

The Law and Economics of Guilt and Shame

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Abstract: The negative moral emotions of guilt and shame impose real social costs but also create opportunities for policymakers to engender compliance with legal rules in a cost-effective manner. We present a unified model of guilt and shame that demonstrates how legal policymakers can harness negative moral emotions to increase social welfare. The prospect of guilt and shame can deter individuals from violating moral norms and legal rules, thereby substituting for the expense of state enforcement. But when legal rules and law enforcement fail to induce total compliance, guilt and shame experienced by noncompliers can increase the law's social costs. We identify specific circumstances in which rescinding a legal rule will improve social welfare because eliminating the rule reduces the moral costs of noncompliance with the law's command. We also identify other instances in which moral costs strengthen the case for enacting legal rules and investing additional resources in enforcement because deterrence reduces the negative emotions experienced by noncompliers. We end by exploring the implications of our framework for legal policy across "guilt cultures" and "shame cultures," for the debate over shaming sanctions, and for other moral emotions such as resentment and virtue.

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Introduction

Guilt is a central concern for both law and psychology, yet the meaning of guilt differs across those two disciplines. In law, guilt generally refers to a jury's or judge's finding that a defendant has committed a legal wrong.¹ In psychology, guilt generally denotes a person's own belief—not the finding of an external adjudicator—that the person has committed a moral or social transgression.² Thus, a person may be found guilty in law but experience no psychological guilt (e.g., if she maintains her factual innocence or feels no contrition for her offense), while a person who escapes legal liability still may experience guilt as a psychological phenomenon.

Notwithstanding the differences between the legal and psychological definitions of guilt, psychologists have made important contributions to the determination of guilt in law. Courts often turn to psychologists and other mental health professionals when faced with questions regarding the insanity defense,³ the reliability of eyewitness identification,⁴ the admissibility of “repressed memory” testimony,⁵ and other issues that arise in the guilt phases of courtroom trials. Legal scholars have had much less to say, however, about the psychological concept of guilt. The law and economics literature, in particular, has paid only fleeting attention to the implications of psychological guilt for macro questions of legal policy such as the optimal number of legal rules and the optimal level of law enforcement effort.⁶

In contrast to the dearth of legal scholarship on the psychological phenomenon of guilt, legal scholars have devoted thousands of pages in recent decades to the related concept of shame. In an influential 1996 article, Dan Kahan argued that greater use of shaming penalties could liberate Americans from their excessive reliance on incarceration as a tool for expressing condemnation of criminal behavior.⁷ Kahan's intervention has inspired other scholars to examine

¹ See, e.g., Black's Law Dictionary (Brian A. Garner ed., 12th ed. 2024) (defining “guilt” as “[t]he fact, state, or condition of having committed a wrong, esp. a crime; esp., a judicial finding to this effect”).

² See Carlos Tilghman-Osborne, David A. Cole & Julia W. Felton, Definition and Measurement of Guilt: Implications for Clinical Research and Practice, 30 Clin. Psych. Rev. 536, 541 tbl.3 (2010).

³ See, e.g., Gary M. Farkas, Patrick H. DeLeon & Russ Newman, Sanity Examiner Certification: An Evolving National Agenda, 28 Professional Psychol.: Research & Practice 73 (1997) (finding that the vast majority of states allow psychologists to testify in sanity examinations).

⁴ See, e.g., *People v. McDonald*, 690 P.2d 709, 721 (Cal. 1984), overruled in part on other grounds, *People v. Mendoza*, 4 P.3d 265 (Cal. 2000).

⁵ See, e.g., *State v. Hungerford*, 697 A.2d 916, 919-934 (N.H. 1997).

