Behavioral Jurisprudence: The Quest for Knowledge about the Ex-ante Function of Law and Behavior

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1. Introduction

Law has massive potential. If successful, contemporary law can protect our property, it can keep our environment free from pollution and degradation, it can safeguard our markets and financial institutions, and it can keep us safe from violence and damaging behavior. To do so, law must shape human and organizational conduct, and reduce risky and harmful behavior.

Yet, law can fail in its behavioral function. Just think how the decades of legal responses to illicit recreational drugs have not been able to prevent or end the ongoing opioid epidemic that is ravaging communities across the United States. Or consider how legal rules against sexual misconduct have not been effective in foiling the current #Metoo crisis that has victims speaking out from across different types of organizations from the Boy Scouts to the courts. And what about the ever-stricter rules against the usage of performance-enhancing substances in sports that in the worst cases seem to have led to ever-cleverer ways to evade detection, such as the ingenious doping program the Russians developed for the Sochi Olympics.

To truly achieve its potential, law must somehow come to shape behavior. It must move outside of the legislative and adjudicative arenas, to operate in our markets, societies, and even inside our homes and private lives. Rather than ask what the law is, how it should be interpreted or what the law should be, we must come to ask how the law shapes our behavior. This means we must change the focus in our inquiry of law. Rather than use an ex-post perspective to address behavior, where the conduct is given in the facts of the case and the question is

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how to apply the law to the case, we must adopt an ex-ante perspective where we seek to understand how law can affect future cases and future behavior.

This essay will discuss four questions about the ex-ante function of law and how it can shape future behavior. It will do so inspired and to some extent reflecting on Yuval Feldman's *The Law of Good People*.[1] First it will address what the ex-ante function of law is and why it is important. Second, it will ponder what knowledge there is about the ex-ante function of law. Third, it will discuss why this body of knowledge has not had more attention and focus, looking at the structural biases within law and broader society and human psychology that are stacked against it. It will conclude by thinking about what this means for the field of law and presenting a research agenda for a behavioral jurisprudence that makes the ex-ante function of law central and that controls biases against law's behavioral functions. But before we begin let us first look at Feldman's *Law of Good People*.

2. The good, the bad, and the rethinking of law and behavior

Feldman's *The Law of Good People* is of great importance to the study of law and behavior. His work provides a vital correction to such study in showing that ethicality plays a major role in how people respond to the law. His book focuses on how such ethicality plays a role in rule abiding and rule breaking behavior of what he calls "good people."[2] With this, he tries to contrast his work with the predominant focus in the law on "bad people" who are committed to break the law. He argues that lawbreaking by ordinary people is common and that the cumulated damages of such everyday transgressions are significant if not more than those by what may be seen as "bad people."[3]

We can trace the idea that law focuses on bad people in ancient writing. Consider for instance how Aristotle wrote: "For they [people, generally] hold that while the good man, whose life is related to a fine ideal, will listen to reason, the bad one whose object is pleasure must be controlled by pain, like a beast of burden. This is why they say that the pains inflicted should be those that are most contrary to the favored pleasures."[4]

Feldman argues that because good people also can behave badly and that because the accumulated cost and damage of such misconduct is large, the law must also focus on such good people.[5]

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[1] Yuval Feldman, THE LAW OF GOOD PEOPLE: CHALLENGING STATES' ABILITY TO REGULATE HUMAN BEHAVIOR (2018).

[2] *Id.*, 1.

[3] *Id.*, 1.

[4] ARISTOTLE, *ETHICS* (1976):337 (section 1180a15).

[5] Feldman, *supra note* 1, ix.

Feldman argues that good people can come to break rules under two conditions. First are the authentic good people who have blind spots or moral forgetting, and thus see reality in a biased way without realizing it. And second, there are situational wrongdoers who use justifications in the situation to behave badly without realizing it. *The Law of Good People*'s core argument is that the law fails to successfully address these two types of good people.[6]

His book draws on the field of behavioral ethics to show how law can better influence rule breaking behavior of good people. Here he clearly argues that we must look beyond law's traditional tools of sanctions and incentives. Drawing on psychological insights about the dual process model of cognition, he argues that most behavior does not involve calculated decisions that are a basic premise for sanctions and incentives to work as they have been designed. Instead, Feldman focuses on a core insight from behavioral ethics, namely that people have a "bounded ethicality" and that "in a considerable number of cases, people do not engage in any form of deliberative moral reasoning before deciding whether or not to obey the law." [7]And because of this, people may come to do harmful things and break rules even though they are not aware that it is unethical to do so. He argues that this necessitates a different approach to compliance, one beyond traditional enforcement mechanisms and even alternatives that have developed such as procedural justice interventions, nudges, social norms, or de-biasing techniques.[8]

The book's contribution may be far larger than it presumes. As it focuses on "good people", it implicitly argues that its core findings on how bounded ethicality affects traditional enforcement and alternative approaches to misconduct do not seem to apply to "bad people." Yet, as I have argued elsewhere, in a forthcoming paper co-authored with Feldman and Melissa Rorie, there are some remarkable similarities in findings from behavioral ethics about good people and findings in criminology about criminal behavior[9], which Feldman's book would mostly categorize as committed by "bad people." Decades of criminological research has for instance shown that there is no sound proof that punishment has a deterrent effect on individual and organizational criminal behavior.[10] Criminologists have also shown that people are more likely to commit crime when they are able to neutralize guilt and shame beforehand[11], similar to ideas of moral licensing that Feldman discusses from

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[6] *Id.*, x.

[7] *Id.*, 20.

[8] *Id.*, 21.

[9] Yuval Feldman, Melissa Rorie, & Benjamin Van Rooij, *Rule-Breaking without Crime: Insights from Behavioral Ethics for the Study of Everyday Deviancy*, 44 CRIMINOL. 8, 11 (2019).

[10] Daniel S. Nagin, *Deterrence in the Twenty-First Century*, 42 CRIME JUST. 199, 263 (2013); *Deterrence: A Review of the Evidence by a Criminologist for Economists*, 5 ANNU. REV. ECON 83, 105 (2013); Sally Simpson et al., *Corporate Crime Deterrence: A Systematic Review*, 10 CAMPBELL SYST. REV. 5, 88 (2014).

[11] Shadd Maruna & Heith Copes, "*What Have We Learned from Five Decades of Neutralization Research?*, 32 CRIME JUST. 221, 320 (2005); W. William Minor, *Techniques of Neutralization: A Reconceptualization and Empirical Examination*, 18 J. RES. CRIME AND DELIN. 295, 318 (1981); William A. Stadler & Michael L. Benson, *Revisiting the Guilty Mind: The Neutralization of White-Collar Crime*, 37 CRIM. JUST. REV. 494, 511 (2012); Gresham M. Sykes & David Matza, *Techniques of Neutralization: A Theory of Delinquency*, 22 AM. SOCIOLOG. REV. 664, 670 (1957).

behavior of good people. And just as behavioral ethics shows that unethical behavior is situational, criminology shows that criminal behavior is situational as overlapping strands of routine activities theory,[12] situational crime prevention theory[13] and ecological evolutionary crime theory and environmental criminology[14] have demonstrated.

