Behavioral International Law

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This article systematically explores the application of insights from behavioral economics to international legal issues. Economic analysis has in recent years made significant inroads into the study of international law, but most of this literature relies upon assumptions of perfect rationality of states and decision-makers. This approach is inadequate, both in its insufficient empirical grounding and in its question-begging tendency towards often unsophisticated and outdated forms of ‘Realist’ international relations theory. A behavioral approach would augment legal research by providing new hypotheses to address puzzles in international law while at the same time introducing empirically grounded concepts of real, observed bounded‘ rationality, which diverge from the assumed, perfect rationality of traditional law and economics. The article addresses some possible methodological objections to the application of behavioral analysis to international law, namely: the focus of behavioral analysis on the individual; the empirical foundations of behavioral economics; and behavioral analysis’ relative lack of parsimony. It then offers indicative behavioral research frameworks for three outstanding puzzles in international law: (a) the relative inefficiency of the development of international law; (b) collegiality and dissent in international tribunals; and (c) target selection in armed conflict. Behavioral research of international law can serve as a viable and enriching alternative and complement to economic analysis and other theoretical approaches to international legal research, so long as it is pursued with academic and empirical rigor as well as intellectual humility.

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I. INTRODUCTION: A NEW AND NECESSARY AGENDA FOR RESEARCH

How can insights from cognitive psychology and behavioral economics be meaningfully applied to international legal issues, in all their normative and prescriptive dimensions? To understand the importance and potential impact of this question, consider the following three contemporary puzzles, each relating to different dimensions of international law.

First, when – and why - does international law fail to develop, even when it is most needed? For four decades, global warming has been proclaimed the most severe crisis humanity has ever faced, that can only be tackled through concerted international agreement and action. Nevertheless, concrete, effective, international norms, whether customary or treaty based, fail to materialize.\(^1\) Similarly, the rise of non-state actors and transnational terrorism as well as new technologies of warfare and intelligence have significantly altered the battlefield at home and abroad, dramatically so

since 9/11. Yet the applicable international law remains a series of treaties (and their acceptance as customary law) whose roots date back to the 19th century, and whose latest editions are from the 1970s. This is not to say that international law in these fields has not adapted or developed at all, but why has it been so sluggish in these areas of paramount concern, where with respect to other issues it has demonstrated the capacity to develop quite meteorically? Second, how should international courts be structured? In the last two decades, there has been a momentous increase in the number and influence of international courts and tribunals, dealing with issues as varied as international crimes and international trade. The structure of these courts varies, as does their respective records of quality and effectiveness. Procedurally, some international courts allow dissenting opinions of judges, while others require a high degree of consensus among judicial decision-makers coming from very different backgrounds. How have these differences affected judicial outcomes? Do collegial international courts stifle the development of international law? Or do fragmented benches hinder it?

Third, how should military attacks be conducted? Under international humanitarian law, military commanders contemplating an armed attack must follow a principle of proportionality, comparing the potential injury to non-combatants, on one hand, with the military advantage gained from the attack. What does this mean in ex ante terms? How do reasonable, good faith military commanders understand and execute this norm in practice? And conversely, how should this practice impact upon the norm?

Responses to all three questions, however different they may be from each other, must rely on certain understandings, fundamentally descriptive but often normative, of the ways in which states and other actors interacting with international law (e.g., judicial decision-makers in international tribunals, military commanders etc.) are expected to behave. Over the last decade, many compelling analyses of similar questions in international law have built on particular assumptions of what may be termed ‘perfect’ rationality: the growing area of economic analysis of international law.

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3 For example, the right to self-determination would have been virtually incomprehensible to international lawyers in the late 1940s, but only twenty years later it had been elevated to the highest degree of international normativity; see SAMUEL MOYNI, THE LAST UTOPIA: HUMAN RIGHT IN HISTORY (2010). In other areas commentators have argued that customary law can be created almost instantly through formally non-binding resolutions of international institutions; Bin Cheng, United Nations Resolutions on Outer Space: ‘Instant’ International Customary Law? 5 INDIAN J. INT’L L. 23 (1963).


7 Any bibliographical list would risk injury by omission. For a literature survey see Alan O. Sykes, International Law, HANDBOOK OF LAW AND ECONOMICS (A. Mitchell Polinsky &
many other areas of law, however, the value of applying such forms of rational choice theory to legal questions has been questioned and contested by empirically-grounded streams of behavioral economics and cognitive psychology that focus on systematic divergences from perfect rationality. Should these behavioral insights not be now avidly applied to international law?

Employed properly, such a behavioral approach can contribute to international legal research by raising interesting hypotheses relating to problems in international law, and by providing frameworks for experimental and empirical testing of these hypotheses, with both explanatory and normative implications. A behavioral approach could be seen as either augmenting or in some cases supplanting now common (one is almost tempted to say ‘traditional’) economic analyses of international law. Indeed, in some cases, behavioral research can be useful without any recourse to the framework of economic analysis. In any event, behavioral analysis must be added to the international legal research toolbox of alternative research methodologies, each of which should be employed where they are illuminating and can be pursued with intellectual honesty.

In making the case for behavioral analysis of international law, the article proceeds as follows. In section II, I discuss some weaknesses of rational choice and economic analysis of international law. In section III I briefly explain the corrective impact of cognitive psychology on the economic analysis of law in general, and suggest what value it might contribute to international legal research. In the subsequent section IV I discuss and provide responses to what appear to be the central methodological objections to such a behavioral approach to international law: (i) the focus of behavioral analysis on the individual; (ii) the empirical foundations of behavioral economics; and (iii) its relative lack of parsimony. Section V then offers indicative behavioral research frameworks for three issues in international law: the (a) development of international treaty law; (b) collegiality and dissent in international tribunals; and (c) target selection in armed conflict. Section VI offers some concluding remarks on the potential role and viability of a behavioral approach to international law.

II. REVISITING THE LIMITS OF RATIONAL CHOICE AND INTERNATIONAL LAW

Are states and other international legal actors ‘rational’ when they interact with each other in the processes of making international law, abiding by it, violating it and enforcing it? A burgeoning, essential (and predominantly
American) literature that uses rational choice tools in the analysis of international law assumes that they are. The ‘Law and Economics’ (L&E) of international law has in the last decade made significant inroads into the study of international law. It necessarily rests upon assumptions of perfect rationality, whether of states or of decision-makers that are determinative of what amounts to state conduct in international law.

To be sure, social scientists engaged in the study of International Relations ("IR") have used the same assumptions of rationality and employed similar methods for more than half a century. For most of this time, mainstream international legal scholarship occupied the separate methodological universes of doctrinaire positivism, "natural" law idealization or intuitive "policy-oriented" prescriptiveness. For a variety of reasons, international legal scholars turned their attention to the implications of IR theory for international law only after the end of the Cold War, to the point that today rational choice and economic analyses of international law are very much in vogue. Contemporary international lawyers who have not yet

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9 The 2006 symposium on Public International Law and Economics held by the Max-Planck-Institute for Research on Collective Goods in Bonn is illuminating in this respect: all the paper-givers were from US law schools, while the largely skeptical commentators were German. The symposium contributions were subsequently published in a US law journal (2008(1)) U. Ill. L. Rev.. Indeed, the gap between American and European acceptance of economic analysis of law was a subject of debate at the symposium (see Georg Nolte, Public International Law and Economics: Concluding Remarks to the Bonn Conference, in that issue at 429).

10 Assumptions, as theoretical tools, should not, however, be mistaken for claims about reality. The old saw about economists stuck in a hole in the ground and assuming a ladder in order to extract themselves amply demonstrates the difference. Nevertheless, both proponents and opponents of rational choice too often blur this distinction.

11 The 'realist' school that launched the disciplinary study of IR in the late 1940s in a Hobbesian tradition employed rudimentary concepts of rational choice by emphasizing the role of national interest in the determination of state behavior and state sensitivity to incentives presented by power relations (see HENRY J. MORGENTHAU, POLITICS AMONG NATIONS: THE STRUGGLE FOR POWER AND PEACE (1948)). Neo-Liberal IR theory built on the rationality of states and added layers of strategic thinking to state behavior through the use of game theory (see, e.g., COOPERATION UNDER ANARCHY (Kenneth Oye ed. (1986)); James Morrow, Modeling the Forms of International Cooperation: Distribution Versus Information, 48 INT. ORG. 387 (1994); and Duncan Snidal, Coordination Versus Prisoners' Dilemma: Implications for International Cooperation, 79 AM. POL. SCI. REV. 923 (1985).

12 For a non-critical but comprehensive survey of traditional doctrines of international law, see MARTIN DIXON, TEXTBOOK ON INTERNATIONAL LAW, Ch. 1 (2004).

13 See Jeffrey L. Dunoff and Joel P. Trachtman, Economic Analysis of International Law, 24 YALE J. INT. L. (1999) for explanations of international lawyers' avoidance of L&E, many of which apply to rational choice and to IR theory more generally.


15 See bibliography supra note 7.
mastered the differences between the Prisoners' Dilemma and Chicken\(^\text{16}\) or lack a basic grasp of economic terminology - utility functions, externalities, Pareto efficiency, transaction costs, Coasian bargaining - jargon that was once, at most, the domain only of those who dealt with international economic law,\(^\text{17}\) increasingly risk missing out on a substantial body of cutting edge international law scholarship.\(^\text{18}\)

The advent of economic analysis of international law is, in essence, the fusion of two complementary trends: first, on the demand side, the acknowledgement of the relative dearth of non-doctrinaire research methodology and disciplinary rigor in international legal studies,\(^\text{19}\) that has led some legal scholars to turn not only to IR theory but more directly to classical economic theory.\(^\text{20}\) Second, but of no lesser importance, on the supply side, economic analysis of law has (in the US and elsewhere) significantly impacted upon virtually all fields of law and jurisprudence, in both theory and practice.\(^\text{21}\) For the disciples of L&E, the application of its idiom to international law is simply another feather in their cap.\(^\text{22}\)

Rational choice analysis of international law thus satisfies both international law's quest for methodological decorum and the L&E school's ambitious mission of increased legal and social influence. Nonetheless, this marriage – the 'rationalization' of international law - has not been harmonious, leading at times to disconcerting results. For many

\(^\text{16}\) Two of many variants of collective action problems analyzed through game theory; for a succinct explanation, see Todd Sandler, GLOBAL COLLECTIVE ACTION (2004) 20-29. For a fascinating critique of the ubiquity of the Prisoners' Dilemma, see Carol M. Rose, Game Stories 22 YALE J. L. & HUMAN. 369 (2010).

\(^\text{17}\) It is hardly coincidental that many of the path-breaking, most prominent and most proficient L&E scholars of international law are also among the leading lights in international economic law, such as Ken Abbott, Andrew Guzman, Alan Sykes, Joel Trchtman and Michael Trebilcock.


\(^\text{20}\) According to Dunoff and Trachtman, supra note 13 at 1, “almost every international law research subject could be illuminated, to some degree, by these research methods [economic analysis]”.


\(^\text{22}\) For example, Richard Posner, arguably the Dean of the L&E school, devoted very little attention to international legal issues in RICHARD POSNER, ECONOMIC ANALYSIS OF LAW, 6TH ed. (2003), while implying quite clearly that they can and should be analyzed as any other legal subject, by equating treaty law with domestic contract law with respect to the concept of "efficient breach" (Ibid., 136-141).
international lawyers, economic analysis of international law, for all its merits, will be forever tainted (and as a result, too easily ignored) because of its association with the crude revisiting and rehearsal of the 'Realist' claim that international law is not a system of law at all.\(^23\) This is unfortunate, because the field has produced many contributions and responses\(^24\) more rigorously based on economic theory and method, that both effectively uphold the normative value of international law and go a long way towards explaining its functions, or at least towards presenting hypotheses to this end. There should be no doubt that rational choice and L&E analyses have presented – and still can present - many of the most enriching and challenging contributions to the ways we reflect upon international law. Even if its introduction has antagonized many, the rational choice approach has a lot to offer, both positively and normatively.