⁶ Two notable exceptions—discussed in detail below—are Steven Shavell, *Law versus Morality as Regulators of Conduct*, 4 Am. L. & Econ. Rev. 227 (2002), and Murat C. Mungan, *A Note on the Effects of State-Dependent Benefits on Optimal Law Enforcement*, 6 Rev. L. & Econ. 97 (2010). We discuss these two contributions in detail below and explain how our unifying theory both accommodates and complicates Shavell and Mungan's central claims. For a game-theoretic analysis of securities regulation that incorporates a conception of guilt, see Peter H. Huang, *Trust, Guilt, and Securities Regulation*, 151 U. Pa. L. Rev. 1059 (2003). For an analysis of unconscionability doctrine in contract law that incorporates guilt, see Hila Keren, *Guilt-Free Markets? Unconscionability, Conscience, and Emotions*, 2016 B.Y.U. L. Rev. 427.

⁷ See Dan M. Kahan, *What Do Alternative Sanctions Mean?*, 63 U. Chi. L. Rev. 591 (1996).

the role of shaming sanctions in areas ranging from bank regulation⁸ and corporate law⁹ to environmental protection,¹⁰ intellectual property,¹¹ international law,¹² taxation,¹³ and beyond. Some of these scholars have endorsed the application of shaming sanctions.¹⁴ Others have developed careful and nuanced arguments against the use of shame as a policy tool.¹⁵ None of these shaming sanctions studies, however, has explored the complex interactions between shame and the related moral emotion of guilt.

Importantly for our purposes, there is a critical distinction between the subject of the shaming sanctions literature and the psychological phenomenon of guilt. As the psychologists Paul Ekman and Mark Frank write, “[n]o audience is needed for feelings of guilt,” whereas “[t]he humiliation of shame requires disapproval or ridicule by others.”¹⁶ Thus, while legal scholarship on shame can inform the study of guilt, the shaming sanctions literature does not resolve key questions regarding the relationship between law and psychological guilt. It does not tell us, for example, how law can exacerbate or ameliorate experiences of guilt, nor does it address the normative implications of psychological guilt for the design or enforcement of legal rules.

This essay takes up those key questions, situating psychological guilt alongside legal guilt as a fundamental issue for legal policy. Our central claim is that negative moral emotions—including but not limited to psychological guilt—impose real social costs but also create opportunities for policymakers to engender compliance with legal rules in a cost-effective manner. We argue that welfare-minded policymakers should account for the double-edged quality of negative emotions when crafting laws and allocating enforcement resources. When compliance is less than perfect, legal rules can impose a psychological cost (guilt) upon noncompliers. At the same time, individuals are more likely to comply with legal rules precisely because noncompliance leads to the prospect of future guilt, and so guilt—through its effect on

⁸ See Ruth Plato-Shinar, *Shaming by Bank Regulators: Methods and Applications*, in *The Legal Aspects of Shaming: An Ancient Sanction in the Modern World* 249 (Meital Pinto & Guy Seidman eds., 2023).

⁹ See David A. Skeel, *Shaming in Corporate Law*, 149 U. Pa. L. Rev. 1811 (2001).

¹⁰ See Shirley Naveh, *Shaming and the Environmental Arena*, in *The Legal Aspects of Shaming: An Ancient Sanction in the Modern World*, supra note 8, at 200.

¹¹ See Elizabeth L. Rosenblatt, *Fear and Loathing: Shame, Shaming, and Intellectual Property*, 63 DePaul L. Rev. 1 (2013).

¹² See Sandeep Gopalan & Roslyn Fuller, *Enforcing International Law: States, IOs, and Courts as Shaming Reference Groups*, 39 Brook. J. Int’l L. 73 (2014).

¹³ See Michael S. Kirsch, *Alternative Sanctions and the Federal Tax Law: Symbols, Shaming, and Social Norm Management as a Substitute for Effective Tax Policy*, 89 Iowa L. Rev. 863 (2004); Joshua D. Blank, *What’s Wrong with Shaming Corporate Tax Abuse*, 62 Tax L. Rev. 539 (2009).