Based on all this, our laws may not just need rethinking for bad behavior of "good people" but for people generally, whether they are good or bad. And thus, traditional legal tools using sanctions and incentives for behavior by "bad people" are equally questionable as when they are used for "good people." The problem is not just that law does not differentiate between addressing behavior of "good" and "bad" people. The problem is that law does not make shaping human conduct central enough.

3. The ex-ante approach to law

If law is to shape human conduct, it must come to shape behavior before it happens. This is the ex-ante function of law, where law comes before behavior.[15] This stands in contrast to an ex-post function of law where the legal system responds to past behavior and tries to resolve disputes that arise out of such conduct, applies the law to the facts of the case, and seeks to deliver justice to society.

Feldman also discusses these two perspectives, and argues for more emphasis on the ex-ante function of law in shaping behavior As he writes: "These new approaches use an *ex-ante* approach that attempts to regulate behavior in advance rather than an *ex-post* approach that tries to determine responsibility."[16] He further states that: "The move to an ex-ante design reduces the need to find the smoking guns required by evidentiary rules; hence, it gives more importance to dealing with minor mis-conducts that cannot justify ex-post legal examination but in the aggregate are not less important."[17] And his core argument, which I cite in full here:

> In general, I argue that we should separate situations of specific individuals where we need to define *ex-post* the level of responsibility of a given individual who is on trial

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[12] Lawrence E. Cohen & Marcus Felson, *Social Change and Crime Rate Trends: A Routine Activity Approach*, 44 AM. SOCIOL. REV. 588, 608 (1979); Marcus Felson, *Routine Activities and Crime Prevention in the Developing Metropolis*, 25 CRIMINOL. 911, 932 (1987); Travis C. Pratt, Kristy Holtfreter, & Michael D. Reisig, *Routine Online Activity and Internet Fraud Targeting: Extending the Generality of Routine Activity Theory*, 47 J. RES. CRIME DELINQ. 267, 296 (2010).

[13] Christopher Birkbeck and Gary LaFree, *The Situational Analysis of Crime and Deviance*. 19 ANNU. REV. SOCIOL. 113, 137 (1993); Ronald VG Clarke, *"Situational" Crime Prevention: Theory and Practice*. 20 BR. J. CRIMINOL. 136, 147 (1980).

[14] Paul J Brantingham and Patricia L Brantingham, *Environmental Criminology* (Sage Publications Beverly Hills, CA, 1981); Clarence Ray Jeffery, *Crime Prevention through Environmental Design*, vol. 91 (Sage Publications Beverly Hills, CA, 1971); Richard Wortley and Michael Townsley, *Environmental Criminology and Crime Analysis* (Taylor & Francis, 2016).

[15] cf. John M. Darley, Kevin M Carlsmith, & Paul H. Robinson, *The Ex Ante Function of the Criminal Law*, LAW SOC. REV. 165, 190 (2001).

[16] FELDMAN, *supra note* 1, xi

[17] *Id.*, xi.

given his or her limited awareness from situations where we examine *ex-ante* how to mobilize a given population, where our focus is on the collective. The first type of situation is the traditional view of law, but the fact that current studies show that ethical awareness is limited might not be enough to lead to a normative change without more research. However, when it comes to *ex-ante* intervention, even when we cannot fully determine the strength of the non-deliberative component in people's ethical motivation, we are able to predict that this component is likely to change the behavior of an unknown proportion of the population and hence should affect the *ex-ante* design of law.[18]

Feldman thus places the focus on the ex-ante function of law within the confines of limited ethicality and non-deliberative components of ethical behavior. Here, he narrows the focus on the ex-ante function of law somewhat. And in the remainder of his book he continues within this vain, as much of the discussion on the ex-ante function is about what regulators and those seeking to change behavior through law can predict about the ethicality of people they try to influence. By doing so he shows clearly how behavioral ethics can play a role in the ex-ante function of law, but he makes less clear what the ex-ante function of law in shaping future conduct is generally and what mechanisms overall play a role in this function.

This essay returns to the broader, original, notion of the ex-ante function of law in shaping future behavior that Feldman started his book with. Here, it goes back to the work by Darley and Carlsmith that developed this idea in a paper in the Law and Society Review about legal knowledge in the realm of criminal law, more about this study will follow later in this essay. In this approach, law has a major function to play in preventing harmful and unjust behavior.[19] Law does so by shaping human and organizational conduct as it occurs after the laws have been made. As such, law comes to shape future behavior. This function of law is vital as it forms the basis of our contemporary societies in which legal rules have come to govern the way humans and organizations interact. It is a vital, yet often invisible function. The mechanisms through which law shapes human conduct are not merely the ones we so often associate with law. Law's influence on future behavior does not just occur through courts, legal arguments, legal text codes, or even law enforcement. Law shapes behavior through a multitude of mechanisms that are both conscious and unconscious, and do not just involve legal punishment and incentives, but also social norms, individual and organizational capacities to obey rules, opportunities for rule breaking, perceptions of legitimacy, and unconscious processes all of which of course also are shaped and shape forms of bounded ethicality as Feldman has so clearly shown.

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[18] *Id.*, 10.
[19] Darley et al., *supra note* 15.

The ex-ante function of law is thus a crucial part of our legal systems. It is through this function that laws can prevent violent crime, that they can come to reduce pollution and curb climate change, that they can try and reduce sexual misconduct in the work place, or prevent police violence, and that they can curb financial misconduct and prevent the next financial crisis.

In seeing the ex-ante function of law as law's influence on future behavior, this essay goes beyond how the term has been used in most prior legal scholarship (that is other than Feldman and Darley and Carlsmith). Legal economists have for instance used the term when discussing different forms of regulatory instruments. Some instruments would work ex-ante, namely before the harm occurs, including safety standards and permits, and others would work ex-post such as taxes on harmful behavior.[20] Legal scholars have also used the term ex-ante when making arguments for why certain legal rules are necessary. Here, for instance in the field of intellectual property rights law there has been debate about justifications for patent rights because the development of such right may spur creativity and thus work ex-ante of the desired behavior, or whether such rights come after there is a certain amount of activity and thus are the result of it.[21] Legal scholarship has also applied the term when studying legal decision making. Here, it focuses on the inherent problem that judges and jurors must make ex-post decisions where they at times must apply standards that involve an ex-ante recreation of how the decision was made, for instance when making judgments about negligence in liability.[22]

Yet, none of these usages of the ex-ante function of law fully relates to the broader ex-ante function law has in shaping future behavior. The discussion of regulatory instruments, for instance, uses the term "ex-post" for tort liability, indicating that such liability exists after the harmful activity occurs. But of course, at least in theory, the establishment of such liability in law may also act as a deterrent for all those considering the same harmful behavior in the future.[23] And as such, the usage of the term ex-ante in such prior legal scholarship does not relate to the overall function law has in shaping future conduct. Such prior legal scholarship on ex-ante relates to where legal rules and their implementation occur (after conduct has occurred or before) as in the debate about regulatory instruments and on patent rights, while such placement even

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[20] See e.g. Charles D. Kolstad, Thomas S. Ulen, & Gary V. Johnson, *Ex Post Liability for Harm Vs. Ex Ante Safety Regulation: Substitutes or Complements?*, 80 AM. ECON. REV. 888, 901 (1990).