However, the gaps in the existing literature – such as the substantial and substantive differences between studies ostensibly based upon one and the same methodology - only highlight the susceptibility of economic analysis of law to the political manipulation of assumptions and definitions. This risks robbing it of its main self-professed strength: its scientific basis and methodological parsimony. Moreover, even the most developed economic analyses of international law are ultimately little more than shadows of similar analyses generated by the Neo-Liberal/Institutionalist school of IR,\(^25\) an important earlier generation of knowledge, still taught but now rarely practiced on its own.\(^26\) They too, at times, have a tendency to frame what should rightly be hypotheses about state behavior, as question-begging assumptions instead. Interestingly, IR researchers are cutting loose from the analytical strictures of perfect rational choice,\(^27\) at the very same time that international legal scholars are beginning to discover it. Legal research would do well by avoiding the rearguing of intellectual debates now all but

\(^{23}\) As implied by a conservative rational choice formulation of customary international law suggested in Jack L. Goldsmith and Eric A. Posner, *A Theory of Customary International Law* 66 U. CHI. L. REV. (1999) 1113; and more explicitly in Goldsmith and Posner, * supra* note 7. Contrast with *Peter Malanczuk, Akehurst’s Modern Introduction to International Law* 6 (76, Rev. ed., 1997); “The old discussion on whether international law is true ‘law’ is therefore a moot point”, referring to the booming professional and academic work supporting international law. For discussion, see Anne van Aaken, *To Do Away with International Law? Some Limits to The Limits of International Law*, 17(1) EUR. J INT. L. 289.

\(^{24}\) Most notably, Trachtman, and Guzman, * supra* note 7.

\(^{25}\) Guzman, * supra* note 7, reduces the workings of international law to the "three Rs" of reciprocity, retaliation and reputation (p. 33) – remarkably reminiscent of the repertoire of IR theory of earlier periods. See also Kal Raustiala, *Refining the Limits of International Law*, 34 GEORGIA J. INT. & COMP. L. (2006) and Trachtman, * supra* note 7.

\(^{26}\) Where in the recent past IR studies could at least seem to be neatly divided up into paradigmatic ‘-isms’ – Realism, Neo-Liberalism, and Constructivism – it is increasingly acknowledged that these schools share some common ground, and more importantly, that each approach has its explanatory strengths and weaknesses, jointly constituting the IR ‘toolbox’, suggesting a dialectic rather than linear or paradigmatic pattern of progress [see Mark Blyth, *Structures do Not Come With an Instruction Sheet: Interests, Ideas, and Progress in Political Science*, 1(4) PERSPECTIVES ON POL. 695 (2003)]; see also Kenneth W. Abbott and Duncan Snidal, *Law, Legalization, and Politics: An Agenda for the Next Generation of IL/IR Scholars* in Dunoff and Pollack * supra* note 14, 33 at 37.

settled in the IR discipline. And although it has generated interesting hypotheses, L&E’s venture into international law has not been backed up by a requisite level of empirical substantiation. Hypotheses are advanced, but rarely tested beyond the provision of anecdotal evidence typical of ‘informal’ L&E. In this respect, economic analysis of international law can – and should – be salvaged by developing a more rigorous empirical dimension. The generation of hypotheses is an important step in research, but as Milton Friedman wrote, "[T]he only relevant test of the validity of a hypothesis is comparison of its predictions with experience." 28

The most imperative of L&E’s assumptions is the assumption of rationality of states and other actors under international law, which leads us back to the question asked in opening: are states and other international actors ‘rational’? We can make this question more precise and indeed more interesting; instead of querying whether states are rational or not - there seems to be no self-evident or other reason to presume that states are inherently irrational – the question ought to be, what is the nature of their rationality? Studies employing rational choice in the analysis of international legal problems and systems typically adhere to conventional assumptions about human rationality, and apply them en banc to states. 29 Only rarely are these assumptions somehow qualified, for example through the employment of ‘thin’ rationality. 30 Thin rationality is a framework in which states would be deemed rational in their behavior, pursuing self-interest within a certain set of preferences, but it is acknowledged that they set these preferences not by 'objective' standards of utility or efficiency but rather idiosyncratically, in accordance with their own emotional, cultural and historical charges "which many outsiders might find difficult to understand." 31 Such a contextualization of state behavior would appear obvious to traditional, regionalist or otherwise specialist scholars and analysts of international politics, but it is an important modifier to conservative economic analysis. Moreover, in the broader context of international legal research, it stumbles upon the can of worms of cultural relativism, and erodes the paradigm of perfect rationality, making it highly contingent on specific assumptions about individual state preferences and utility functions. There is nothing inherently wrong with this; in IR, many explanations "are no longer parsimonious". 32 Yet some rational choice analyses of international law might also generally concede the possibility of miscalculation by rational actors, but this is also not inconsistent with traditional expected utility theory; only decisions that are haphazard, arbitrary, random or otherwise a

28 See Milton Friedman, The Methodology of Positive Economics, in MILTON FRIEDMAN, ESSAYS IN POSITIVE ECONOMICS (Chicago, Chicago University Press, 1966) 3 at 8 (original emphasis). To be sure, the present article is also an exercise in hypothesis-making, as an invitation for research.

29 See, e.g., Andrew T. Guzman, The Design of International Agreements, 16 EUR. J. INT. L. 579 at 586: "This Article assumes that states are rational beings; that they act in their own self-interest, at least as that interest is defined by the political leaders of the state; and that states are aware of the impact of their actions on the behavior of other states".

30 On "thin" rationality, see in general DONALD P. GREEN AND IAN SHAPIRO, PATHOLOGIES OF RATIONAL CHOICE THEORY (1994), 17-19.


priori inutile are removed from the model. The latter cases are of course symptoms of irrationality, not of qualified rationality – divergences from perfect rationality are mistakes, not behavioral patterns.

What, then, is wrong or problematic with the perfect rationality model of international law and politics? Most clearly, it is empirically false; or more accurately, it is empirically unsubstantiated. So far, international L&E’s chief weakness lies in its seeming reluctance to seriously test its hypotheses. In some cases, these hypotheses might be factually valid, and hence, useful; but they usually remain hypotheses. As anywhere, with respect to international law L&E clearly needs to become more empirical and less theoretical, in which case it would be brought into the fold of the so-called ‘new legal realism’ (not unlike the behavioral form of analysis discussed in this article).

However, a standard defense against this claim is that rationality is not intended to depict reality. It is a model, no less, no more.4 Nevertheless, international L&E scholars rarely test their theories, yet often make significant claims about reality. Furthermore, some economic analysis, even if it is formally hypothetical and descriptive, includes a disguised or otherwise embedded normative element. Implicit in its assumptions of individual (or state) rationality is the view that individuals or states are and should be (perfectly) rational, and this is no longer a model, but a positive and/or normative claim.

But beyond international L&E, studies of rationality have evolved into the gradual establishment of a behavioral school of economics, that challenges basic assumptions of human rational choice, judgment and decision-making with alternative, empirically-based observations on cognitive psychology. These have recently been greatly popularized and for better or for worse cannot be ignored in current public policy debates. Would it not be possible and potentially productive to turn to these insights "to bring new and more accurate understandings of behavior and choice to bear" on international law – subject to all methodological qualifications and controls. Cognitive psychology has led to analyses of domestic legal systems and arrangements; it has also led to non-legal behavioral studies in IR, indeed with a long, if not


34 "The advantage of studying models is that they allow descriptive and normative questions to be answered in an unambiguous way"; see STEVEN SHAVELL, THE FOUNDATIONS OF ECONOMIC ANALYSIS OF LAW (2004) 1. The emphasis is, therefore, on parsimony, rather than empirical accuracy.

35 See, e.g., DANIEL KAHNEMAN, THINKING FAST AND SLOW (2011); DAN ARIELY, PREDICTABLY IRRATIONAL: THE HIDDEN FORCES THAT SHAPE OUR DECISIONS (2012).


37 Another path to follow given the limits of rational choice in international law is the path of social constructivism, explaining state behavior in sociological terms instead of those of rationality (see, eg, Moshe Hirsch, _The Sociology of International Law_, 55(4) U. TORONTO L. J. (2005); and _The Sociology of International Economic Law: Sociological Analysis of the Regulation of Regional Agreements in the World Trading System_, 19(2) EUR. J. INT’L L. 277. This is indubitably an important alternative or complementary approach to understanding behavior in the international environment; however, it too could benefit from greater attention to theoretical clarity and parsimony as well as to empirical validation.
III. Why Behavioral International Law?

Despite the apparent primacy of classical or ‘traditional’ rational choice theory in international legal scholarship, contemporary formulations of rationality are far from monolithic. Traditional L&E employs classical theoretical economic assumptions of perfect human rationality, namely, that under conditions of resource-scarcity, human beings act as utility-maximizing, self-interested beings that respond to incentives in accordance with stable preference-ordering. These assumptions enable L&E scholars to discuss and analyze the ramifications of such rational behavior for the design and effectiveness of law and legal institutions, both market- and non-market-oriented. But where traditional L&E adheres to objective conceptions of ideal rationality personified in the (counter-factual) "homo economicus", behavioral L&E seeks to incorporate insights from empirical research in the field of cognitive psychology regarding human rationality as it is observed in reality and practice. Experimental research has shown that in many cases human behavior diverges from theoretical assumptions about rationality. Consequently, "the task of behavioral law and economics, simply stated, is to explore the implications of actual (not hypothesized) human behavior for the law". After a few decades of significant experimental research by behavioral psychologists on human decision-making, it is well-acknowledged that human individuals are in many ways decidedly not rational in the ideal sense. Human action is not only "shaped by relevant economic constraints but is highly affected by people's endogenous preferences, knowledge, skills, endowments, and a variety of psychological and physical constraints".

A behavioral-economic approach to law supplants the basic assumptions of rationality with several qualified statements on human decision-making,

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38 See, eg, ROBERT JERVIS, PERCEPTION AND MISPERCEPTION IN INTERNATIONAL POLITICS (1978); Jack S. Levy, Prospect Theory and International Relations: Theoretical Applications and Analytical Problems 13(2) POL. PSYCH. 283; and YAACOV VERTZBERGER, RISK TAKING AND DECISIONMAKING: FOREIGN MILITARY INTERVENTION DECISIONS (1998).

39 Indeed, the idea of Behavioral International Law research flows naturally from the problématique of non-empirical, rational choice approaches to international law; see thoughts briefly raised in Anne van Aaken, Towards Behavioral International Law and Economics: A Comment on Enriching Rational Choice Institutionalism for the Study of International Law, U. ILL. I. R. [2008], supra.

40 See Guzman, supra note 29; and more generally, GARY S. BECKER, THE ECONOMIC APPROACH TO HUMAN BEHAVIOR 1 (1976).


43 Francesco Parisi and Vernon Smith, Introduction in THE LAW AND ECONOMICS OF IRRATIONAL BEHAVIOR (Francesco Parisi and Vernon Smith, eds.), 1 at 1.
based on experimental observations of human behavior.\textsuperscript{44} Like classic economic rationality, behavioral psychology is first and foremost a theory of judgment. The former emphasizes models based upon objective methods of utility-maximization. The latter similarly embraces the importance of autonomous decision-making, but strives to understand how it plays out in reality, taking into account the real boundaries and characteristics of human character and capacities.

Indeed, for the reasons noted above, perfect rationality is not only a theory of judgment, but also includes elements of a normative theory. In contrast, behavioral theory has a very strong empirical, descriptive element. Which is not to say that it cannot provide the basis for normative analysis. Of course it can; understanding how actors behave in practice is a crucial element in designing rules with the consequentialist intention of influencing this behavior.\textsuperscript{45} Indeed, advocates of the behavioral approach to law consider it to be both 'normatively neutral', because it is not necessarily wedded to economic analysis,\textit{and} normatively relevant, because of its ability to point to systematic decision errors that reduce the capacity of the law to promote social welfare.\textsuperscript{46}

Simplified, the central concept underlying the study of behavioral theory is the idea of ‘bounded rationality’, which recognizes that human cognitive capabilities are not perfect or infinite.\textsuperscript{47} The human brain makes shortcuts in judgment and decision-making that diverge from expected utility theory. Limiting aspects of bounded rationality and the shortcuts taken to overcome them – generally known as biases and heuristics respectively - inevitably cause human decisions that would be regarded as erroneous if compared with perfectly rational outcomes. Having said this, it is important to understand that behavioral economics does not aspire to replace one ideal-type decision maker (a perfectly rational one) with another (rationally imperfect) one. Rather, the behavioral research agenda aims to explore the characteristics of the real decision-making processes of different types of actors, under different circumstances. So far, various important

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\textsuperscript{44} This does not mean, however, that the rational choice framework of analysis is entirely rejected: "[w]e do not argue that the edifice of rational choice theory, which underlies so much of legal scholarship, be ripped down. Rather, we suggest that it be revised, paying heed to important flaws in its structure that unduly and unnecessarily limit the development of a more nuanced understanding of how law affects society"; see Ulen and Korobkin supra note 8 at 1144. In other words, other central tenets of economic analysis of law – especially the idea that actors respond to incentives that the law creates or influences – are retained. For a purist response, implying that the rational choice framework and the assumption of rationality are a ‘package deal’, see Richard A. Posner, \textit{Rational Choice, Behavioral Economics, and the Law}, 50 STANFORD L. REV. 1551 (1998).