¹⁴ See, e.g., Sharon Yadin, *Regulatory Shaming*, 49 *Env’tl Law* 407 (2019).

¹⁵ See, e.g., Toni M. Massaro, *The Meanings of Shame: Implications for Legal Reform*, 3 *Psychol. Pub. Pol’y & L.* 645 (1997); James Q. Whitman, *What Is Wrong with Inflicting Shame Sanctions?*, 107 *Yale L.J.* 1055 (1998); Eric Posner, *Law and Social Norms* 92–95 (2002); Martha C. Nussbaum, *Hiding from Humanity: Disgust, Shame, and the Law* (2004).

¹⁶ Paul Ekman & Mark G. Frank, *Lies That Fail*, in *Lying and Deception in Everyday Life* 184, 191 (M. Lewis & C. Saarni eds., 1993).

compliance—can increase the social benefit of adopting legal rules. The psychological phenomenon of guilt thus bears context-contingent implications for lawmaking, reducing the optimal number of legal rules in some circumstances and increasing the optimal number of legal rules in others.

Psychological guilt has similarly nuanced implications for investments in law enforcement. On the one hand, when noncompliers experience guilt—a decidedly unpleasant emotion—the social cost of noncompliance is higher. For that reason, guilt enhances the social return on investments in law enforcement because enforcement, insofar as it increases compliance, carries the added benefit of reducing guilt. On the other hand, because guilt functions as a substitute for law enforcement in achieving compliance, guilt may reduce the social return on investments in law enforcement for the same reason that an abundance of apples reduces the benefit of bananas: having more of one good leads to less demand for close substitutes.

An appreciation of the social costs of guilt and related moral emotions might at times counsel toward a laissez-faire regime with fewer rules. Take, for example, recent reports that roughly half of New York City bus riders fail to pay the required fare.¹⁷ Standard responses to this problem include increasing the size of the fine or devoting more law enforcement resources toward detecting noncompliance. But instead of attempting to boost compliance through heavier punishments or more intensive enforcement efforts, policymakers can eliminate noncompliance and reduce the guilt that noncompliers experience by rescinding the rule that riders must pay. In other circumstances, the social costs of guilt and other moral emotions may counsel in favor of more legal rules and more robust enforcement efforts—especially when those laws and enforcement efforts target behaviors that people already perceive as wrongful. For example, consider the case of texting while driving—an unfortunately prevalent practice that many people think is one of the most immoral everyday transgressions.¹⁸ One potential benefit of a legal ban on texting while driving—in addition to the obvious traffic safety benefits—is that insofar as the ban successfully deters the behavior, it reduces the psychological guilt experienced by drivers who would have text-messed in the law’s absence.

After probing the implications of psychological guilt for legal rules and law enforcement, we examine guilt’s relationship to shame—an emotion that, as noted, already is the subject of a sizable legal literature. Despite their similarities, guilt and shame sometimes operate in opposition to each other: for example, guilt may induce an individual to confess to a crime, while fear of shame may intensify efforts to avoid detection.¹⁹ But like guilt, shame resists one-size-fits-

¹⁷ Ana Ley, *Fare Evasion Surges on N.Y.C. Buses, Where 48% of Riders Fail to Pay*, N.Y. Times (Aug. 26, 2024), <https://www.nytimes.com/2024/08/26/nyregion/nyc-bus-subway-fare-evasion.html>.

¹⁸ In one recent study, participants assigned a higher “immorality” rating to texting while driving than to any other common behavior, including speeding, littering, running a stop sign, and illegally downloading TV shows, music, or movies. See Stephanie A. Schwartz & Yoel Inbar, *Is It Good To Feel Bad About Littering? Conflict Between Moral Beliefs and Behaviors for Everyday Transgressions*, 236 *Cognition* 105437, at 3 tbl.1 (2023).