[21] Mark A. Lemley, *Ex Ante Versus Ex Post Justifications for Intellectual Property*, UNIV. CHICAGO L. REV. 129, 149 (2004).

[22] Kim A. Kamin & Jeffrey J. Rachlinski, *Ex Post≠ Ex Ante*, 19 L. HUMAN BEHAV. 89, 104 (1995).

[23] W. Jonathan Cardi, Randall D. Penfield, & Albert H. Yoon, *Does Tort Law Deter Individuals? A Behavioral Science Study*, 9 J.EMP. LEGAL STUD. 567, 603 (2012); Don Dewees & Michael Trebilcock, *The Efficacy of the Tort System and Its Alternatives: A Review of Empirical Evidence*, 30 OSGOODE HALL L. J. 57 (1992); Michael J. Saks, *Do We Really Know Anything About the Behavior of the Tort Litigation System. And Why Not?*, 140 Univ. PENNSYL. L. REV. 1147, 1292 (1992); Gary T. Schwartz, *Reality in the Economic Analysis of Tort Law: Does Tort Law Really Deter*, 42 UCLA L. REV. 377 (1994); *Mixed Theories of Tort Law: Affirming Both Deterrence and Corrective Justice*, 75 TEX. L. REV. 1801 (1996).

after behavior occurs can still affect future behavior. And such scholarship concerns how within the legal system decision-making and analysis occurs after the fact and in judgment of such past facts, but in doing so must still make legal analysis based on an ex-ante understanding of such facts.

The remainder of this essay will look deeper at what we know about how the law's ex-ante function works, and second why such knowledge has not been more successful in improving legal design and shaping mainstream legal thinking.

4. Existing knowledge about law's ex-ante behavioral mechanisms

There is an extensive body of knowledge about how law can shape future behavior. This body of law has developed across the social and behavioral sciences, including in the fields of psychology, criminology, behavioral economics, sociology, anthropology, public administration, organizational science, management science, and of course behavioral ethics as discussed in Feldman's book.

So far, these distinct bodies of literature have remained fragmented. And this is not just so because it has remained siloed within different disciplines, which it surely has. Some scholarship has just focused on studying a singular mechanism through which law shapes behavior. Tom Tyler and the many scholars drawing on his work as such have focused on how the law's legitimacy and especially its procedural justice can shape legal compliance.[24] Or, in criminology, a host of scholars have focused on assessing the validity of particular criminological theories as explaining crime, for instance work on self-control[25] or on deterrence.[26] There has also been a large distinction between work looking at law's influence on criminal behavior and work looking at behavior more generally. And there have been differences between work looking at how law shapes individual conduct and studies looking at law's effect on organizational wrongdoing. Finally, of course many studies have focused on particular

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[24] For an overview, see Daniel S. Nagin & Cody W. Telep, *Procedural Justice and Legal Compliance*, 13 Annu. Rev. L.Soc. Sci. 5, 28 (2017).

[25] See, e.g., Michael R. Gottfredson & Travis Hirschi, A General Theory of Crime (1990); Harold G. Grasmick et al., *Testing the Core Empirical Implications of Gottfredson and Hirschi's General Theory of Crime*, 30 J. Res. Crime Delin. 5, 29 (1993).

[26] See, e.g. Daniel S. Nagin, *General Deterrence: A Review of the Empirical Evidence*, in Deterrence and Incapacitation: Estimating the Effect of Criminal Sanctions on Crime Rates (A. Blumstein, A., Cohen, J. & Nagin, D. ed., 1978); *Criminal Deterrence Research at the Outset of the Twenty-First Century*, Crime Just. 1, 42 (1998); *Imprisonment and Crime Control: Building Evidence-Based Policy*, in Contemporary Issues In Criminological Theory And Research: The Role Of Social Institutions 309, 317 (2012); Nagin, *supra note 10*; *Deterrence: A Review of the Evidence by a Criminologist for Economists*.; Daniel S. Nagin, Francis T. Cullen, & Cheryl Lero Jonson, *Imprisonment and Reoffending*, 38 Crime Just. 115, 200 (2009); Daniel S. Nagin & John V. Pepper, ed., Deterrence and the Death Penalty (2012); Daniel S. Nagin & Greg Pogarsky, *Integrating Celerity, Impulsivity, and Extralegal Sanction Threats into a Model of General Deterrence: Theory and Evidence*∗, 39 Criminology 865, 892 (2001).

areas of legal rule breaking, such as for instance tax evasion, industrial pollution, communal crime, corruption, or unsafe driving.

All of this shows that the ex-ante function of law concerns a multitude of laws and a multitude of behaviors that defy easy generalization. It also shows that the study of the ex-ante function of law has become compartmentalized in different strands of theory, that focus on different behavioral mechanisms, different behaviors and different sets of legal rules.

Feldman's book presents a unique form of synthesis through the perspective of behavioral ethics on a wider range of behavioral mechanisms and the behavior of "good people." Similarly, Friedman has recently provided a much-awaited synthesis of some of the core mechanisms through which law shapes behavior in his 2016 book entitled *Impact*.[27] However, just like Feldman, Friedman has a particular focus, sociology, and also does not elaborate deeply on organizational behavior and organizational processes.

In the traditional approach to law and behavior, one that has remained implicit for a long time, but which has become more explicit with the advent of law and economics, a particular view of human and organizational responses to law has been common. In such view, people and organizations make free, amoral, rational, and individual choices in response to costs and benefits they see in complying or breaking legal rules. In this view, achieving behavioral change requires a proper design of the law's incentives.

To truly understand the ex-ante function of law, an empirical perspective is necessary, one that forces us to look beyond the models and assumptions that have been dominant in traditional legal scholarship and law and economics analysis.

The empirical body of knowledge about the ex-ante function of law offers several fundamental challenges to the traditional non-empirical assumptions about how law may impact behavior. As a first, overall finding, also discussed in Feldman's book, is that legal incentives often do not work as they have been designed. Most clearly this applies to the deterrent effect of legal sanctions. Empirically, across a range of individual and organizational behaviors, there is significant doubt that stricter punishment in of itself can actually achieve effective deterrence.[28] Rather than focus on strong punishment, the focus should be on certain punishment. There is clearer evidence that in order to create deterrence the certainty of punishment is more important than its severity[29], and that a threshold level of certainty must be achieved before sanctions work.[30]

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[27] Lawrence M. Friedman, Impact (2016).

[28] For e.g. Nagin, *supra note* 10; Nagin et al., *supra note* 26; Nagin & Pepper, *supra note* 26; Simpson et al., *supra note* 10.

[29] Nagin, *supra note* 10.

[30] Don W. Brown, *Arrest Rates and Crime Rates: When Does a Tipping Effect Occur?*, 57 Social Forces 671, 682 (1978); Mitchell B. Chamlin, *A Longitudinal Analysis of the Arrest-Crime Relationship: A Further Examination of the Tipping Effect*, 8 Just. Quart. 187, 199 (1991).

