when irrationality may signal something more than misconceived self-interest, as with the ultimatum game, larger questions of systemic priority are necessarily invoked. Evidence of variable values within the same game indicates that we must choose between competing theories of the self and the ends desirable to individuals, not between regulatory instruments of rationality versus irrationality. Rather than accepting the legitimacy of maximization, it would be better to consider which situations illustrate that maximization is being imposed at the expense of other principles that may equally represent individuality, and perhaps be of greater benefit to society.