¹⁹ See *id.*

all conclusions for legal policy. Depending on contextual factors that our analysis elucidates, shame may increase or decrease the optimal number of legal rules and may raise or reduce the optimal level of law enforcement investment. Legal policymakers can, moreover, modulate the extent to which offenders experience shame by choosing whether and how to publicize violations—choices at the center of the shaming sanctions debate. Rigorous analysis of the relationship between guilt and shame can inform that debate by illuminating the implications of shame for other legal policy parameters.

Our essay advances the study of “law and the emotions”²⁰ by constructing a unified model that relates guilt and shame to key legal policy questions. We go on to show how this model reveals important cultural contingencies in the economic analysis of legal rules and law enforcement. To be clear, our claim is not that law and economics only has analytical purchase in certain cultural contexts. Rather, our argument is that the policy prescriptions derivable from the economic analysis of law depend upon factors such as the extent to which guilt or shame predominates in a particular society—factors that vary not only across cultures and countries but also within cultures and countries across time.

Beyond the broad implications for law and economics, our framework sheds new light on the long-running shaming sanctions debate in legal scholarship. Our analysis does not decisively favor one side of the debate or another; rather, we emphasize that regardless of whether policymakers deploy explicit shaming sanctions, legal policy and shame will inevitably interact. Some of these interactions, moreover, may be deeply counterintuitive. For example, we highlight circumstances in which the use of explicit shaming sanctions may reduce shame in the aggregate by deterring individuals who otherwise would have violated moral norms or legal rules and would have experienced shame as a result.

Finally, we consider how guilt and shame relate to other moral emotions—specifically, resentment and virtue. Like guilt and shame, resentment—a negative emotion experienced by individuals who observe others violating moral norms or legal rules without appropriate legal consequence—is generally an unpleasant phenomenon, and accordingly, legal policymakers who seek to increase social welfare should strive to reduce the amount of resentment that individuals bear. And as with guilt and shame, the implications of resentment for legal policy are circumstance-dependent. When resentment arises from violations of moral norms, hardening those norms into legal rules may reduce resentment because the suasive and deterrence effects of law will increase norm compliance. Yet when resentment stems from violations of legal rules themselves, resentment may counsel in favor of fewer legal rules, since in the absence of a legal rule, there will be no legal rule violations to resent.

²⁰ See Eric A. Posner, *Law and the Emotions*, 89 *Geo. L.J.* 1977 (2001); Terry A. Maroney, *Law and Emotion: A Proposed Taxonomy of an Emerging Field*, 30 *Law & Hum. Behav.* 119 (2006); Kathryn Abrams & Hila Keren, *Who’s Afraid of Law and the Emotions?*, 94 *Minn. L. Rev.* 1997 (2010).

Virtue differs from the negative emotions of guilt, shame, and resentment insofar as virtue is a positive experience. Still, our model of law and the negative moral emotions applies—with modifications—to virtue (i.e., the positive moral emotion experienced by individuals when they comply with moral norms and legal rules). Like guilt and shame, virtue can reduce the optimal number of legal rules and the optimal investment in law enforcement when virtue substitutes for legal inducements. And as with guilt and shame, virtue can increase the optimal number of legal rules and the optimal level of law enforcement when the combination of law and virtue brings about socially beneficial behavior that neither law nor virtue could incentivize on its own. Finally, we consider the possibility that legal rules may “crowd out” the virtue that individuals experience when they comply with moral norms that are not codified into law. Whether legal rules “crowd out” (or conversely, “crowd in”) virtue will have important implications for laws such as compulsory voting requirements and the much-debated “duty to rescue” statutes adopted by several U.S. states.

Taken as a whole, our model of guilt and shame—and our extensions to resentment and virtue—do not yield unidirectional prescriptions for the optimal number of legal rules or the optimal level of law enforcement investment. What our analysis does underscore is that sensitivity to the psychological sequelae of legal compliance and noncompliance can produce far-reaching—though context-contingent—lessons for legal policy. By building a conceptual framework that links moral emotions to legal rules and law enforcement, we contribute to the growing law-and-emotions field²¹ while supporting future work—theoretical and empirical—that explores the relationship between moral emotions and legal policy.