Moreover, such certain punishment will only work if people actually perceive that punishment is inevitable.[31] Literature also questions whether other incentives such as tort or rewards or bonuses can have the desired effect.[32]

Empirical studies about the ex-ante influence of law on behavior further question whether people are fully free to decide in how they respond to legal rules. In some cases, people may lack the capacity to do as the law demands. Here we can think of different types of abilities. One key example is whether people have sufficient self-control, as empirical studies have found a persistent link between low self-control and criminal behavior.[33] Another example of how capacity can obstruct law's influence on behavior is legal knowledge. Several empirical studies have shown how people have only a limited amount of knowledge about the law and that without knowing the law they will be unable to comply with it.[34]

Vice versa, people may not be free to decide how to respond to the law as they do not always have the opportunity to break the law and thus their response to the law may not be a response to the law's incentives but rather one that is given by the practical situation.

Several strands of criminology have consistently found that the practical and situational context of rule breaking matters.[35] Similarly, behavioral ethics, as also discussed by Feldman, shows that when there is ample opportunity to break rules people may find a situational legitimacy and more easily do so.[36]

Empirical studies of law's influence on behavior also show that people do not just make individual choices. People are influenced by others through the

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[31] Robert Apel, *Sanctions, Perceptions, and Crime: Implications for Criminal Deterrence*, 29 J.Quant. Criminol. 67, 101 (2013); Dorothy Thornton, Neil Gunningham, & Robert A. Kagan, *General Deterrence and Corporate Environmental Behavior*, 27 Law & Policy 262, 288 (2005).

[32] Uri Gneezy, Stephan Meier, & Pedro Rey-Biel, *When and Why Incentives (Don't) Work to Modify Behavior*, 25 J.Econ. Perspect. 191, 209 (2011); Samuel Bowles, *Policies Designed for Self-Interested Citizens May Undermine "the Moral Sentiments": Evidence from Economic Experiments*, 320 Science 1605, 1609 (2008); Bruno S. Frey, "Institutions and Morale: The Crowding-out Effect," *Economics, Values, and Organization* 437, 460 (1998); Bruno S. Frey & Reto Jegen, *Motivation Crowding Theory*, 15 J.Econ. Surveys 589, 611 (2001); Roland Bénabou & Jean Tirole, *Incentives and Prosocial Behavior*, 96 Am. Econ. Rev. 1652, 1678 (2006). Cardi et al., *supra note 23*; Dewees & Trebilcock, *supra note 23*; Yoed Halbersberg & Ehud Guttel, *Behavioral Economics and Tort Law* (2014); Schwartz, *supra note 23*.

[33] Gottfredson & Hirschi, *supra note 25*; Grasmick et al., *supra note 25*.

[34] Pauline T. Kim, *Norms, Learning and Law: Exploring the Influences of Workers' Legal Knowledge*, 1999 Univ. Illinois Legal Rev. 447, 516 (1999); Darley et al., *supra note 15*; Matthew Militello, David Schimmel, & H. Jake Eberwein, *If They Knew, They Would Change: How Legal Knowledge Impacts Principals' Practice*, NASSP Bulletin (2009); Michele Peterson-Badali, Rona Abramovitch, & Juliane Duda, *Young Children's Legal Knowledge and Reasoning Ability*, 39 Can. J. Criminol. 145 (1997); Pascoe Pleasence & Nigel J. Balmer, *Ignorance in Bliss: Modeling Knowledge of Rights in Marriage and Cohabitation*, 46 Law & Soc. Rev. 297, 333 (2012); LaVell E. Saunders, *Collective Ignorance: Public Knowledge of Family Law*, Family Coordinator 69, 74 (1975); John R. Snortum, Dale E. Berger, & Ragnar Hauge, *Legal Knowledge and Compliance: Drinking and Driving in Norway and the United States*, Alcohol, Drugs & Driving (1988); Martha Williams & Jay Hall, *Knowledge of the Law in Texas: Socioeconomic and Ethnic Differences*, 7 Law & Soc. Rev. 99, 118 (1972).

[35] Cohen & Felson, *supra note 12*; Felson, *supra note 12*; Pratt et al., *supra note 12*, Christopher Birkbeck & Gary LaFree, *supra note 13*, Ronald V.G. Clarke, *supra note 13*; Lawrence E. Cohen & Richard Machalek, *A General Theory of Expropriative Crime: An Evolutionary Ecological Approach*, 94 Am. J.Sociol. 465, 501 (1988), Paul J. Brantingham & Patricia L Brantingham, *supra note 14*; Clarence Ray Jeffery, Crime Prevention through Environmental Design, Vol. 91 (1971); Richard Wortley and Michael Townsley, *supra note 14*.

[36] Feldman, *supra note 1*.

operation of social norms. These are what we (consciously or not) see others doing (descriptive social norms) or what we think (consciously or not) others hold we should do (injunctive social norms). Social norms can be aligned with the law's behavioral objectives and strengthen it. And when such positive social norm exists, the law should be careful not to erode it, for instance, by installing a punishment or incentive.[37] Social norms can also be opposed to the law's goals, and then the law must be careful not to trigger such norms, for instance through a deterrence message that shows how frequent rule breaking is.[38] Scholars have shown that there can be contagion effects where viewing a common violation of one legal norm (and thus viewing one negative descriptive social norm) can lead to more common violations of other legal norm. And Feldman's work has shown, how such social norms operate in relation to people's bounded ethicality and that ethics play a vital role in social behavior.[39]

Empirical studies of law and behavior also find that human responses to law are deeply linked to morality and legitimacy. Feldman's book is a testament to the importance of ethicality in human responses to the law and show how this plays out across different behavioral mechanisms. Earlier work has approached this issue from a moral and procedural justice perspective. Here, Tom Tyler's work has been leading, as it has shown that the law's ex-ante function can only exist when there is a degree of compliance even whether there is no credible threat of punishment. Such voluntary compliance rests on the one hand on moral alignment between the law with people's own morals.[40] On other hand, and crucially, as in our modern legal systems there naturally will be many laws many people do not agree with, is the systemic legitimacy.[41] This means that people will more likely comply with the law if they see the legal system as a whole as legitimate. Here, a large body of research, following Tyler, has found a strong relationship between procedural justice and legitimacy and between legitimacy and compliance.[42]

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[37] Gneezy et al., *supra* note 32; Uri Gneezy & Aldo Rustichini, *Fine Is a Price, A*, 29 J. LEGAL STUD. 1 (2000); Mark R. Lepper, David Greene, and Richard E Nisbett, *Undermining Children's Intrinsic Interest with Extrinsic Reward: A Test of the "Overjustification" Hypothesis*, 28 J. PERSONAL.SOC. PSYCHOL. 129 (1973); Shu-Hua Tang & Vernon C. Hall, *The Overjustification Effect: A Meta-Analysis*, 9 APPL. COGN. PSYCHOL. 365, 404 (1995).