\textsuperscript{47} Though not in name, the concept of bounded rationality was first introduced into academic discourse by Herbert A. Simon in \textit{A Behavioral Model of Rational Choice} 69 QUARTERLY J. OF ECON. 99 (1955) (suggesting the replacement of "economic man" with "a choosing organism of limited knowledge and ability" whose "simplifications of the real world for the purposes of choice introduce discrepancies between the simplified model and the reality" (\textit{ibid.} at 114)). For a collection of studies on the topic, see \textit{BOUNDED RATIONALITY: THE ADAPTIVE TOOLBOX} (Gerd Gigerenzer and Reinhard Selten, eds., 2001).
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generalizable characteristics have been identified, but behavioralists do not claim that they exist equally among all decision-makers in all cases and under all conditions.

Momentarily setting this caveat of contingency aside, perhaps the single most important insight of behavioral psychology vis-à-vis economic analysis derives from Prospect Theory. Prospect theory questions the validity of the Coase Theorem, that both expresses and relies upon the idea of perfect rationality. In Coasean economics, in the absence of transaction costs, the initial assignment of resources or entitlements is not determinative of their ultimate allocation. Cost-benefit bargaining between rational actors will assign the entitlements efficiently to the actor to whom they hold the most value, regardless of the starting point. The Coase Theorem is elemental for classical economic analysis of law because it neutralizes the psychological contexts of human interactions. Indeed, it is the basis of L&E’s overarching parsimony. However, experimental observations have shown repeatedly, in varying circumstances, that initial assignments of entitlements do matter, significantly, in that they influence actor’s decisions, in particular, their willingness to part with their entitlement. In Coasian terms, 10$ (or any other thing of value) have equal worth, whether gained or lost, whether compared to rags or to riches. Yet in real life, people do not regard losses and gains of equal size indifferently. For example, they will often invest more in the prevention of loss than in the generation of gains of the same amount. This is the logic that underlies a variety of related terms that derive or are otherwise related to the ideas of Prospect theory, such as loss aversion, risk aversion, endowment effects and framing effects.

Prospect theory and the various phenomena it informs present a fundamental diversion from perfect rationality. If law – including international law – has the aim of directing actors’ behavior, it must take prospect theory into account, at least in instances where it can empirically be shown to have a significant impact. There are additional such psychological kinks in rationality, systematically substantiated by scientific experiments in cognitive psychology. For example, under the availability bias, "people tend to think that risks are more serious when an incident is readily called to mind". Under the so-called hindsight bias, people tend to


51 Framing effects arise when alternative descriptions of the same decision problem give rise to different preferences. Thus, in one classic example, people who have lost 10$ on the way to the theater will tend to nonetheless purchase a ticket; but people who have lost a pre-purchased ticket to the theater worth 10$ will not, even though in expected utility terms, the rational decision should be the same; see examples in Amos Tversky and Daniel Kahneman, *The Framing of Decisions and the Psychology of Choice*, 211 SCIENCE 453 (1981); and Amos Tversky and Daniel Kahneman, *Rational Choice and the Framing of Decisions*, 59(4) J. OF BUSINESS (1986) 5251.

52 Sunstein supra note 36 at 5.
overestimate ex ante predictions they had made "concerning the likelihood of an event's occurring after learning that it actually did occur". Probability matching is a proven tendency of human subjects to make choices that match the relative frequency of events, instead of utility-maximizing choices that would presupposes the occurrence of the most probable (e.g., when faced with a 6-sided die with 4 red sides and 2 white sides and asked to repeatedly guess the color that would be rolled, people choose red 2/3 of the time, instead of the utility-maximizing solution that would choose red all the time). Like Prospect theory, the availability bias, hindsight bias, probability matching and other biases and heuristics hold important lessons for the design of law and legal process in a variety of areas. For example, it has been argued that the availability bias, compounded by social and political processes, makes risk regulators vulnerable to inefficient decisions; and that hindsight bias in conjunction with other biases mean that increased tort liability for drivers will not reduce traffic accidents. Others have argued that probability matching supports employing a risk-based rather than a harm-based liability scheme in tort law, inducing individuals to behave more like maximizers than 'probability matchers'.

These expressions of bounded rationality show that individuals are in many situations incapable of rational utility-maximization, because of the way the human mind handles information and reacts to particular circumstances. Moreover, in addition to bounded rationality, cognitive psychology has shown that individuals may have only bounded willpower. This is a concept that significantly cuts against the grain of the premises of classical rational choice. People sometimes act against their own interests, even when fully informed and conscious of the damage they may be inflicting upon themselves. The classic example is smokers, who do not kick the habit, even if they declare that they would like to. While this may be attributable to substance addiction, behaviorists have shown that bounded willpower is influential in other areas that are relevant to law, such as lack of self-control in criminal behavior.

Finally, to complete the picture, in contrast to rational choice's assumptions of self-interest, people sometimes deliberately act contrary to their own interests in the name of fairness, in order to benefit others. Evidently, in many cases, the human utility function includes values relating to fairness.

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56 Ulen, supra note 53.
58 See Jolls, Sunstein and Thaler, supra note 42 at 15.
59 See, e.g., James Q. Wilson and Allan Abrahamse, Does Crime Pay? 9 JUSTICE QUARTERLY 359 (1992); analyzing criminal earnings per days in prison, suggesting that criminals' opportunism and focus on the present (ie, discounting future costs of punishment) leads them to decisions that can render deterrence inefficient.
to the utility of others. In the literature this aspect of human behavior is sometimes referred to as "bounded self-interest". The calculus of fairness in actual rationality includes also the expectation of fair treatment from others. Both of these aspects of fairness considerations can be demonstrated through consistent experimental results in "ultimatum games", in which subjects regularly make offers and responses that diverge from the rational economic prediction. These results are preserved even when agents do not know each other and possible reputational effects or social contexts are controlled for, suggesting that fairness is not (only) a social phenomena but one that is embedded in human rationality.

To be sure, behavioral theory should not necessarily be seen as contradictory to rational choice; indeed, in many ways it supplements and completes it. What is clear, however, is that these experimental findings have suggested significant qualifications to rational choice based social analyses, and hold important implications for the L&E description and prescription of law.

This nutshell explanation of behavioral economics and its effects on rational analysis of law is neither novel nor exhaustive. It is furnished here mainly to inform the question, whether behavioral analysis could make a difference to international legal scholarship. If we assume, for the sake of argument at this stage, that the rationality of states and other international actors, or at least of those individuals and groups who determine state behavior is also "bounded", that biases and heuristics impact upon their choices and decisions, the answer to this question is undoubtedly positive. In essence, any area of international law that can be explained or analyzed in terms of rational choice – humanitarian law, trade law, environmental law, arms control, migration law or more general aspects of international law such as treaty-making or adjudication - could benefit from the incorporation of behavioral economics, and some examples will be suggested later in this article.

Strikingly, however, despite the great potential behavioral analysis holds for these areas of cardinal importance, one hardly finds recourse to behavioral science in international legal literature, L&E or otherwise. The

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60 Ibid, at 16.; and Elms supra note 32 at 255 et seq.  
61 For a detailed description, see Jolls, Sunstein and Thaler, supra note 42, at 21-26.  
62 But see Barbara A. Mellers et al., Group Report: Effects of Emotions and Social Processes on Bounded Rationality; and Joseph Henrich et al., Group Report: What is the Role of Culture in Bounded Rationality? In Gigerenzer and Selten, supra note 47, 263 and 343, respectively, discussing the role of society and culture in the development of behavioral biases and heuristics.  
63 See footnote 36 supra. Whether behavioral L&E challenges or rather complements traditional L&E is a question discussed in Christine Jolls, On Law Enforcement with Boundedly Rational Actors, in Parisi and Smith supra note 43.  
64 Conservative L&E remains unmoved by these findings, because "the concept of rationality used by the economist is objective rather than subjective, so that it would not be a solecism to speak of a rational frog"; see Posner supra note 44, at 17.  
65 For a rare study that applies behavioral analysis to trade disputes, see Deborah Kay Elms, Large Costs, Small Benefits: Explaining Trade Dispute Outcomes, 25(2) POL. PSY. 241 (2004). For an application of the availability bias to bilateral investment treaty-making, see Lauge N. Skovgaard Poulsen and Emma Aisbett, When the Claim Hits: Bilateral Investment Treaties and Bounded Rational Learning, 6(2) WORLD POL. [2013] 273. For discussions of applications to international humanitarian law, specifically targeting decisions, see presentations at the Minerva Center for Human Rights conference on Proportionality in Armed Conflicts, Jerusalem,
scarcity of behavioral research on international legal issues is evident even in the increasing literature on international risk regulation, which is a prime area for behavioral study.66

Even leading scholars with a keen interest and high degree of proficiency in behavioral analysis of domestic law, seem to refrain from applying behavioral insights when engaging in questions of international law. For example, in a lucid negotiation-theory analysis of the ongoing impasse in Israeli-Palestinian peace talks, Korobkin and Zasloff67 have employed a rational choice negotiation framework that allows for miscalculation firmly within the "expected utility" tradition. They do not, however, discuss the potential insights of behavioral theory with regard to the Israeli-Palestinian context – even though Korobkin has separately addressed the role that heuristics and biases play in bargaining more generally, and how the acknowledgement of their existence can help negotiators either adjust their own decisions in order to reach normative results, or to take advantage of their counterparts in maximizing the terms negotiated.68 These behavioral insights, if applied to the Israeli-Palestinian context are non-trivial. Consider, for example, the possible role of overconfidence as well as hindsight bias in both Israeli and Palestinian positions in general, or of the fairness bias in the meltdown of the Camp David talks in 2000, in particular, which could be analyzed as an 'ultimatum game'; or the influence of endowment effects evident in Israel's entrenched occupation and settlement policy on its negotiating positions, or the impact of the availability bias as triggered by recurring terrorist attacks on Israeli risk assessments, that have informed its security policies in the occupied territories as well as its negotiating positions. These frameworks of analysis are not pursued in the present article – they are only mentioned here to demonstrate the hesitation of behavioral legal analysts to apply their knowledge about human decision-making to international legal affairs.

Why this reticence, to say the least, towards the application of behavioral theory to international law? The reasons might themselves be behavioral, but that is beside the point. The question is rather whether there are any methodological justifications to refrain from doing so. I now turn to discuss a number of particular obstacles or objections towards the application of behavioral economics to international law, which have perhaps so far 'chilled' the advent of this project.


67 See Korobkin and Zasloff, supra note 31.

IV. OBJECTIONS TO BEHAVIORAL INTERNATIONAL LAW AND METHODOLOGICAL RESPONSES

(a) Key Difficulties in Applying Behavioral Theory to International Law

Several theoretical and methodological objections to a behavioral approach to international law can be raised. First, cognitive psychology and behavioral economics relate primarily to the conduct of individuals as (obviously) unitary actors, while the main subjects of international law are collective entities, primarily states. Second, the main strength of the claims made by cognitive psychology regarding rationality and decision-making is its grounding in empirical observations derived from experiments made with human subjects, which are difficult and perhaps impossible to replicate meaningfully in the context of international law and international relations; and third, the parsimony of traditional rational choice analyses of international interactions is superior to that of bounded rationality, although the latter adds layered and contingent dynamics to otherwise more straightforward hypothetical mechanics.

These are all legitimate objections. Notably, they could be voiced from practically all corners: by realists, traditional rationalists, behavioralists and by non-rationalists, albeit for different reasons. However, there are good responses to them, as explained below, and they are not sufficient to reject the project. Rather, they must be taken into account in the design of research methodologies that incorporate behavioral insights in the analysis of international law. I will deal with them in the order of their importance.