Moreover, while this essay focuses on legal rules, our framework and analysis apply similarly to nonlegal institutions that regulate conduct capable of generating moral emotions. Nonlegal rules that we encounter in everyday life—for example, a rule at the gym that users must wipe down equipment after a workout, or a rule in an apartment building that residents must break down cardboard boxes before placing them in the recycling area—often affect the amount of guilt and shame experienced by violators, the amount of resentment experienced by observers, and the amount of virtue experienced by compliers. In these non-legal contexts, as in law’s domain, moral emotions can supply reasons to adopt more or fewer legal rules or to invest more or less in informal enforcement efforts.

We begin in Part I by reviewing the law-and-economics literature on guilt and shame. In Part II, we introduce a unified model of guilt and shame that connects those emotions to the optimal number of legal rules and the optimal level of law enforcement. Part III draws out implications of our model for the use of guilt and shame as well as extensions to resentment and

²¹ For a recent overview of the “law and emotion” literature, see Susan A. Bandes, Jody Lyneé Madeira, Kathryn D. Temple & Emily Kidd White, Introduction, in *Research Handbook on Law and Emotion* 1, 1–10 (Susan A. Bandes et al., eds., 2021).

virtue. We conclude by suggesting promising paths for future research into the relationship between moral emotions and legal policy.

I. Negative Emotions in the Law and Economics Literature

A. Guilt

Guilt is a polysemous word. Even within the small law-and-economics literature on guilt, there are multiple definitions of the term. Distinguishing among these types of guilt will facilitate rigorous analysis and allow us to see—in Part II—how policies that reduce one type of guilt can increase the amount of another.

In his original analysis of law and morality, Steven Shavell describes guilt as the negative emotion that individuals experience when they violate moral norms.²² Importantly, this negative emotion does not depend on whether the relevant moral norm has been codified in law.²³ Put another way, Shavell's conception of guilt is *law-independent* (though Shavell does not use that term himself). Shavell goes on to consider how the existence of law-independent guilt affects the optimal design of legal rules. He makes two claims that are particularly relevant to our analysis in Part II. First, Shavell argues that when moral emotions are strong, morality can *substitute* for law as a means of regulating undesirable conduct.²⁴ In other words, when law-independent guilt is sufficient to deter harmful behavior, society need not incur the additional costs of enacting and enforcing a law prohibiting that behavior. Second, Shavell argues that when moral emotions are too weak to deter harmful behavior on their own, “then failure to prevent bad conduct will . . . make worthwhile the additional expense of the legal system as a supplement to morality.”²⁵

Murat Mungan offers a notably different operationalization of guilt in his analysis of optimal law enforcement.²⁶ In Mungan's model, individuals experience guilt only if they commit a crime proscribed by law.²⁷ Put another way, Mungan conceives of guilt as being *law-dependent* (though again, that term is ours). Moreover, Mungan posits that if an individual who commits a

²² Shavell, *supra* note 6, at 230.

²³ See *id.* at 230–32.

²⁴ See *id.* at 244.

²⁵ See *id.* at 247. Shavell, writing with Louis Kaplow, expands on his discussion of guilt in Louis Kaplow & Steven Shavell, *Moral Rules, the Moral Sentiments, and Behavior: Toward a Theory of an Optimal Moral System*, 115 *J. Pol. Econ.* 494 (2007). Like Shavell's initial article, Kaplow and Shavell's insightful study conceives of guilt in strictly law-independent terms. See *id.* at 497. Unlike Shavell's earlier article, however, Kaplow and Shavell do not consider the relationship between guilt and legal policy. See *id.* at 509 (“[O]ur model considers morality in isolation from other social methods of controlling behavior, whereas the optimal use of morality will depend on the availability of other instruments, notably, the legal system . . .”). Kaplow and Shavell's article nonetheless contributes significantly to our framework for analyzing the relationship between guilt and legal policy. We discuss the connections between our framework and Kaplow and Shavell's model in more detail below. See *infra* note 50.