[38] Robert B. Cialdini, *Crafting Normative Messages to Protect the Environment*, 12 CURR. DIRECT.PSYCHOL. SCI. 105, 109 (2003); Robert B. Cialdini, *Descriptive Social Norms as Underappreciated Sources of Social Control*, 72 PSYCHOMETRIKA 263, 268 (2007); Robert B. Cialdini et al., *Managing Social Norms for Persuasive Impact*, 1 SOC. INFL. 3, 15 (2006); Robert B. Cialdini & Noah J. Goldstein, *Social Influence: Compliance and Conformity*, 55 ANNU. REV.PSYCHOL. 591, 621 (2004); Robert B. Cialdini & Melanie R. Trost, *Social Influence: Social Norm, Conformity, and Compliance*, in HANDBOOK OF SOCIAL PSYCHOLOGY (ed. D.T. Gilbert, S.T. Fiske, & G. Lindzey, 1998).

[39] Feldman, *ssupra* note 1.

[40] Tom R. Tyler, *Procedural Fairness and Compliance with the Law*, 133 SWISS J. ECON.STAT. 219, 240 (1997).

[41] *Id.*

[42] Kristina Murphy & Tom Tyler, *Procedural Justice and Compliance Behaviour: The Mediating Role of Emotions*, 38 EUR. J.SOC. PSYCHOL. 652, 668 (2008); Kristina Murphy, Tom R. Tyler, & Amy Curtis, *Nurturing Regulatory Compliance: Is Procedural Justice Effective When People Question the Legitimacy of the Law?*, 3 REGUL. & GOVERN. 1, 26 (2009); TOM R. TYLER, WHY PEOPLE OBEY THE LAW (1990); Tom R. Tyler & Jonathan Jackson, *Popular Legitimacy and the Exercise of Legal Authority: Motivating Compliance, Cooperation, and Engagement*, 20 PSYCHOL. PUBLIC POL.L. 78 (2014). For an overview, see Nagin & Telep, *supra* note 24.

Empirical research on law and behavior has also found that people do not make rational choices in response to the law. As Feldman also describes, much human conduct is not (fully) conscious and goes through a dual process cognitive model. The result is in part that people do not make the well-balanced rational choice weighing of costs and benefits or even of shame and guilt that rational choice theorists have assumed. And in part, as Feldman describes that people have bounded ethicality and are not fully aware of their own unethical behavior. Law may try and tap into these unconscious processes, for instance, through debiasing biases that occur there[43] or through using primes and frames that shape behavior unconsciously.[44] The evidence that these interventions work over the longer run is still limited.[45]

Finally, the body of empirical knowledge about the ex-ante function of law shows that organizations do not act as individuals. In traditional legal thinking about behavior, organizations are often seen as actors that can think, decide and act. While in reality organizations consist of a range of humans within a set of structures, values, and practices that shape the overall conduct within the organizational setting.[46] The law has tried to shape behavioral processes through a range of systems, including compliance and ethics management systems,[47] mandated monitorships,[48] and whistleblower protection programs.[49] While there has been much interest on the design of such systems, there has been far less interest in their actual functioning and how they can actually

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[43] Christine Jolls & Cass R. Sunstein, *Debiasing through Law*, 35 J. LEGAL STUD. 199, 242 (2006).

[44] See e.g., Lisa L. Shu et al., *Signing at the Beginning Makes Ethics Salient and Decreases Dishonest Self-Reports in Comparison to Signing at the End*, 109 PROC. NATL ACAD.SCI. 15197, 15200 (2012).

[45] Yuval Feldman, *Behavioral Ethics Meets Behavioral Law and Economics*, in HANDBOOK OF BEHAVIORAL LAW AND ECONOMICS (ed. Eyal Zamir & Doron Teichman2014); Feldman, *supra note 1*.

[46] E.H. SCHEIN, ORGANIZATIONAL CULTURE AND LEADERSHIP (4th edn, 2010).

[47] Christine Parker & Sharon Gilad, *Internal Corporate Compliance Management Systems: Structure, Culture and Agency*, in EXPLAINING COMPLIANCE: BUSINESS RESPONSES TO REGULATION (ed. Christine Parker & Vibeke Nielsen, 2011); Christine Parker & Vibeke Lehmann Nielsen, *Corporate Compliance Systems Could They Make Any Difference?*, 41 ADMIN. & SOC. 3, 37 (2009); Kimberly D. Krawiec, *Cosmetic Compliance and the Failure of Negotiated Governance*, 81 WASH. ULQ 487 (2003); Cary Coglianese & David Lazer, *Management-Based Regulation: Prescribing Private Management to Achieve Public Goals*, 37 LAW & SOC. REV. 691, 730 (2003).

[48] Cristie Ford & David Hess, *Can Corporate Monitorships Improve Corporate Compliance*, 34 J. CORP. L 679 (2008); Caelah E. Nelson, *Corporate Compliance Monitors Are Not Superheroes with Unrestrained Power: A Call for Increased Oversight and Ethical Reform*, 27 GEO. J. LEGAL ETHICS 723 (2014); Veronica Root, *Constraining Monitors*, 85 FORDHAM L. REV. 2227 (2016); *Modern-Day Monitorships*, 33 YALE J. ON REG. 109 (2016); F. JOSEPH WARIN, MICHAEL S. DIAMANT, & VERONICA ROOT, SOMEBODY'S WATCHING ME: FCPA MONITORSHIPS AND HOW THEY CAN WORK BETTER (2011).

[49] Gladys Lee & Neil Fargher, *Companies' Use of Whistle-Blowing to Detect Fraud: An Examination of Corporate Whistle-Blowing Policies*, 114 J.BUS. ETHICS 283, 295 (2013); Marcia P. Miceli & Janet P. Near, *Some Implications of the Voice Literature for Research on Whistle-Blowing*, in VOICE AND WHISTLEBLOWING IN ORGANIZATIONS: OVERCOMING FEAR, FOSTERING COURAGE AND UNLEASHING CANDOUR 182, 204 (2013); MARCIA P. MICELI, JANET POLLEX NEAR, AND TERRY M DWORKIN, WHISTLE-BLOWING IN ORGANIZATIONS (2013); Janet P. Near & Marcia P. Miceli, *Effective-Whistle Blowing*, 20 ACAD.MANAGE. REV. 679, 708 (1995); *Whistle-Blowing: Myth and Reality*, 22 J. MANAGE 507, 526 (1996); Michael T. Rehg et al., *Antecedents and Outcomes of Retaliation against Whistleblowers: Gender Differences and Power Relationships*, 19 ORGANIZ. SCI. 221, 240 (2008); GARY R. ROTHWELL & J. NORMAN BALDWIN, *Ethical Climate Theory, Whistle-Blowing, and the Code of Silence in Police Agencies in the State of Georgia*, 70 J.BUS. ETHICS 341, 361 (2007); Eileen Z. Taylor & Mary B. Curtis, "*An Examination of the Layers of Workplace Influences in Ethical Judgments: Whistleblowing Likelihood and Perseverance in Public Accounting*, 93 J. BUS. ETHICS 21, 37 (2010).