(b) The Individual Focus of Behavioral Theory

Under this objection, a behavioral approach to international law would be faulted if it examined the conduct of states, because it would ostensibly be making a leap of faith from the 'methodological individualism', on which behavioral theory and research are premised, to 'methodological statism'. Put differently, states as constructed legal personalities do not necessarily share the faults of individuals, or by some accounts necessarily do not. There are at least three responses to this criticism, each with its own methodological consequences, corresponding to three levels of analysis: (i) the state as a unitary actor; (ii) decision-making collectives in international law; and (iii) the individual as a decision-maker in international law.

69 The term is used here loosely to refer to cognitive psychology's focus on the individual, without any statement about the theoretical framing of the relationship between the individual and society in the social sciences. For a comprehensive survey and discussion of this grand debate, see LARS UDEHN, METHODOLOGICAL INDIVIDUALISM: BACKGROUND, HISTORY AND MEANING (2001).

70 See, for example, the objection to the application of prospect theory to decision-making of states, in Eldar Shafir, Prospect Theory and Political Analysis: A Psychological Perspective, 13(2) POL. PSYCH. 311 (1992), 313-314. Notwithstanding the objection, for such theoretical applications in specific international contexts, see, e.g., Jack S. Levy, Loss Aversion, Framing, and Bargaining: The Implications of Prospect Theory for International Conflict, 17(2) INT. POL. SCI. REV. 178; and Rose McDermott, Prospect Theory in International Relations: The Iranian Hostage Rescue Mission, 13(2) POL. PSYCH. 73 (1992), both of which apply prospect theory to state leaders and small decision-making groups, rather than to states as unitary actors.
(i) **The State as a Unitary Actor?**: This is perhaps the most difficult of objections, but ultimately, it does not hold. First, quite bluntly, to the extent that this objection were voiced from the traditional quarters of realists, L&E analysts and international lawyers, the initial response would be to raise a mirror, because they have all tended to do exactly the same: assimilating states to individual agents and considering the state as a (usually unitary) actor and decision-maker. Is there any reason, however, to suppose - or any substantiation to that effect - that states, even when seen as 'black boxes' or 'billiard balls' (i.e., without looking into their internal decision making processes) are any more perfectly rational than individuals? If the general rules of human behavior are better captured by the concept of bounded rationality, the validity of an assumption that states conduct themselves within the dictates of perfect rationality would be an exception to that rule.

The burden of proving the validity of a decision-making theory could therefore be said to rest not upon a behavioral approach, but rather upon traditional rationalist analyses. These would then have to explain how states overcome the bounded rationality of the individuals that compose them, and perfect their own rationality. Generally, there are two ways to do this: looking beyond the state and looking within the state.

Looking *beyond* the state, the argument against applying behavioral economic analysis to states would be that even if states naturally acted according to bounded rather than ideal rationality, the international political and legal environment in which states act would somehow have a corrective effect leading them to become more perfectly rational. Put differently, the costs associated with behaving in imperfectly rationally ways would lead states to adjust their behavior accordingly. Notably, a similar debate has arisen with respect to the rationality of another type of non-individual, collective legal actor: the firm. Traditional economic analysts of law have claimed that 'selection effects' in market contexts will discipline bounded rational behavior in firms, rendering empirical insights about individual behavior immaterial.71 Indeed, some proponents of behavioral analysis have conceded this as a valid point.72 With respect to states this is certainly an important issue — but of itself it should be seen as an impetus to behavioral research of international law rather than an obstacle, requiring empirical inquiries into the degree to which state behavior in discrete situations conforms to expected rational benchmarks.

Indeed, in many — arguably, most — situations relating to international law, states operate in a non-economic market environment, making the 'selection' argument less relevant. Moreover, the application of 'selection effects' to states is difficult, because in contrast to firms, states are never formally eliminated from international relations because of losses in the same way that firms might be pushed out of the market — states can fail, but they do not liquidate.73 Finally, even with respect to firms active in economic market

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73 There are few exceptions. For example, in 1934, the self-governing status of the British Dominion of Newfoundland was suspended due to economic crisis and its inability to pay interest charges on its national debt, and replaced by a Commission of Government composed of non-elected civil servants; in 1949 Newfoundland joined the Canadian Confederation. See David Mackenzie, *Canada, The North Atlantic Triangle, and the Empire*, in
contexts, empirical behavioral research has shown that while competitive forces do tend to eliminate some boundedly rational firms, they also "inevitably select some other such actors for success", to the point that they even become overrepresented.

Subject to empirical research on this issue, it would appear that the same might apply, even a fortiori, as a plausible hypothesis relating to states: i.e., that states do not become more perfectly rational, but rather maintain a degree of boundedness, despite the external competitiveness.

But in any case, this discussion does lead to an important methodological qualification. The idea of behavioral international law, so far as it is applied to states, is not to simply lift whatever knowledge we have gained about real individual decision-making and plant it willy-nilly on states, in the way that traditional L&E has often done with assumptions of human rationality. Rather, one goal of the approach, to the extent that it would regard the state as the relevant unit of analysis (and this is not necessarily or exclusively the case, as we shall see below), would be to seek observable systematic diversions from rationality in state behavior, without simply assuming that those biases and heuristics found in individuals are replicated by states. Indeed, as already noted, behavioral psychology does not claim that all individuals suffer from the same cognitive biases or employ the same decision-making heuristics. It would be a travesty to behavioral theory to claim that states simply reproduce particular individual behavioral traits. Thus -- and this could perhaps respond to this element of the critique if raised from behaviorist circles -- a behavioral approach to international law could focus on examining the decisions made by states in differing circumstances, from a behavioral perspective, rather than simply applying individual behavioral theory to states. For example, one would not simply assume that states qua states have a 'fairness' bias; this would have to be demonstrated empirically. Under this approach, one would maintain the state as the decision-making unit under scrutiny, and look into the consistency of deviations from rationality apparent in their decisional outputs.

The second way of arguing that states might actually overcome the bounded rationality of individuals (ostensibly undermining recourse to behavioral economic analysis of international law) and their naturally unitary character would be to cut the Gordian knot and look within the state. Perhaps process taking place within the state perfect its rationality? To be sure, this line of argument would appear to be inherently inconsistent with the way economic analyses of international law have worked so far: with few exceptions, L&E analyses of international law have accepted the state as a unitary, even monolithic, actor. But contrary to the assumptions of 'realist' theorists, states do not act like 'black boxes' or 'billiard balls'. Rather, state

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behavior with respect to international law is the outcome of intricate social, political, administrative and legislative processes that take place within the state. Yet, crucially, looking within the state does not negate the subsequent treatment of the state as an actor with individually observable behavioral traits.

International relations scholars have long recognized the complex interactions between domestic politics and international relations, through the metaphors of the ‘second image’ or the ‘two level game’. For present purposes we are concerned with the question of whether behavioral economic approaches can meaningfully be applied to states at the second, international level. Arguably, for bounded rationality to be manifest at the international game level—in which we ought to include international law constructions and constraints—bounded psychological elements must factor in also, and indeed initially, at the domestic game level. There is in fact a substantial body of research and scholarship on the role of bounded rationality in domestic political processes, as well as public policy and administration. To the extent that imperfect rationality within the state is a necessary condition for considering states as boundedly rational actors (unitary or non-unitary, depending on one’s definitions), it is quite easily satisfied.

This does not, however, remove entirely this argument against applying bounded rationality to the state on the international plane because of intra-state process: far from it. All that this scholarship might contribute in the present context is that cognitive biases and heuristics evident in the domestic policy environment may influence the preference formation of the state as an actor on the international level. In this sense, we are here merely confronted with a particular form of ‘thin’ rationality of states. Domestic bounded rationality is neither necessary nor sufficient for international behavioral analysis, although it might play a part. What we might know about the rationality of domestic policy and state preference formulation does not necessarily reflect upon the overall rationality of the state as an actor in pursuit of those preferences in the international environment. This theoretical uncertainty seems, however, to cut both ways. On one hand, in principle states can be domestically imperfectly rational, yet internationally perfectly rational. One might even hypothesize that the aggregation of differential bounded rationalities of various agents at the sub-state level produces some sort of perfect rationality of the state in international affairs. On the other hand, bounded rationality might simply carry over to the international plane, whether en bane or in subtle and variegated ways.

The truth of the matter is that we don’t really know, in theory or in practice, how bounded rationalities interact with each other, whether horizontally (within the state) or vertically (between the domestic environment and the international level). This is of course not a reason to

80 See supra text accompanying notes 30-31.
foreclose behavioral analysis of international law, but rather one to encourage it. Perhaps more importantly, this discussion shows that the state (whether viewed as unitary or not) is a plausible individual unit to which behavioral economics can be applied, at least under particular informed circumstances — certainly no less so than traditional rational choice and L&E analyses. However, it also demonstrates that there is still much to learn and examine, from a behavioral perspective, if the state is to be regarded as such a unit of analysis. But we need not resolve these issues entirely; there is no question that sub-state entities, such as decision-making collectives and the individual, can also figure significantly in the study of behavioral international law.

(ii) Decision-Making Collectives in International Law: A second response to the objection based on the individual focus of behavioral analysis would be to eschew state-level analysis, looking instead at the behavioral aspects of collective decision-making within states and other relevant entities, such as non-state actors, international bureaucracies and tribunals, that lead to outcomes in international law. In other words, no 'methodological statism' would be involved. Rather, at this second level of analysis there is a recognition that states do not make decisions relating to international law; people do, or most often, groups of people.

There exists a significant behavioral literature on cognitive biases in small decision-making groups. In particular, there is an important debate on the existence and effects of 'groupthink', that is, the set of phenomena in which individuals comprising a decision-making group suffer "a deterioration of mental efficiency, reality testing, and moral judgment that results from ingroup pressures". Small-group decision making theories based on behavioral psychology have been applied in international politics (but not law), for example, to decisions to embark in international interventions.

Prospect theory has also been applied to relevant group decisions, including to foreign policy decisions and bureaucracies. There are even empirical studies examining the existence of decision-making biases in extremely large decision-making collectives, such as the US electorate. In short, there is room to seriously engage in the study of the rationality of choices pertaining to international law, at the decision-making group level of analysis.

Analogies from corporate law are again illuminating, mutatis mutandis. For example, studies have shown that in some circumstances, lawyers practice 'herd behavior' that results in the persistence of suboptimal provisions in

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83 See Verzijver supra note 38, at 87 et seq.


bond indentures. Such reliance on inherited 'status quo', precedent and group 'wisdom' might be a response to individual bounded rationality, that could be countered by responsible board governance. It is not difficult to conceive of research questions and testable hypotheses relating to similar occurrences of 'legal groupthink' with respect to international law. For example, to what extent do legal advisors engaged in considering new international commitments, such as in the areas of climate change or trade agreements, rely on the legal status quo, instead of exercising their independent judgment on the best possible solutions?

There are also studies that identify groupthink in collective corporate decision-making as a catalyst for unethical decisions that would not have been made individually, and link the lack of diversity in corporate management diversity to illegal acts by corporations. It would be illuminating to examine in a similar vein decisions by executive decision-making groups and governmental legal counsel to sanction acts that violate international law, such as some armed attacks, or torture authorizations.

To be sure, looking into the state or within organizations and other collective units interacting with international law in this way could bring us back to the claim that behavioral traits observable at the individual level 'wash away' at the collective level. Here the argument would be that internal decision-making settings have a corrective effect on individual bounded rationality, leading to more perfect rationality in decisions made at the leadership level. To illustrate, there are indications that within business corporations, individuals who are relative risk-takers – less prone to loss-aversion and hence, actually less bounded in their rationality – rise disproportionately to corporate leadership echelons. It could follow that the corporate decisions made by the decision-making groups composed of these individuals are more in keeping with perfect rationality. If similar selection effects were shown to exist in parliamentary politics, or in military command promotions, this could have significant implications for an understanding of the rationality of group decisions in international law, in that they might actually have a relatively low level of biases and heuristics. Indeed, the result might even be that in some cases decision-making groups are more rational than individuals, to some extent vindicating traditional rational choice.

These are, however, only hypotheses and examples. The application of behavioral approaches to collective decision-making is far from simple. Even in economic fields, such as corporate and antitrust law, attempts to explore the impacts of cognitive biases on firm level decisions, have so far been few

89 Thus, one wonders to what extent groupthink and other behavioral phenomena enabled the advice provided by US Department of Justice lawyers relating to torture; see Jens David Ohlin, The Torture Lawyers, 51(1) HARV. INT. L. J. 193 (2010).
90 For this suggested argument, see Donald C. Langevoort, Heuristics inside the Firm: Perspectives from Behavioral Law and Economics, in Gigerenzer & Engle supra note 45, at 87.
91 For a model that attempts to prove this, see Andrew Farkas, Evolutionary Models in Foreign Policy Analysis, 40 INT. STUD. Q. (1996) 343.
and far between. At this stage, the important point is that behavioral research on international can be meaningfully conducted at this level of analysis, setting aside the 'individual methodology' objection to a behavioral approach to international law.