²⁶ See Mungan, *supra* note 6.

²⁷ See *id.* at 99–100.

crime and experiences guilt is later detected by law enforcement, the individual may experience a partial relief of guilt.²⁸ According to Mungan, the ameliorating effect of enforcement on guilt provides a reason for society to invest in law enforcement.²⁹

Importantly, the existence of one type of guilt need not preclude the existence of another. Individuals may experience some amount of guilt when they transgress a moral norm (law-independent guilt), and they may experience an additional amount of guilt when they violate a legal rule (law-dependent guilt).³⁰ Whereas Shavell conceives of guilt as law-independent while Mungan characterizes guilt as law-dependent, we will—in Part II—consider the possibility that both types of guilt operate simultaneously. Moreover, while Mungan assumes that detection by law enforcement will provide partial relief for lawbreakers, the reverse is possible as well: detection by law enforcement may increase the amount of the negative emotion experienced by lawbreakers. As we will see, this last observation connects the phenomenon of guilt with the related phenomenon of *shame*.

B. Shame

In contrast to the limited legal literature on psychological guilt, the related emotion of shame has attracted significant attention from legal scholars—including in the law and economics field—over the last several decades. Most of this work focuses on whether the government should use explicit “shaming sanctions” to supplement or substitute for other penalties such as fines and imprisonment. Our main focus is different: we ask how the phenomenon of shame—which we define as an individual’s experience of a negative emotion when her transgression of a moral norm or violation of a legal rule is observed by others—affects the optimal number of laws and the optimal level of law enforcement. Still, the large literature on shaming sanctions informs our analysis in Part II, and the results of our analysis bear important implications for the desirability of shaming sanctions.

The “shame debate”³¹ in U.S. legal scholarship began in earnest with a 1996 article by Dan Kahan advocating for the wider use of shaming sanctions—for example, publishing offenders’ names on billboards or requiring individuals convicted of drunk driving to display special license

²⁸ See *id.* at 100.

²⁹ See *id.* at 101.

³⁰ The level of guilt that individuals experience for noncompliance may turn on other factors as well. For example, guilt may be related to *mens rea*: an individual who intentionally violates a norm or rule may experience more guilt than someone who commits an inadvertent transgression. Our model is not restricted to intentional decisions. The prospect of guilt may deter negligence (non-intentional harm) by inducing more care or lower activity level effects. Moreover, individuals may also experience more law-dependent guilt (somewhat akin to survivor guilt) if a co-conspirator is detected and punished while their own violations remain undetected.

³¹ Dan M. Kahan, *What's Really Wrong with Shaming Sanctions*, 84 *Tex. L. Rev.* 2075, 2077 (2006). For an excellent overview, see Kate Klonick, *Re-Shaming the Debate: Social Norms, Shame, and Regulation in an Internet Age*, 75 *Md. L. Rev.* 1029, 1037–44 (2016).

plates.³² Kahan's primary argument was that shaming sanctions—unlike other alternatives to incarceration—would be acceptable to a public that demands that penalties express condemnation “as dramatically and unequivocally as imprisonment.”³³ But Kahan also emphasized the substitutionary advantages of shaming sanctions, noting that “adding shame to the conventional punishments allows society to reduce its total reliance on imprisonment and thereby realize substantial savings in resources.”³⁴