Table 1. Potential behavioral effects of punishment

Positive		Negative
		Erode positive social norms
		Strengthen negative social norms
End Impunity (set a norm)		Spread illegal behavior
Specific deterrence		Cause criminogenic effects
General deterrence		Cause brutalizing effects
Reassuring compliance	→ Behavior ←	Make people evade detection
Incapacitation		Enhance blame shifting
Rehabilitation		Undermine procedural justice
Shaming		Disable capacity for compliance
		Enhance neutralization

come to shape organizational conduct. Here in a recent overview of these bodies of work, co-authored with Adam Fine, I concluded that such organizational systems seem to work best where they are least needed, namely when there is strong external law enforcement, strong leadership commitment to compliance and a compliant organizational culture.[50] What is the key here is to understand how organizations develop structural rule breaking and organizations develop a culture that normalizes deviancy.[51]

In sum, there is a massive body of empirical knowledge about the law's ex-ante function in shaping behavior. The body of knowledge shows clear doubt about some of the premises in traditional legal thinking about shaping behavior through sanctions and incentives. And further it shows a much broader range of potential mechanisms that the law could use or should account for when seeking to alter human conduct. This body of knowledge is thus of utmost importance for improving the ex-ante function of law. This body of knowledge will not yield one grand theory of law and behavior or a grand theory of compliance. Instead, it will show what mechanisms can potentially be at play through which law influences conduct. And for each form of regulation and legal instrument seeking to steer different forms of behavior this body of knowledge can help better understand what potential influences may be at play. The knowledge can for instance be used when introducing a new form of punishment for a particular form of behavior. In Table 1 above, I have outlined, what, according to my reading, are the different potential effects punishment can have on behavior.

Here we can see, there are (at least) seventeen potential effects punishment can have on behavior, and depending on exactly what punishment it is and what context there is for instance in terms of existing social norms or practices

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[50] Benjamin Van Rooij & Adam Fine, *Managing Compliance from Within*, in THE HANDBOOK OF WHITE COLLAR CRIME (ed. Melissa Rorie, 2019 (forthcoming)).
[51] Vaughan (1989, 1997, 1999), Van Rooij &Fine (2018).

of neutralizing shame or guilt or evading detection, its effects can be positive or negative in improving behavior. Using this body of knowledge, lawmakers or law enforcement authorities could for each new punishment try and assess what they can expect the punishment to do and also adapt the proposed punishment in such a way that its positive effects come to outweigh the negative ones.

5. Ex-post v. Ex-ante

There is a solid body of empirical knowledge about the law's ex-ante function in shaping future behavior. Yet, this body of knowledge has not been central in mainstream legal thinking and legal practice, and also not in political and popular discourse. Even very clear insights, for which there is strong empirical evidence, are not commonly known and not even mentioned in commonly used criminal law textbooks. Here we can think, for instance, of the fact that deterrence only can exist if there is a threshold level of certainty of getting caught and punished, which is still not commonly discussed in introductions to criminal law.

Lawyers who play key roles in shaping future human behavior, for instance as regulators, prosecutors, lawmakers, judges, and compliance managers, receive hardly any training in this body of behavioral knowledge about the law's ex-ante function. And as such, behavioral regulation is designed and operated by people without formal behavioral literacy. Legal training and most legal thought and writing is still concentrated on law's ex-post function. It is still focused on the analysis of law through past cases, the processes of litigation that occur after damaging facts have occurred, and the roles lawyers play within these processes. Surely, there is normative work on what new law should be in response to new forms of behavior and such work does look at the future. But most often, it does so through a normative lens of the legal system itself, linkages to past cases or more broadly the expected costs and benefits, which are based on untested assumptions on the effects law will achieve on behavior. Without sound empirical knowledge on the impact of law on behavior in the future, the behavioral responses to law are based on theoretical deduction, assumptions, and intuition.

So, why has the existing body of empirical work not been more central in how legal thinking and practice? Clearly, there is not a problem of knowledge. There is an immense body of work as we have just outlined above.

Feldman ponders some of these questions when discussing why behavioral ethics has not been as influential as behavioral law and economics. He argues that this has to do with two issues: First, the fame of Kahneman and Tversky who built the field of behavioral economics and, second, the complexity of behavioral ethics compared to neatness of behavioral law and economics.[52]

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[52] Feldman, *supra note* 1, 7.

And surely, this explains why ideas from behavioral law and economics, such as the usages of so-called nudges,[53] have been influential.

Surely, the complexity of existing knowledge about law and behavior and the lack of truly famous public scholars may be at play. But some elements of knowledge, for instance that certainty of punishment is more important than severity of punishment, are abundantly clear and have been so for a long time. What if there is a deeper obstacle that keeps knowledge about the ex-ante function of law from successfully entering legal thinking and practice? This essay argues that there is a structural bias against the ex-ante function of law.

To understand this bias, we must begin by looking at the ex-post orientation of law. This ex-post approach to law and behavior has several basic characteristics. In the ex-post view behavior is a given. There has been some form of behavior, some form of misconduct, rule breaking, or damage that has occurred. Once that behavior has occurred, the question is how to assign liability in a fair and pro-cedurally sound way. And this then involves a form of legal analysis where the relevant facts of the case are combined with an interpretation of the applicable legal rules to come to a prescription to how such behavior should be dealt with. And throughout this, normative questions are important, either questions of what the right interpretation of the law is or should be, or normative judgment of the law in light of broader principles of justice and fairness.

These ex-post characteristics are most clear in the processes of litigation, which are inherently about this ex-post form of application of law to past facts. But we also see this in how law is taught, where students learn to apply rules of the law to given sets of fact patterns and where students learn what the law is by study-ing interpretations as they exist in older cases and by discussing normative issues in light of such cases and legal interpretations. Even in lawmaking activities an ex-post view may creep in as legal rules are designed within the normative con-fines of the existing system of law and the effect of rules is discussed in light of cases that the lawmakers know to have existed in the past. We also see this in the political and public discourse about law that often concerns major court cases or the call for legal response to major instances of damaging or unjust behavior.

In summary, the ex-post view of law and behavior has several core focus points that are important for the ex-ante function of law. These include the following:

- There is a focus on the past and not a focus on the future.
- There is a focus on assigning liability and punishment
- There is a focus on individual cases (that have happened in the past) and inductive reasoning from cases to generalities, and deductive reasoning from general rules to cases.

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[53] Richard H. Thaler & Cass R. Sunstein, Nudge: Improving Decisions About Health, Wealth, and Happiness (2008).

- There is a normative focus that seeks to understand what the law should be either from a narrow view of what legally fits in the system (positivist narrow view) or a broader focus on what would be just and fair.

These points stand in contrast to a successful ex-ante view of law and behavior. In such view:

- There is a focus on the future.
- There is a focus on a wide range of mechanisms (conscious and unconscious, individual, organizational, moral, ethical, and practical).
- There is a focus on change within a large number of cases.
- There is an empirical focus within a normative view that takes the effective impact of the law on behavior as its basis and leaves the broader question of the justness and fairness of the law to other legal approaches, except where it comes to harm effectiveness.

In sum, the dominant ex-post approach to law (to a large extent) stands in direct contrast to the ex-ante function of law in shaping future behavior. Its core tenants are opposed to the ex-ante outlook. And because the ex-post is the mainstream view on law, it will be harder to develop an ex-ante view that so strongly departs from it. Of course, there is no absolute opposition between the two points of view. And a successful approach to law should combine both approaches. Law should learn from the past, where appropriate assign liability, apply law to cases and of course always ask the broader normative questions. But it should not do so while disregarding key knowledge about how to apply the law to future behavior.