(iii) The Individual as a Subject and Decision-maker in International Law: A third response to the individualist methodological objection would be to simply focus on individual decision-making that relates to international law. The place of the individual is no longer in question or "prospective", as it was half a century ago. In classical international law, individual actions may be attributed, of course, to the state, giving rise to state responsibility under various circumstances, and so analyses of individual behavior are important for understanding state behavior. Put differently, many cases of compliance or non-compliance with international law are ultimately made by individuals – soldiers in the field, immigration officers, customs officials, legal advisors etc.. Moreover, in modern international law, individuals are increasingly direct addressees and beneficiaries of international law, such as in the areas of investment protection, international human rights, international criminal law and international humanitarian law - the latter indeed constituting an area with major scope for behavioral research, as will be discussed in the next section. In addition, some state-to-state law takes into account, or is premised on, assumptions about private behavior – such as the World Trade Organization's goal of "providing security and predictability" to traders.

The point need not be belabored here: behavioral analysis of international law is not restricted to 'unitary' state behavior. There is a rich field of international legal issues that can be examined at the level of individual behavioral economics, in addition to the state-level and group decision-making levels, whose application is more complex, but with potential that is at least as illuminating.

(c) The Empirical Foundations of Behavioral Theory

It is perhaps the crowning achievement of behavioral analysis of law that it is based on claims about human behavior that are empirically substantiated. Some go so far as to say that "legal scholarship not drawing on empirical behavioral findings is not engaged in a behavioral analysis of law". If the behavioral approach's predictions about actors' actions in the face of legal prescriptions are more dependable and realistic than those of standard rational choice theory, with all its explanatory strengths, it is because of its empirical basis. In this respect, an objection could be raised towards a behavioral approach to international law: that the empirical – and especially

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95 Tor, supra note 46 at 273.
experimental – insights and methods of behavioral analysis are difficult, if not impossible, to apply to international law.

Clearly, there are methodological difficulties in applying an experimental approach to international law. At the state level, one cannot conduct 'experiments'. At the group decision-making level, access to real decision-making groups and senior decision-makers is normally very limited to most researchers. Experimental research with individuals also poses significant challenges. Access to real international law decision-makers such as trade officials or military commanders for experimental purposes is also constrained, and even if achieved, it would be difficult to design experiments that replicate the real-life environment of decision-making. However, this objection merely underscores the non-empirical basis of most international legal research. Recent years have witnessed a growing cadre of legal scholars who apply quantitative and qualitative empirical research methods to international law. Non-behavioral empirical research of international law encounters many of the same difficulties that behavioral research of international law would be faced with, and copes with them successfully.

There are, in fact, a number of ways in which behavioral analysis could be meaningfully applied to international law, on the basis of empirical findings. In this sense, a behavioral approach to international law is no different than general behavioral legal research. Following Tor's useful menu for research, behavioral insights on the law can be gained through three complementary channels: (i) theoretical applications; (ii) experimental research; and (iii) field studies. The strengths and weaknesses of each methodology should be recognized, but each of them retains an empirical basis and could be applied to different international legal puzzles, showing that this objection is definitely not one that can stop behavioral analysis of international law at the threshold.

(i) Theoretical applications: These are research scenarios in which a divergence from perfect rationality is noted on the basis of general empirical evidence, and its ramifications are subsequently applied to a legal rule or institution. The application is theoretical in the sense that although empirically valid in one area, it is being applied in a different legal field and set of circumstances; hence, empirical authority is reduced. This migrational methodology will be familiar to most interdisciplinary legal scholars: theoretical knowledge from non-legal fields is adopted and applied to legal issues; empirical knowledge from one field of law migrates to another. In international legal research, theoretical application could also include cases in which insights from behavioral economics in other areas of law are

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97 Tor supra note 46, 272-291.
applied to international law, or instances in which non-legal IR research on behavior of states and other actors has international legal implications.

For example, theoretical applications of cognitive psychology challenge the traditional rational choice parameters of deterrence in criminal law, by suggesting (among other points) that 'optimism' or 'overconfidence' biases could cause potential offenders to underestimate the probability that they will be apprehended and convicted. Moreover, the availability bias might mean that visibly increased enforcement has a greater effect on deterrence than increased punishment. These are both theoretical applications of general expressions of bounded rationality to a legal issue, with implications for criminal enforcement policy. Given that a central goal of international criminal justice is deterrence and/or prevention of future international crimes by punishing existing ones, any such theoretical application of behavioral psychology to criminal law would by extension be relevant to international criminal law.

However, this example demonstrates the main weakness of theoretical application as a methodology: the external validity challenge, that is the difficulty in transferring empirical findings from one research group to another group that differs from the first in its personality and environment. To what extent can behavioral traits established in experimental research among college students under 'laboratory conditions' be applicable to criminals? To what extent can theories applied to criminals in the setting of domestic law and society be re-applied to potential war criminals acting in very different circumstances and under very different 'utility functions'? When the external validity – or generalizability – of behavioral inferences is questionable, theoretical applications can still be highly useful, though, because of their ability to generate interesting hypotheses. However, these hypotheses would then need to be tested against relevant empirical evidence, through field studies or experimental research. To be sure, this will not always be possible, in which case the behavioral insights should be understood as bearing reduced research value.

(ii) Experimental Research: Experimental behavioral legal research entails controlled and randomized experiments in which participants' reactions to different 'treatments' in legal settings are polled and statistically compared, within experimental and control groups. This allows the researcher "to draw conclusions about the causal effect of the experimental treatment". For example, groups of randomly selected students can be asked to play the role of trial jurors and to answer certain questions with different fact patterns. In international legal issues, the same groups could be asked to pose as individuals in combat settings with respect to rules of international humanitarian law, or as regular citizens with respect to human rights issues.

99 Jolls supra note 63.
101 Tor supra note 46, at 280 and sources cited therein.
102 Ibid., 285.
However, while the strength of experimental research lies in its controlled and randomized environment, this is also the source of its weakness. Again we are faced with the problem of external validity. Both the subjects and the circumstances are very different from those that govern in reality. Although there is evidence that behavioral simulations and surveys, properly conducted, can provide reliable evidence that conforms to results from the field, experimental research in the social sciences will often be treated with suspicion as lacking in its realism and generalizability. Nevertheless, it has been contended that most of the objections to experimental research are misguided and that more experimental social science research should be conducted, as a significant complement and corroboration to field research. Behavioral legal research — certainly with respect to international law — faces similar dilemmas; but ultimately their resolution will depend on the ability to conduct meaningful experimental research on particular research questions, and researchers should take cognizance of this in both their selection of research topics and in the design of experiments. For example, experimental studies related to international humanitarian law or trade law can be upgraded by conducting controlled experiments with groups of relevant decision-makers, such as military commanders and trade officials and executives, respectively.

(iii) Field Studies: Experimental research is not the only way to gather empirically valid information about the way people make decisions. Indeed, some consider the first-best method to be field research, using observational testing of real behavior. A significant criticism leveled at the behavioral L&E movement is that knowledge gleaned from experiments is limited in its ability to provide guidance for real life policy because it lacks context, and should be at least supplemented by field observations. However, observational testing of behavioral questions in legal contexts is still rare. In this respect, international legal research might actually have significant strengths. At the state level-of-analysis, the relevant research group for observational field research is limited to under 200 entities, with a vast historical background for research. This can foment quantitative research, such as in international litigation, which although on the rise is still much easier to track in terms of volume than the domestic judicial activity of even a small state. Qualitative empirical research, such as in international political economy, is quite developed, and can glean a lot of information on decision-making processes, with a long historical memory.

103 Craig A. Anderson, James J. Lindsay and Brad J. Bushman, *Research in the Psychological Laboratory: Truth or Triviality?*, 8 CURRENT DIRECTIONS IN PSYCHOLOGICAL SCIENCE (1999) 3.


105 Tanina Rostain, *Educating Homo Economicus: Cautionary Notes on the New Behavioral Law and Economics Movement*, L. & Soc. REV. (2000): "legal scholarship that seeks to incorporate the insights of empirical social science must be aware of the limitations of such knowledge. Before Laboratory results can serve as the basis for legal policy, they must be replicated in field studies that resemble as closely as possible "natural" conditions. And proposed interventions must be tried in small-scale pilot studies before they are implemented broadly".

106 Tor *supra* note 46, 281.

107 See examples in note 96 *supra*. 
Quantitatively, international relations researchers have already compiled historical databases that can be relevant to ex-post observational testing of legal issues, such as the Correlates of War project (COW).\textsuperscript{109} Field studies at the individual level are difficult but possible.\textsuperscript{110}

In sum, there is no a priori reason to discard the idea of conducting empirical behavioral research in international law. Quite the contrary – such research can be conducted in all three methodological streams (theoretical application, experimental research and field studies) in meaningful ways.

\textit{(d) The Parsimony of Traditional Concepts of State Rationality}

The final general objection to a behavioral approach to international law would be that its high degree of contingency – on actors, environments and levels-of-analysis – would make it unparsimonious, in contrast to the parsimony that characterizes 'traditional' economic or rational choice analyses of law and international relations. Indeed, this critique would not be unique to international behavioral analysis, and the response provided by behavioralists would apply here as well. The parsimony achieved through rational choice theory comes at the expense of empirical accuracy, and predictive power.\textsuperscript{111} Ideally, one should have both parsimony and accuracy. But ultimately, so long as such an approach is not at hand, whether one prefers one method or another is very much a question of both intellectual temperament and the balance between accuracy and parsimony – how much of one is sacrificed for the sake of the other. There would seem to be little to add to this debate, but I would venture the following. A behavioral approach to international law would not – should not – underwrite a claim to providing a 'theory of everything' or even 'a theory of international law'. It would simply be an addition to the arsenal of methodologies of international law, like rational choice or sociological approaches, applicable and illuminating in some contexts, less so in others. Within the bounds of those discrete areas in which it is both illuminating and intellectually honest, it would be parsimonious; but parsimony should not be confused with simplicity. So, for example, if behavioral research would show that military field commanders do not currently or usually take the remote possibility of international criminal prosecution as a consideration in their operative calculations, but in contrast are deterred by domestic (and more 'available') sanctions, such as investigations by committees of inquiry, as well as by demotion, this specific finding would in itself be parsimonious, as well as empirically accurate. Therefore, the risk of a lower degree of parsimony in behavioral analysis is a methodological constraint to keep in mind in the design of research, but it is not a threshold barrier to it.


\textsuperscript{109} See \url{http://www.correlatesofwar.org/} (last accessed Aug. 23, 2013).

\textsuperscript{110} See Felmeth note 6 \textit{supra}.

\textsuperscript{111} See Jolls, Sunstein and Thaler, \textit{supra} note 42 at 20-21; and Elms \textit{supra} note 32 at 240-242.
V. SOME INDICATIVE APPLICATIONS OF BEHAVIORAL RESEARCH TO INTERNATIONAL LEGAL ISSUES

So far, potential uses of behavioral research on international law have been mentioned only in passing. In this section I will describe in some more detail select indicative applications of behavioral international research. By no means should this discussion be mistaken for actual behavioral research. Rather, it comprises a set of prototypical 'research briefs' or research proposals, indicating in concrete yet general terms how behavioral research projects could be conducted with respect to international legal questions. It is a methodological tasting menu, an invitation for research.

The research issues discussed below have been selected so as to allow for the full range of applicable levels-of-analysis (the state, small decision-making groups and individuals) discussed above in section IV.(b), and the full spectrum of behavioral research methods (theoretical application, experimental research and field studies) discussed in section IV.(c). They have also been selected in order to display both explanatory and normative avenues of research, and the ways in which behavioral research can be either linked to rational choice frameworks or disengaged from them. Finally, they also cover a broad range of international legal issues, from general international law and dispute settlement, to international economic law, and international humanitarian law. The queries addressed are: (i) how can international treaty-making be made more efficient?; (ii) do collegial international tribunals produce better outcomes than non-collegial ones?; and (iii) should international humanitarian law relating to target selection in armed conflict take into account the bounded rationality of military commanders and decision-makers?