Kahan's groundbreaking article unloosed a torrent of scholarly commentary—much of it critical. Toni Massaro argued that shaming sanctions are likely to be ineffective at deterring criminal conduct and—worse yet—are inconsistent with a democratic society's commitment to human dignity, equality, and decency.³⁵ James Whitman wrote that shaming sanctions are wrongful because they “involve a species of lynch justice” that creates “an ugly, and politically dangerous, complicity between the state and the crowd.”³⁶ Eric Posner—who had previously co-authored with Kahan a proposal to incorporate shaming sanctions into the Federal Sentencing Guidelines for white-collar crimes³⁷—subsequently argued that shaming sanctions would not achieve optimal deterrence because the amount of shame suffered by a lawbreaker would be poorly tailored to the severity of the offense.³⁸ A decade into the shame debate, Kahan reversed his own position and declared that shaming sanctions cannot achieve political acceptability because they conflict with the egalitarian and individualist cultural orientations of many citizens.³⁹ Notwithstanding Kahan's renunciation of shaming sanctions, other scholars have taken up the shaming sanctions mantle and continue to argue for the use of shaming sanctions across a range of legal contexts.⁴⁰

³² See Kahan, *supra* note 7.

³³ *Id.* 592

³⁴ *Id.* at 641.

³⁵ See Toni M. Massaro, *The Meanings of Shame: Implications for Legal Reform*, 3 *Psychol. Pub. Pol'y & L.* 645, 692–704 (1997). Martha Nussbaum—echoing and expanding on Massaro's critique—concluded that state-imposed shaming sanctions are “profoundly subversive of the ideas of equality and dignity on which liberal society is based.” Martha C. Nussbaum, *Hiding from Humanity: Disgust, Shame, and the Law* 232, 238 (2004).

³⁶ James Q. Whitman, *What Is Wrong with Inflicting Shame Sanctions?*, 107 *Yale L.J.* 1055, 1059 (1998).

³⁷ Dan M. Kahan & Eric A. Posner, *Shaming White-Collar Criminals: A Proposal for Reform of the Federal Sentencing Guidelines*, 62 *J. L. & Econ.* 365 (1999).

³⁸ See Eric Posner, *Law and Social Norms* 92–95 (2002). Posner also argued that shaming sanctions might be counterproductive because they would foster the formation of “deviant subcommunities” that celebrate criminal conduct. See *id.* at 100–03.

Offering a more sympathetic perspective on shaming sanctions, the sociologist Amitai Etzioni wrote that “one must not evaluate any social policy in itself but must compare it to others” and that shaming sanctions—for all their flaws—still might be preferable to the United States' extraordinarily harsh, ineffective, and costly system of mass incarceration. Amitai Etzioni, *The Monochrome Society* 46–47 (2001).

³⁹ See Kahan, *supra* note 31, at 2086–88.

⁴⁰ See, e.g., Plato-Shinar, *supra* note 8, at 271 (acknowledging arguments against shaming sanctions but nonetheless concluding that “regulatory shaming should be implemented in the banking context” according to a “special banking regulatory shaming model” that allows for the publication of enforcement decisions and

Although the shame debate in the late 1990s and 2000s focused mostly on whether the government should impose shaming sanctions, participants in that debate also addressed the relationship between shame and other aspects of legal policy, including the optimal number of legal rules and the optimal level of law enforcement. “Once shaming takes hold,” Kahan noted in his initial article, “a community might begin to punish conduct that it couldn’t have afforded to punish when imprisonment was the only politically acceptable option.”⁴¹ In economic terms, shame could serve as a *complement* to legal rules. Kahan suggested that this increase in the number of legal rules might be an additional benefit of shaming: “if the underlying conduct is in fact socially undesirable,” Kahan wrote, “then reducing the cost of deterring it always increases social wealth.”⁴² Meanwhile, Doron Teichman analyzed the relationship between shame and the optimal level of law enforcement, concluding that shame and law enforcement efforts could be substitutes.⁴³ According to Teichman, when law enforcement expenditures yield diminishing marginal returns in terms of deterrence, the optimal investment in law enforcement will decrease as offenders suffer more shame.⁴⁴