6. Deeper biases against the ex-ante function of law

The problem here is not just that the ex-post perspective has different focus points from the ex-ante approach to law and behavior. Each of the ex-post focus points comes with particular biases that obstruct ex-ante thinking.

A first set of biases comes from the ex-post focus on the past. When law looks at the past, it does not merely refrain from looking at the future, but it also brings biases related to such past perspective into considerations about the future. Several biases come to mind. The first is **hindsight bias**. Overall, this means that looking at the past with the knowledge we have today, we become overconfident in our abilities to have been able to foresee what had not yet happened in the past. And this makes us overconfident in predicting our own future.[54] As Kamin and Rachlinksi summarize this body of work: "When trying to reconstruct what a foresightful state of mind would have perceived, people remain anchored in the hindsightful perspective. This leaves the reported

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[54] Baruch Fischhoff, *Hindsight Is Not Equal to Foresight: The Effect of Outcome Knowledge on Judgment under Uncertainty*, 1 J.Exp. Psychol. 288 (1975).

outcome looking much more likely than it would look to the reasonable person without the benefit of hindsight."[55] Within legal scholarship hindsight bias has been predominantly studied in legal decision making in the context of disputing processes and thus, the ex-ante function of law. But, such bias of course can play a major role when people try and develop legal rules or enforce them to shape future behavior. The more they are normally focused on the past and on past cases, the more overconfident they will become in predicting the effect of legal interventions on the future. A focus on the past can also cause other forms of bias that sway proper thinking. The most important one follows from Tversky and Kahneman's groundbreaking work in 1973: *the availability heuristic*, where we tend to overestimate the probability of events we can easily recall and have easy availability to.[56] And as such, when we look at the past we tend to overestimate risks that have vividly occurred, and underestimate more common but less reported or less vivid risks that we should be concerned about.[57]

A second set of biases against the ex-ante function of law comes from the ex-post *focus on liability and punishment*. As we have seen, a consistent finding in empirical studies about law and behavior is that there is no thorough evidence that stricter punishment in of itself will help to prevent wrongdoing and illegal behavior. Yet, time and again, a most common response to rule breaking is to call for punishment. The empirical knowledge here must compete with a long tradition. In legal systems and in philosophical and religious writing across the globe, including in Chinese legalism of Han Feizi, Greek thinkers such as Plato and Aristotle, Hindu texts such as the *Mahabharata*, the Judea-Christian tradition of the Old Testament and Quran we can find very similar ideas.[58] They all hold that people respond to pain and pleasure, and that bad behavior can be prevented through punishment that inflicts pain, and that when such punishment is public people will learn from such pain and refrain from misconduct. These ideas were later developed into deterrence theory, first by Beccaria[59] and Bentham[60] in the 18th century, and later into the economic language of costs and benefits and general deterrence by scholars

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[55] Kamin & Rachlinski, *supra note 22*, 90

[56] Amos Tversky & Daniel Kahneman, *Availability: A Heuristic for Judging Frequency and Probability*, 5 Cogn. Psychol. 207, 232 (1973).

[57] cf. Timur Kuran & Cass R. Sunstein, *Availability Cascades and Risk Regulation*, Stanford L. Rev. 683, 768 (1999).

[58] Summarized in Benjamin van Rooij & Adam Fine, The Invisible Code, Why the Law Fails to Improve Our Behavior (Draft Manuscript, 2019). See Aristotle, Ethics., Plato, The Laws (1975); Ram Prasad Das Gupta, Crime and Punishment in Ancient India (2007); Hisham M. Ramadan, Understanding Islamic Law: From Classical to Contemporary (2006) and also online collection of texts from Han Feizi, the Old Testament and the Quran.

[59] Cesare Beccaria, On Crime and Punishment (1764 (reprinted in 1985)).

[60] Jeremy Bentham, *An Introduction to the Principles and Morals of Legislation*, in The Ultilitarians (1789 (Reprinted in 1973)).

including Becker.[61] There is thus a very long tradition of theories that see punishment as an effective deterrent against criminal behavior. And this may well have worked in societies that were small, where illegal behavior was visible and where chances of getting caught were high, and where there was only a limited number of rules and where these rules were well-aligned with existing social norms. But in contemporary societies and legal systems, very often, these conditions are not present. For instance, for many crimes, the chances of being caught remain low,[62] many people do not know what the chances are of getting caught and punished or even what the punishment may be should they get caught,[63] legal rules are not always morally aligned[64] and law enforcement may be procedurally unfair.[65] And at worst, punishment may come to have a more negative effect on behavior than a positive one, when negative behavioral consequences of punishment come to outweigh positive consequences (for a summary of these potential consequences, see Table 1 discussed earlier above). Such traditional-thinking shapes and also is reinforced by the social and political contexts that we exist in. From an early age, we learn that punishment is the normal response to misconduct, only to be reinforced later in school, during sports and at work. Also, politicians are prone to propagate punishment as their preferred response to misconduct, whether it is conservatives who favor strong punishment against drug abuse and street crime or progressives who favor strong punishment for corporate wrongdoing. All of this means that there can be a ***punishment reflex*** where humans automatically revert back to punishment even though there is empirical knowledge that that will not be effective. People seem to have become hardwired to believe that it is effective. Such hardwiring is not just a figure of speech. One neurological study has found that our brains favor punishment, as the dopamine system is activated when we punish others, and the more the dopamine system was activated during such punishment the more test subjects were willing to pay to punish.[66]

A third possible bias against the ex-ante function of law originates in the ***case focus*** that is normal in law and in the discussion of law in our society. This means that there is a focus on discussing and analyzing individual cases. However, a successful ex-ante function of law requires changing a large number of cases. And this is where a bias can creep in. Redelmeier and Tversky[67] have shown, based on earlier work by Samuelson,[68] that doctors make different decisions for individual patients than they do for larger

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[61] Gary S. Becker, *Crime and Punishment, an Economic Approach*, 76 J.POL. ECON. (1968).

[62] Nagin, *supra note 10*.

[63] Apel, *supra note 31*; Thornton et al., *supra note 31*.

[64] Tyler, *supra note 40*.

[65] Nagin & Telep, *supra note 24*.

[66] Dominique J. F De Quervain et al., *The Neural Basis of Altruistic Punishment*, 305 SCIENCE 1254 (2004).

[67] D. A. Redelmeier & A. Tversky, *Discrepancy between Medical Decisions for Individual Patients and for Groups*, 322 NEW ENGL. J.MED. 1162, 1164 (1990).