(a) The State Level: The Efficiency of International Law-Making and the Status Quo Bias

When can international law-making be deemed efficient? L&E scholars have over the last decade or so devoted copious attention to explanations of international law-making processes, especially their two central sources: treaties and customary international law.112 A sub-set of this literature criticizes international law-making as inefficient. In particular, scholars have argued that international law does not adapt quickly or reflexively enough to the preferences of states and the needs of the global community. Thus, for example, international legal responses to global warming and transnational terrorism remain blocked.113 In this section I will focus on a particular

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113 See text accompanying footnotes 1-3 supra.
critique of the efficiency of treaty formation, setting aside discussion of critiques relating to customary international law as such.114

With respect to treaty law, Guzman has argued115 that the chief cause for lack of progress towards effective global legal solutions is in many cases international law’s strict requirement of consent in treaty-making: states may be bound by treaty norms only if they have expressly consented to them.116 Hence, so long as some states – any state, for that matter - can object to new treaty arrangements or to reforms of existing ones solely on the basis of their narrow self-interest, legal responses that satisfy the collective interests of the international community are prevented. According to Guzman, the consent requirement should be relaxed in ways that would enable the global community to create law that would bind states non-consensually.117

What is most important for present purposes, however, is that Guzman’s analysis builds on understandings of efficiency that lie firmly within the standard economic approach to contract law. This approach regards private contracts as efficient in the Coasean sense: bargaining among parties will lead to an allocation of rights and obligations that optimizes their preferences, regardless of initial allocations, provided that transaction costs are at zero, or at least very low.118 The economic model of contract law can be similarly extended to international treaties. States, considered as unitary actors, enjoy substantial freedom in the pursuit of their interests through bilateral and multilateral treaty-making, in a manner reminiscent of the private ordering achieved through the freedom of contract in domestic legal settings.119 From a rational choice perspective, this can lead to welfare analyses familiar from contract theory, such as ‘efficient breach’.120

Thus, where treaty obligations are entered into on an informed and voluntary basis, rational choice models generally assume that international multilateral rules are efficient with respect to parties' preferences, at least at the time that these obligations are made. The classical Paretian formulation posited by Trachtman states in this respect that "In the cooperative treaty game, any treaty must be such that, at least in prospective terms, each

114 I refer here primarily to Guzman supra note 7 at 169-171; Eugene Kontorovich, Inefficient Customs in International Law, 48 Win. & Mary L. Rev. 859, (2006); and especially to Curtis A. Bradley and Mitu Gulati, Withdrawing from International Custom, 120 YALE L.J. 202 (2010).
116 See LOUIS HENKIN, INTERNATIONAL LAW: POLITICS AND VALUES 28 (1995) (“No treaty, old or new, whatever its character or subject, is binding on a state unless it has consented to it.”); and see VIENNA CONVENTION ON THE LAW OF TREATIES, May 23, 1969, 1155 U.N.T.S. 331 (VCLT): Art. 2(1)(g) defines a “party” to a treaty as a state that has consented to be bound by it; and Art. 34 unambiguously provides that “A treaty does not create either obligations or rights for a third State without its consent”.
117 In particular, Guzman advocates increased use of non-consensual rule-making procedures in international organizations, though stopping short of “limitless delegation of authority”; see supra note 115 at 790.
119 See MICHAEL J. TREBILCOCK, THE LIMITS OF THE FREEDOM OF CONTRACT (1993), 244 et seq..
adherent receives a benefit that is at least as great as it would receive if it did not join in the treaty.”121 As Guzman explains, a Pareto-efficient improvement in treaty law (whether reforms to an existing treaty regime, or the launch of a new one) would entail that at least some parties gain from it, but none are made worse off by it (in comparison to the prevailing legal situation prior to the change). In contrast, a Kaldor-Hicks-efficient treaty improvement would be such that the benefit granted to some states from the change would be greater than the disadvantage caused to other states; in other words, aggregate utility is increased, although there are winners and loser in a distributive sense.122 To Guzman, the strict consent requirement in international law-making epitomizes a Pareto concept of efficiency; aggregate welfare is sacrificed to the maintenance of individual state welfare.

There are several difficulties with this analysis, but let me focus on one that highlights the possible theoretical application of insights from behavioral economics. Guzman’s compelling analysis ‘against consent’ assumes first that states will, as a rule, agree to changes in treaty law if they benefit from them or at the very least do not suffer from them (Pareto efficient treaty reform); or if they are counted among the ‘winners’ from a Kaldor-Hicks efficient treaty change. In the face of these rationality-based assumptions, cognitive psychology provides a startling insight: all things considered, people actually have a tendency to prefer an existing state of affairs over alternatives that might leave them better off. This is the status quo bias. Experiments with individuals show that they disproportionately prefer the status quo over alternatives when making decisions: "faced with new options, decision-makers often stick with the status quo alternative, for example, to follow customary company policy, to elect an incumbent to still another term in office, to purchase the same product brands, or to stay in the same job".123 This phenomenon is conceptually related to the endowment effect, in the sense that people view the existing state of affairs as an endowment that they value more than possibly improved conditions, that they associate with risk and uncertainty.

The status quo bias has distinct implications for the development of legal systems and arrangements, both domestic and international. Generally, it suggests that contracts will be inherently 'sticky', and inefficient, because agents prefer to keep the law as it is, lagging behind changes in their otherwise rational interests and preferences about the way the law should be, even in the face of personal, commercial or other developments.124 A more advanced application of the status quo bias relates to default rules – rules that apply in the absence of a specific agreement to apply different rules. Coasean economics predicts that default rules – the initial legal arrangement - will not affect bargained contractual arrangements, unless precluded by transaction costs, and so their effect in real legal relations is little. Yet experimental research conducted among private contractors has confirmed the status quo bias and shown that default rules matter: there is a

121 See Trachtman, Ibid. at 128.
122 See Guzman, supra note 115 at 758.
tendency to adopt them in negotiated settings, even if they are inefficient. Thus, default rules are not just a fallback in case certain issues are left open in contracts, but have an effect on negotiated contracts as well. These phenomena have been observed not only in relation to default rules established by law, but also with respect to standard form or boilerplate terms that are not \textit{ex ante} binding upon parties.\footnote{See Korobkin \textit{ibid}, and Russell Korobkin, \textit{Inertia and Preference in Contract Negotiation: The Psychological Power of Default Rules and Form Terms}, 51 \textit{VAND. L. REV.} 1583 (1998).}

What does this imply for the critique of the efficiency of the strict consent requirement in treaty-making? The immediate implication is that states might regularly be withholding consent from new treaty regimes and treaty reforms, not (or not only) because they believe these regimes and reforms run counter to their best interests, but because of an embedded behavioral aversion to change.

Thus, where Guzman sees the consent requirement as the \textit{cause} for an observed ‘status quo bias’ in international treaty law,\footnote{It appears that Guzman intends the term in a colloquial rather than behavioral sense; see supra note 115 at 790: “The overcommitment to state control over events creates a suffocating status quo bias that does more harm than good”.} it might be that the “excessive commitment to consent”\footnote{See Guzman, supra note 115 at 749.} that he decries is in fact the formal \textit{result} of a \textit{behavioral} status quo bias. States preserve the constraints of the consent requirement, because it enables them to pursue their (imperfectly rational) preference for status quo. In some respects this makes the critique even stronger because it indicates that the consent requirement may even facilitate the scuttling of treaty regimes and reforms that would be Pareto efficient (i.e., when no state has a ‘rational’ reason to object), not just those that are Kaldor-Hicks efficient. Treaty reform can therefore be exceedingly difficult even when everybody stands to gain.

The policy implications of this theoretical application are that relaxing the consent requirement would not be sufficient to solve the problem. In many cases, states will still eschew formal legal change. Even in majoritarian, institutional rule-making settings in international organizations, states might prefer to maintain the \textit{rule-making} status quo of consent, despite the existence of alternative formal possibilities. A living example of this can be found in the World Trade Organization (WTO). Although the WTO’s institutional provisions allow for various forms of majority decision-making, including amendments to the substantive treaties,\footnote{See Arts. IX and X of the WTO Agreement: Marrakesh Agreement Establishing the World Trade Organization, Apr. 15, 1994, \textit{THE LEGAL TEXTS: THE RESULTS OF THE URUGUAY ROUND OF MULTILATERAL TRADE NEGOTIATIONS 4} (1999), 1867 \textit{U.N.T.S.} 154, 33 \textit{I.L.M.} 1144 (1994).} these provisions are rarely resorted to, and a culture of consensus continues to govern decision-making.\footnote{See Claus-Dieter Ehlermann and Lothar Ehring, \textit{Decision-Making in the WTO: Is the Consensus Practice of the WTO Adequate for Making, Revising and Implementing Rules on International Trade?}, 8(1) \textit{J. INT. ECON.} 51 (2005).}

But beyond merely refining the critique of consent, acknowledging behavioral status quo bias in treaty-making among states can also give rise to many interesting research questions and hypotheses that might be examined empirically. For example, better knowledge of the real incidence and impact
of status quo bias in treaty-making can affect strategies for treaty reform \textit{dernieure}. Multilateral treaty-law can be developed in at least four ways: (a) negotiations leading to the replacement of existing treaty regimes (e.g., the negotiation of the WTO Agreements as a comprehensive replacement of the GATT\textsuperscript{130} and patchwork of associated trade agreements that existed at the time); (b) negotiation of new commitments within an existing treaty-regime, as mandatory (or partially-mandatory) additional or revised commitments (essentially, treaty amendment, e.g., the procedures mentioned above as formally available in the WTO,\textsuperscript{131} and amendments to the International Criminal Court (ICC) Statute);\textsuperscript{132} or as (c) optional ones (e.g., the additional protocols to the Geneva Conventions,\textsuperscript{133} additional protocols to the main human rights covenants\textsuperscript{134}); and (d) negotiations conducted entirely outside existing substantive treaties (e.g., the recently concluded (but not yet in force) Arms Trade Treaty, which was negotiated within the UN, but as a treaty is independent of other arms control conventions).\textsuperscript{135} Even though the legal changes being negotiated would be identical, each of these approaches works with different default rules and environments. A combination of quantitative and qualitative research would be able to show which strategy is more successful in practice.

Perhaps even more intriguing would be research comparing the willingness of states to contract out, \textit{inter partes}, from customary international rules,\textsuperscript{136} in comparison to applicable multilateral treaty rules and various ‘soft law’ sources.\textsuperscript{137} Such a study would not assume the existence of status quo bias, of

\textsuperscript{130} See \textit{General Agreement on Tariffs and Trade} (1947), 55 U.N.T.S. 194; 61 Stat. pt. 5; TIAS 1700.

\textsuperscript{131} See \textit{supra} note 128.

\textsuperscript{132} See \textit{Rome Statute of the International Criminal Court}, 2187 U.N.T.S. 90, entered into force July 1, 2002; amendments were adopted during the 2010 review conference, notably with respect to the definition of the crime of aggression. The time of entry into effect of these amendments may vary among states parties to the Statute; indeed the amendment process includes elements of majority law-making. see Jennifer Trahan, \textit{The Rome Statute’s Amendment on the Crime of Aggression: Negotiations at the Kampala Review Conference}, 11(1) INT. CRIM. L. REV. 49 (2011).

\textsuperscript{133} Most importantly in substance, see International Committee of the Red Cross (ICRC), Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol I), 8 June 1977, 1125 U.N.T.S. 3; ICRC, Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of Non-International Armed Conflicts (Protocol II), 8 June 1977, 1125 U.N.T.S. 609.


\textsuperscript{136} In principle, states can contract around customary international law: “There is no \textit{a priori} hierarchy between treaty and custom as sources of international law. However, in the application of international law, relevant norms deriving from a treaty prevail between the parties over norms deriving from customary law.” (see \textit{Institut de Droit International}, \textit{Problems Arising from a Succession of Codification}, 1 Sept. 1995, available at \url{http://www.idi-iil.org/idie/resolutionsE/1995_lis_01_en.pdf} [last accessed 30 Aug., 2013]), except if the customary rules in question are considered to be \textit{jus cogens} – which permit no derogation (see Art. 53 VCLT \textit{supra} note 115).

\textsuperscript{137} On soft law, see Gregory Shaffer and Mark A. Pollack, \textit{Hard and Soft Law} in Dunoff and Pollack \textit{supra} note at 197.
but attempt to establish its existence and compare the relative ‘stickiness’ of custom, convention and (non-binding) soft law as default rules.

Indeed, there is much to further consider regarding behavioral insights on the efficiency of the development of customary international law, but my limited goal here is to present only selected indicative applications, and this must be reserved for future research.138

(b) Small Decision-Making Groups: Judicial Design and Conformity Effects in International Tribunals

The relatively recent rise of judicialization in international law139 provides fertile ground for behavioral research on international courts as decision-makers. Psychological research has been applied to domestic courts as individual decision-makers140 as well as to courts as small decision-making groups, with interesting results,141 and there is no reason to think that such research methods would not be applicable to international judges and tribunals, or indeed, that research results from the domestic sphere could not carry over, under certain conditions and mutatis mutandis, to the international domain as well. Behavioral research thus may hold significant implications for the design of courts and tribunals.142

As an example, consider the ongoing debate regarding the desirability of dissenting opinions in the WTO. The WTO dispute settlement system, entailing state-to-state litigation relating to international trade law, is one of the most active international tribunals today. Disputes are addressed by ad hoc panels and may be appealed to the standing Appellate Body.143

138 In a nutshell, Bradley and Gulati (supra note 114) have argued that customary international law is inefficient because it is too rigid, pursuant to the ‘mandatory’ doctrine whereby states cannot legally opt-out from a customary rule of international law after it has been formed. Interestingly, where the critique of treaty-formation discussed above argued that international law was inefficiently inflexible because it did not allow for non-consensual rules, this critique of customary law calls for states to be released from obligations they did not expressly commit to. It is not entirely clear what type of efficiency Bradley and Gulati take as their point of reference, but as far as behavioral insights are concerned, one could at least hypothesize that the removal of doctrinal/formal constraints on opt-outs from customary law would not achieve an increase in normative efficiency. A behavioral status quo bias, taking existing customary rules as the default, would lead states to generally retain their normative loyalties. Bradley and Gulati only briefly mention the possibility that psychological factors contribute to the ‘stickiness’ of customary international law (Ibid. at fn. 196, referring to Korobkin supra note 124; for some discussion of custom as default rules in a directly relevant context, see Rachel Brewster, Withdrawing from Custom: Choosing between Default Rules, 21 DUKE J. COMP. & INT’L L. 47 (2010)).

139 See Shany supra note 4.


141 For a compendium of the state of the art, see THE PSYCHOLOGY OF JUDICIAL DECISION MAKING (David E. Klein and Gregory Mitchell, eds., 2010).

142 For a survey of the political science literature on international tribunals, see Mark A. Pollack, Political Science and International Adjudication,” in OXFORD HANDBOOK OF INTERNATIONAL ADJUDICATION (Cesare Romano, Karen Alter and Yuval Shany [eds], forthcoming, 2014); none of it includes applications of cognitive psychology to international judges.

143 For a broad set of analyses of the WTO dispute settlement system see THE WTO AT TEN: THE CONTRIBUTION OF THE DISPUTE SETTLEMENT SYSTEM (Giorgio Sacerdoti, Alan Yanovich and Jan Bohanes, eds., 2010).
Dissenting or separate opinions are allowed, subject to certain formal rules and practices, such as that the dissenter must remain anonymous.\textsuperscript{144} These are, however, formally discouraged,\textsuperscript{145} and are in fact extremely rare.\textsuperscript{146} The WTO is not unique in this respect. In some domestic judicial settings, even when judges are permitted to write separate opinions, they often refrain from doing so. Members of the US Supreme Court avoid individual opinions for over a century.\textsuperscript{147} Indeed, it has been suggested that the option to write a dissenting opinion in case of disagreement actually encourages “adversarial collaboration” on the bench, leading to a high proportion of unanimous opinions in some domestic courts.\textsuperscript{148}

Meredith Kolsky Lewis has comprehensively canvassed many institutional and historical reasons explaining the lack of dissent in WTO rulings, while strongly arguing that an increase in dissenting opinions, certainly at the panel level, would have positive effects on the quality of decisions and the development of international trade law. She advocates removal of the formal preference for consensus, and several additional steps that would encourage separate opinions. In contrast, James Flett has argued equally forcefully that panel dissents have not had any appreciable effect on decisional quality, that the “collective intelligence of reasonable judges should lead them to common ground”, and that overall the collegiality of panels and the Appellate Body should be preserved.\textsuperscript{149} Others have also praised the high degree of consensus in the Appellate Body in particular.\textsuperscript{150}

This fascinating debate could benefit from behavioral insights which it currently. Notably, the current debate neither relies on L&E analysis, nor on a particular formulation of rationality, but rather on differing interpretations of institutional settings and judicial outcomes. Behavioral questions arise nevertheless. Beyond the institutional and formal constraints on dissent, are there cognitive elements in judicial behavior at the WTO that limit dissent? And how might these factors influence the assessment of the quality of consensus decisions?

In the US there is a long tradition of theoretical and empirical examination of decision-making in collegial courts (in the loose sense of courts that reach decisions as a group, with or without dissent)\textsuperscript{151} as opposed

\textsuperscript{144} The condition of anonymity applies at both the panel and Appellate Body levels; see Art. 14(3) and Art. 17(9) DSU supra note 94.
\textsuperscript{145} The Appellate Body Working Procedures (See WORKING PROCEDURES FOR APPELLATE REVIEW, circulated 16 Aug. 2010, WT/AB/WP/6 (consolidating working procedures with all amendments)) require the Appellate Body Members to make every effort to take decisions by consensus.
\textsuperscript{148} See Marsha S. Berzon, Dissent, “Dissentals,” and Decision Making, 100 CAL. L. REV. 1479 (2012), writing about her experience as a federal judge on 9th Circuit Court of Appeals.
\textsuperscript{149} See James Flett, Collective Intelligence and the Possibility of Dissent Anonymous Individual Opinions in WTO Jurisprudence, 13(2) J. INT’L. ECON. L. 287 (2010); for a rejoinder, see Meredith Kolsky Lewis, Dissent as Dialectic: Horizontal and Vertical Disagreement in WTO Dispute Settlement, 48 STANFORD J. INT’L. L. 631 (2010).
\textsuperscript{151} The terms ‘collegial’ and ‘collegiality’ in the WTO are usually in the narrower sense in which all members of a panel of division of the Appellate Body agree to the same ruling.
to individual judges. The utilization of such multi-member courts is justified by the notion that deliberation in a small, high-level group of jurists will help the court arrive at the ‘correct’ decision. However, it creates strategic interactions between members of the court, as none of them has the authority to determine the judicial outcome on their own. Judges in collegial courts inevitably must take into account the views of their colleagues. These interactions are not only strategic; they are also personal, entailing psychological elements, which open the door to sociological and cognitive analysis.

These studies indicate behavioral findings such as ‘panel effects,’ polarization, and ‘groupthink’ in which judges participating in a group decision concur with judicial outcomes that they would not have pronounced on their own—a behavioral phenomenon that can generally be referred to as ‘conformity effects.’ The group context of judicial decision-making can therefore influence judicial outcomes through cognitive channels, although the scope of this influence is still unclear.

Perhaps most troubling among the various conformity effects is the evidence from empirical research suggesting that the status of particular bench members can disproportionately influence the decisions of other members. Formal leadership (e.g., the position of chief justice, or chair of a judicial division) as well as social leadership roles in courts can influence the independence of judicial colleagues’ opinions, reducing the likelihood of dissent. This is only to be expected, and perhaps not objectionable as such, but it casts doubts on the idea that a group of judges can better approximate the correct result. One recent study found that judges in criminal appeals in one domestic court were 50% more likely to vote for defendants when a particular Justice did not preside compared with when he

152 Much of this literature pursues or engages with the so-called attitudinal approach, concerned primarily with the influence of political or ideological attitudes of judges on their decisions, especially in US Supreme Court. The literature is vast. In relation to the US Supreme Court see Jeffrey A. Segal and Harold J. Spaeth, The Supreme Court and the Attitudinal Model Revisited (2002); and Lee Epstein and Jack Knight, The Choices Justices Make (2002). Regarding appellate court, see Virginia A. Hettinger, Stefanie A. Lindquist, and Wendy L. Martinek, Judging on a Collegial Court: Influences on Appellate Decision-Making (2006).
154 Wendy L. Martinek, Judges as Members of Small Groups, in Klein and Mitchell supra note 140, at 74-75 (“If judges may squabble like children, bond like family, or behave toward one another in a more detached, professional manner, but both anecdotal and systematic evidence make clear that there is an affective component to the interactions between and among judges serving on appellate courts” (references omitted).
155 See, e.g., Pauline T. Kim, Deliberation and Strategies on the United States Courts of Appeals: An Empirical Explanation of Panel Effects, 157(5) U. Penn. L. Rev. 1319 (2009) (finding that the behavior of judges on a federal appeals panel is better explained as reflexive to the preferences of other members of the circuit than as strategic decisions related to the possibility of being overruled upon appeal).
157 Wendy L. Martinek, Judges as Members of Small Groups, in Klein and Mitchell supra note 140.
158 Ibid., at 78-79; and Haynie supra note 147.
It should be emphasized that this study examined a court in which each sitting judge was obliged to openly determine their individual position on the verdict in the form of a vote. In other words, a separate opinion was mandatory (but without a requirement of providing written reasons), not optional, ostensibly enhancing the possibility of dissent.

Another strand of research looks at the conformity effects of seniority on the bench. ‘Freshmen’ judges can be disproportionally deferential to incumbents, requiring socialization and acceptance. They might also be treated paternalistically by seniors, reducing their options for independent impact, even when the possibility of dissent exists.

On this backdrop, we might ask, to what extent do leading WTO dispute settlement roles, such as panel chairs, or Appellate Body chairpersons, dominate the reports issued under consensus – squelching dissent, as Kolsky Lewis argues? Or are there dominant personalities in panels and the Appellate Body that exercise social leadership, promoting collegiality but also preventing the development of diverse and perhaps progressive or otherwise innovative solutions to problems in WTO law? Are ‘newbie’ panelists and even Appellate Body Members (many of who arrive in Geneva with a wealth of prior professional experience, sometimes as arbitrators) sociologically and psychologically deterred from taking independent positions, let alone expressing them in dissenting or concurring opinions? Evidence substantiating hypotheses along the lines of such undesirable conformity effects could agitate in favor of the concern voiced by Kolsky Lewis.

It would be methodologically challenging to systematically collect such evidence. Qualitative empirical research based on semi-structured interviews of panelists, Appellate Body Members as well as attorneys and staff of the WTO secretariat would be one avenue, although constraints of confidentiality might restrict the knowledge gained to the level of anecdotal evidence, which to some extent already circulates among cognoscenti. There are other methods, however. Conformity effects in WTO dispute settlement – specifically, the relative weight of panel chairs in determining the - can in fact be gleaned from existing quantitative research that has been conducted with respect to another long-standing debate in international judicial design: the question of whether rulings rendered by adjudicators appointed ad hoc are of lower quality in comparison to permanent or standing judiciaries. As already noted, WTO panelists are appointed ad hoc, while appeals are made to the standing Appellate Body. Proposals have been made to create a permanent panel body in the WTO. Proponents of such a standing

162 On conducting such interviews with elite groups in political circumstances, see Joel D. Aberbach and Bert A. Rockman, Conducting and Coding Elite Interviews, 35(4) PS: POL. SCI. & POL. 673 (2002).
body often claim that permanent arbitrators or panelists, as the case may be, will improve the quality of decisions, because of the experience gained by them in their role as adjudicators. Thus, it has been argued that more experienced panelists will reduce the rate of reversals made by the Appellate Body, as an indication of panel decision quality. Yet in a quantitative study, Marc Busch and Krzystof Pelc have shown that the experience of panelists, in general, has no statistical effect on the likelihood of panel rulings being reversed. However, when the panel chairs are experienced, rulings are far less likely to be reversed by the WTO Appellate Body. This strongly suggests that panel chairs have a disproportionate role in panel outcomes. It also shows a high degree of acculturation to the system over time.

To be sure, this additional, empirically-based knowledge does not resolve the normative debate regarding the lack of dissent in the WTO. Indeed, those opposed to increased expressions of dissent would argue that it merely emphasizes the importance of consensus gathered around experienced chairs who can promote the quality of panel rulings. There is no need, however, to take a position on this question here. For present purposes, the hypotheses raised by behavioral research on courts as small decision-making groups are clearly relevant to international tribunals, in this case demonstrating the effects of cognitive elements in judicial behavior dissent in the WTO, with implications for the quality of judicial decisions.