[68] Paul A. Samuelson, *Risk and Uncertainty: A Fallacy of Large Numbers*, 57 SCIENTIA 108 (1963).

groups of patients and also that they make different decisions when they considered a large amount of treatments compared to singular treatments. Redelmeier and Tversky find that such different perspectives make sense as individual patients, who for instance might require antibiotics, have different needs than those of medical policy that requires care with applying antibiotics. The question is what would happen if the perspective towards medicine would become completely individual patient-oriented and case-based? Would it not come to harm the aggregate policy interest of preventing the development of super bugs that resist anti-bacterial medicine? And this is exactly what happens in the field of law with its strong case orientation. Law may thus have a *case bias*, where responses to behavioral issues are developed for such particular case without sufficient consideration for and usage of knowledge about the aggregate number of cases that may exist in total. Gilboa and Schmeidler have argued that such a case bias affects the proper weighing of overall costs and benefits.[69] And Sunstein has applied this to the field of law as he summarizes their work: "In fact people often reason to calling to mind particular cases and seeing how the problem at hand compares with those cases; this can be an important method of reducing decision costs."[70] Sunstein then goes on to state how important this for the law, but in discussing it focuses on adjudication. And therefore he does not apply these insights to the law's ex-ante function and how our natural focus to think about past cases rather than a large number of future cases keeps us from a proper ex-ante analysis and application of the law.

A fourth possible bias against the ex-ante function of law is related to *the normative focus* in the field of law and also in thinking and discussion in our society and politics about law. With this normative focus discussions about law are about what is right and wrong, what is just and fits justice, and what fits within the system of law. They are discussions about what the law should be and what the proper response to behavior should be. They are not discussions about how law actually functions and analysis of how law shapes behavior. Psychologists have shown that our moral thinking, about what we consider right and wrong, influences our thinking about effectiveness. Using the term *moral coherence*, this work has shown that people prefer to see their moral ideas aligned with ideas about effectiveness and thus present a coherent story.[71] Studies have shown, for instance, that people who morally support the death penalty will also think it is more effective, even when presented with evidence to the contrary. A good example is U.S. President Nixon, who in a 1973 national radio address talked about corporate punishment and deterrence: "Contrary to the views of some social theorists, I am convinced that the

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[69] Itzhak Gilboa & David Schmeidler, *Case-Based Decision Theory*, 110 QUART. J.ECON. 605, 639 (1995).
[70] Cass R. Sunstein, *Behavioral Analysis of Law*, 64 U. CHI. L. REV. 1175 (1997).
[71] Cory J. Clark, Eric Evan Chen, & Peter H. Ditto, *Moral Coherence Processes: Constructing Culpability and Consequences*, 6 CURR. OPIN.PSYCHOL. 123, 128 (2015).

death penalty can be an effective deterrent against specific crimes."[72] Here, he prefers his own convictions over the science. He does so without any reference to facts that question the science, and very likely just following his own beliefs which are probably fueled by what he sees as right and wrong, building a morally coherent narrative. We can all be Nixon and let our moral convictions trump scientific knowledge about effectiveness. The bias here may not be just a matter of trying to find coherence between morals and effectiveness. It may well be that when we are confronted by an instance of injustice or a response to such wrongdoing that is so grossly unjust that our minds are unable to consider an effective response to end it and just keep focused on the injustice. Consider here for instance how U.S. Senator Elizabeth Warren has responded to what she considers the unjust lack of punishment for corporate offenders. In statement after statement, she points to how unfair it is that these offenders get away with massive misconduct while ordinary and less privileged people get punished so strictly for doing much less.[73] Her focus is on the injustice of the unequal punishment, and it is not on preventing the corporate wrongdoing itself, for which there is no conclusive proof that stronger punishment (without at least higher probability of detection) will have much effect.[74] And as such there may be an *(in)justice bias*, where a normative focus about what is morally right, what is just, and what is unjust, can come to obscure asking questions and using scientific data about what is an effective way to prevent wrongdoing.

7. Conclusion: towards a behavioral jurisprudence

Decades of social and behavioral science have revolutionized our understanding of how law can shape human and organizational conduct. Yet, so far, this body of knowledge has only had a limited impact within the field of law and more broadly in our political and societal discussions about law. A key problem here is that our thinking about law is very much focused on law's ex-post function in dealing with past behavior and injustice. Social and behavioral science has predominantly been used and popularized to aid the law in this ex-post function, most notably in understanding the myriad aspects of the legal process in assigning liability in litigation. We need only think about the highly developed usage of psychology to understand memory of witnesses, the behavioral economics of judicial decision making, socio-legal studies of the legal profession or judges, or psychological evaluations of juries. Yet, the massive body of knowledge about how law can shape behavior in the future, the *ex-ante* function of law remains much less influential.

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[72] http://www.presidency.ucsb.edu/ws/?pid=4135
[73] See for instance, her explanation of her April 2019 bill that would make it easier to prosecute corporate executives: https://www.nytimes.com/2019/04/22/business/dealbook/elizabeth-warren-finance-executives.html
[74] cf. Simpson et al., *supra note* 10.

This essay has argued that such ex-ante function of law is vital and should become much more central in legal education, research, and practice. This does not mean that it should replace the ex-post function of law, or to have effectiveness trump fairness and justice. But rather, it means that law should combine the ex-ante perspective with the ex-post. Law always requires thinking about what justice is and what just responses are to past behavior. But law also requires thinking about effectiveness and what will create better behavior and thus prevent injustice in the future. Having one without the other either means an unjust effective system (and thus tyranny) or a seemingly just but ineffective system.

The field of law requires a behavioral correction, just like the field of economics had with behavioral economics. This does not mean simply applying behavioral economics to the field of law. It means something broader. It means developing a *behavioral jurisprudence*. This jurisprudence makes the ex-ante function central. It would offer a synthesis of existing empirical knowledge about how law can shape future conduct. Such synthesis would not result in one big theory of compliance or legal responses to law, but rather insight into the mechanisms that affect law in its behavioral functions. For each legal intervention and for each form of behavior an in-depth analysis can then be made about the expected effects and how to adapt law to become more effective with less negative effects. Here, the behavioral jurisprudence goes beyond existing bodies of work that have kept analysis at the level of regulatory instruments and a view from the legal instrument[75] or that have focused on particular interventions (such as for instance nudges) to focus on the behavioral mechanisms that are at play and the full empirical knowledge about them.

A behavioral jurisprudence does more than synthesize empirical knowledge about law's ex-ante function. It also unearths and corrects behavioral assumptions in legal thinking and practice. Here it studies how empirical ex-ante knowledge relates to notions about law and its effect on behavior in legal education, research, and practice.

Feldman's *The Law of Good People* has taken a massive step towards such behavioral jurisprudence. His book emphasizes the ex-ante function of law. It has offered a unique synthesis of the many important empirical bodies of work about how law can shape future conduct. And it adds a vital new body of research from behavioral ethics to shed a critical light on prior existing knowledge in how law can regulate behavior.

But for Feldman's work and the broader body of ex-ante law and behavior scholarship to truly generate the impact they deserve, this essay has argued, we must delve deeper. To truly make the ex-ante function central and develop a law that is steeped in scientific knowledge like Feldman's, the behavioral

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[75] See e.g., Neil Gunningham, Peter Grabosky, & Darren Sinclair, Smart Regulation, Designing Environmental Policy (1998).

jurisprudence must identify and overcome the root causes in legal political and popular thinking, research, education, and practice that obstruct a proper understanding of how law can shape future behavior. This means that the behavioral jurisprudence should, not just offer synthesis of empirical knowledge, or a correction of legal thinking and practice that is not in line with such knowledge. A successful behavioral jurisprudence goes to the core biases against thinking about the effects of law on future behavior.