(c) The Individual: Target Selection and Cognitive Framing Effects in International Humanitarian Law

International Humanitarian Law (IHL) – the 'jus in bello' – is a branch of public international law that imposes significant restrictions on the use of violence by military forces during international (and non-international) armed conflict, through a mix of treaty and custom. Among IHL's most fundamental elements are the complementary principles of military necessity and proportionality. Both of these principles require military commanders (acting individually or in very small decision-making groups or 'cells', as is often the case in practice) to make judgment calls, either in the heat of battle, or in more deliberate, strategic settings. Such targeting decisions involve a combination of operational and legal factors that amount to a kind of cost-benefit analysis necessarily performed under conditions of

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164 WTO, Dispute Settlement Body Special Session, Contribution of the European Communities and its Member States to the Improvement of the WTO Dispute Settlement Understanding (WTO Doc. TN/DS/W/1, Mar. 12, 2002).
166 See, generally, THE HANDBOOK OF INTERNATIONAL HUMANITARIAN LAW (Dieter Fleck and Michael Bothe, eds., 2008).
uncertainty – the Clausewitzian fog of battle\textsuperscript{169} – and therefore provide an exceptionally appropriate area for research involving legal standards, cognitive psychology of individuals and empirical, even experimental, research.

Under the IHL principle of military necessity, attacks must be directed at 'military objectives', i.e., objectives that cumulatively make an effective contribution to the adversary's military action; and whose destruction or neutralization offer a definite military advantage.\textsuperscript{170} Under the IHL principle of proportionality, it is recognized that an attack against a military objective may cause "incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof", but this damage must not be "excessive in relation to the concrete and direct military advantage anticipated".\textsuperscript{171}

In other words, under IHL, military commanders must assess the potential for a military advantage proffered by a contemplated attack on a military target, and balance this advantage against the possible harm to civilian objects (often referred to as 'collateral damage'). Not surprisingly, however, the assessment of both sides of the equation is rife with speculation and subjectivity.\textsuperscript{172} Moreover, the content of these tests remains vague and problematic in its application, both ex ante and ex post, for example in the context of 'targeted killings'\textsuperscript{173} and drone attacks,\textsuperscript{174} or in weighing the use of aerial attacks of different types (e.g., 'precision' versus 'area' bombings) against each other,\textsuperscript{175} or against the option of more accurate – but more dangerous – methods of ground incursions ("boots on the ground").

This vagueness has led some jurists to establish the notion of the "reasonable military commander" as a normative benchmark that can be seen as an objective – perhaps minimum - standard of conduct with respect to operative decisions such as targeting. A committee established to advise the Prosecutor of the International Criminal Tribunal for the Former


\textsuperscript{171} See, \textit{inter alia}, Art. 57(3) and Art. 51(5)(b), Protocol I, supra note 133; the Protocol is not conventionally binding upon all states, but this provisions can be taken, at least for present purposes, to be a concise formulation of the principle of proportionality in customary international law.


\textsuperscript{174} The literature on drone warfare has grown exponentially over the last few years. See, e.g., Chris Jenks, \textit{Law from Above: Unmanned Aerial Systems, Use of Force, and the Law of Armed Conflict}, 85 N. DAK. L. R. 649 (2010).

\textsuperscript{175} A problem of historical proportions; see W. Hays Parks, \textit{‘Precision’ and ‘Area’ Bombing: Who did Which, and When?}, 18(1) J. STRATEGIC STUD. 145 (1995).
Yugoslavia (ICTY) regarding the legal aspects of attacks conducted by the North Atlantic Treaty Organization (NATO) in Kosovo in the late 1990’s had this to say on the applicable legal standard:

The answers to these questions are not simple. It may be necessary to resolve them on a case by case basis, and the answers may differ depending on the background and values of the decision maker. It is unlikely that a human rights lawyer and an experienced combat commander would assign the same relative values to military advantage and to injury to noncombatants. Further, it is unlikely that military commanders with different doctrinal backgrounds and differing degrees of combat experience or national military histories would always agree in close cases. It is suggested that the determination of relative values must be that of the "reasonable military commander". Although there will be room for argument in close cases, there will be many cases where reasonable military commanders will agree that the injury to noncombatants or the damage to civilian objects was clearly disproportionate to the military advantage gained" (emphases added – T.B.).

In many contexts, such a standard of reasonableness would be viewed as a legal fiction of sorts, or as an aspirational, normative test. But employing theories and methodologies from behavioral economics, applied to the relevant decision-makers – military commanders whose actions are attributable to states and in certain circumstances might bear international criminal responsibility for their own decisions - it should be possible to grant it real meaning. This could enable us to draw the contours of an answer to what is essentially an empirical question: who is the reasonable military commander?

Interesting hypotheses in this respect arise from the study of cognitive framing effects that arise when alternative descriptions of the same decision problem give rise to different preferences. Experimental research on the psychology of risk-related decision-making has shown that individual decision-makers' preferences can shift when the same problem is framed in different ways. In the most foundational experimental proof of this behavioral bias, Tversky and Kahneman showed that subjects made different choices when the outcomes of their decisions were depicted as losses rather than gains (conforming to general prospect theory), even though they were essentially identical. The original experiment related to expenditure on health measures in the face of a deadly epidemic disease. It is not difficult to tweak this experiment to address military necessity and collateral damage. Might military commanders be susceptible to the same distortions of rationality? And if so, what are the implications for


179 Framing effects are discussed generally in note 51 supra.

international law? Should the standard of ‘reasonable military commander’ relating to proportionality in targeting decisions take into account the ways in which reasonableness diverges from ‘perfect’ rationality?

Consider, for example, the following general design of an experiment, closely following the Tversky and Kahneman framework. Two groups of subjects would be presented with the following hypothetical:

Imagine that the enemy has stockpiled a significant quantity of strategic munitions in the basement of an apartment building that normally houses 200 civilians. As part of a military operation your unit has been assigned the mission of eliminating this stockpile. You have two alternative plans of action to choose from, both of which will eliminate the munitions.

A first group of subjects would be posed with this question:

If plan A – a manned aerial attack - is adopted, 80 civilians will survive.
If plan B – an unmanned drone attack - is adopted, there is 1/3 probability that all civilians will survive, and 2/3 probability that no civilians will survive.

A second group of subjects would be posed with what is in essence the same scenario, but framed differently:

If plan A – a manned aerial attack - is adopted, 120 civilians will die. If plan B – an unmanned drone attack - is adopted, there is 2/3 probability that all civilians will die, and 1/3 probability that no civilians will die.

If the differential framing has the same effect in this IHL context as it has elsewhere, we might hypothesize that the first group will prefer plan A, whereas the second group will prefer plan B. An outcome like this would be significant not only in the construction of the ‘reasonable military commander’ as a bounded rational actor, but could also contribute to the design of military manuals, for example: the wording of guidelines matters not only for interpretation but for cognition. Moreover, an experiment like this could also be used to test whether military commanders with different levels of experience and training have developed rationality that overcomes the ‘trick’ of framing effects, by using different groups from among military commanders and civilians as subjects.

This is only an indicative experiment. Many others could be constructed to test the rationality of military commanders in different circumstances and in comparison with other groups. Consider the following. Subjects (playing the role of military commanders, or simply as representatives of the general public) are presented with two risky military operations. In scenario A, there is a 9/10 chance of achieving a small military gain (1, on a scale of 1 to 10); and a 1/10 chance of achieving nothing from the operation. In scenario B, there is a 1/10 chance of gaining a very significant military advantage (say, 10 on the same scale); and a 1/10 chance of gaining nothing. Subjects would

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181 I highlight here the advantages of experimental research, but this does not in any way reduce the importance of field-based empirical research on similar topics, e.g., Fellmeth supra note 6.
Then be asked (a) which alternative they would approve; and (b) how much collateral damage would be justified in each option (the ‘price’ of the operation, which can under terms of proportionality can serve as a proxy for the expected military advantage, all things considered). Similarly constructed experiments have exposed the cognitive phenomenon of ‘preference reversals’: people may prefer gamble A, but place a higher price-tag on gamble B. Which of these calculi should be adopted as representative of a ‘reasonable military commander’? Perhaps military commanders are less prone to this cognitive weakness in rationality?

Another issue begging for behavioral analysis is the question of ‘force protection’: to what extent should military forces take risks in order to prevent civilian harm? And is the reduction of risk to one’s own forces a legitimate factor in potentially increasing risk to civilians as part of the proportionality calculus? The normative issues involved are absorbing, but no less intriguing would be a study from which we might gain an understanding of how force protection factors into decision-making. In the preference reversal example just discussed, we could, for example, replace collateral damage with own-costs. But experiments could be designed taking into account all three factors: military advantage, collateral damage and own losses in combat. Thus, an experiment with relevant subjects might pose the following question:

You are assessing the proportionality of an attack against key enemy personnel. You may choose between two modes of attack: Option A - aerial attack; Option B - ground troop attack.

A first group would be given the following alternative outcomes (the numbers expressing relative results on a scale of 1 to 10 reflecting the severity of collateral damage and the military gain, respectively):

Option A – Civilians killed: 6; Military advantage: 7
Option B – Civilians killed: 2; Military advantage: 10

A second group would be fed the following information:

Option A - Civilians killed: 6; Military advantage: 7; Soldiers killed: 10
Option B - Civilians killed: 2; Military advantage: 10; Soldiers killed: 4

And, finally, a third group would be presented with these options:

Option A – Civilians killed: 6; Military advantage: 7; Soldiers killed: 4
Option B – Civilians killed: 2; Military advantage: 10; Soldiers killed: 10

Here the hypothesis, or rather, the examined element of bounded rationality, would also be one of ‘preference reversals’: the relative


evaluation of two alternatives is affected by an exogenous factor. Note that all three groups are faced with the same outcomes in the strictest terms of proportionality: the number of civilians killed compared to the military advantage (narrowly construed, i.e., without taking into account force protection considerations). The only difference between the three groups relates to the degree of harm caused to own forces. The first group has no data on this, the second group faces moderate damage, the third a very high degree of harm. Moreover, option B is clearly superior to A in terms of proportionality, for all groups. Nevertheless, one might hypothesize that subjects in the third group might be deterred by the high number of own casualties in option B, preferring A and in essence reversing the rational preference. At the very least, this would show us that force protection is taken into account, with or without legal basis.

In short, it appears that behavioral and experimental analysis has great potential to inform international humanitarian law – as well as other areas of international law in which individuals are key decision-makers, such as international economic law and human rights.

VI. CONCLUSIONS

The incorporation of insights from cognitive psychology and behavioral economics into the study of international law is a difficult but necessary next step in the evolution of a legal discipline that has over the last two decades learned to engage with the ever-increasing complexity and sophistication of other academic fields such as political science and economics. This article has endeavored to set out a general yet comprehensive and systematic framework for taking that step, an intellectual invitation to add behavioral analysis to the international legal researcher’s toolbox.

We have seen that there are methodological challenges involved, as a matter of course. Behavioral economics focuses on individual behavior, where international law is the domain of states, peoples, organizations and other collectives, in addition to individuals. Behavioral economics is a field immersed in experimental and empirical research which can be difficult to replicate in the international arena. Behavioral analysis also lacks the neat parsimony of traditional rational choice theorizing, which has gained a following among international legal researchers. These challenges are not, however, weaknesses, but rather strengths, as we struggle to better understand how international law works, and how it interacts with human behavior at any level. As the examples in section V illustrate, there is much to study through behavioral analysis at the state, group and individual levels. Theoretical applications, field studies and experimental research are all methodologies that can be brought to bear on behavioral international law, in practically all sub-fields. Indeed, those examples were of an almost minimal nature: the menu of possible research avenues is huge, as is the potential for gaining a richness and depth that currently only exists in a small segment of empirical work relating to international law, possibly with greater impact.

The challenge now is to design and execute rigorous empirical research programs that can illuminate behavioral deviations from rationality in decision-making that bears upon international legal problems. As much as
there is room for enthusiasm towards the advent of behavioral international law, there is also a crucial need for caution, avoiding making sweeping claims about international law. In order to avoid the difficulties of acceptance and indeed legitimacy that have been faced by other theoretical approaches to international law, and in particular rational choice, a behavioral approach to international law must be pursued with both methodological meticulousness and intellectual humility.