In Section II.B, we will reconsider—and complicate—Kahan’s claim that shame can increase the optimal number of legal rules as well as Teichman’s suggestion that shame can substitute for law enforcement effort. There, we show that shame can increase *or decrease* the optimal number of legal rules and can serve as a substitute *or complement* for investments in law enforcement. For now, we stress that the relationship between shame and legal policy matters whether or not the government deliberately imposes shaming sanctions. That is, individuals who violate moral norms or legal rules may experience shame when their transgressions are detected by other community members even if the government does not employ shaming sanctions as a policy tool.⁴⁵ Thus, while we do not take a position here on whether deliberate shaming sanctions are morally or politically acceptable, our conclusions regarding the relationship between shame and legal policy remain relevant even in societies that reject shaming sanctions on moral or political grounds.

II. A Unified Model of Negative Emotions and the Law

How should legal policy respond to the negative emotions of guilt and shame? We begin in Section II.A with guilt, considering how guilt affects both the optimality of legal rules and the

customer complaints but not audit reports); (arguing that “it is possible to effectively apply the shaming tool to the environmental arena”); Yadin, *supra* note 14, at 451 (“Can shaming be a good thing? And should government agencies engage in shaming? I believe the answer to both is yes.”); see also Naveh, *supra* note 10, at 217 (arguing for the limited use of shaming sanctions in the environmental context).

⁴¹ See Kahan, *supra* note 7, at 641 n.206.

⁴² *Id.*

⁴³ See Doron Teichman, *Sex, Shame, and the Law: An Economic Perspective on Megan's Laws*, 42 *Harv. J. on Legis.* 355 (2005).

⁴⁴ See *id.* at 375 tbl.3.

⁴⁵ See Posner, *supra* note 38, at 94.

optimal level of law enforcement. We then extend our analysis to shame in Section II.B, highlighting similarities and differences between shame and guilt.

A. Guilt

Above, we distinguished between law-independent guilt, which arises when individuals transgress a moral norm whether or not that norm has been codified into a legal prohibition, and law-dependent guilt, which results specifically from breaking a legal rule. We will now introduce formal notation— G_{ind} for law-independent guilt and G_{dep} for law-dependent guilt. We can imagine a behavior—say, littering in the park—that most people recognize as wrongful but that may or may not be illegal. In our model, litterers always experience law-independent guilt of G_{ind} and experience additional disutility of G_{dep} if littering is proscribed by law. In our model, individuals who litter experience a private benefit (B) that is less than the negative externality that they impose on society (N). In other words, littering is socially harmful even before we consider the social costs of the guilt that litterers impose upon themselves.

In our main analysis, we will assume that all parameter values are the same for all individuals. Ours is thus a “representative agent model” that allows us to analyze the entire population as if it were a single actor. Representative agent models are widely used in many areas of economics—for example, optimal taxation⁴⁶—and they have the benefit of simplifying what would otherwise be a highly technical analysis. Importantly, though, our key findings do not depend on the representative agent assumption, and in a separate working paper, we demonstrate that these same results can be derived from a more complicated model with a heterogeneous population.⁴⁷

When littering is merely wrongful but not illegal, individuals engage in the behavior if and only if the private benefit of littering exceeds the resulting law-independent guilt: $B > G_{ind}$.⁴⁸ When littering is illegal, two additional deterrents emerge. The first is law-dependent guilt (G_{dep}). The second is the monetary or other legal sanction imposed when law enforcement authorities catch a lawbreaker. Let P_{law} represent the probability of detection by law enforcement, and let F represent the fine for littering. When littering is illegal, individuals engage in the behavior if and only if:

$$B > G_{ind} + G_{dep} + P_{law} \bullet F$$

⁴⁶ See, e.g., Dylan T. Moore & Joel Slemrod, Optimal Tax Systems with Endogenous Behavioral Biases, 197 J. Pub. Econ. 104384, at 2 (2021); Brian Galle, David Gamage & Yulia Kuchumova, Tax Base Diversification as an Enforcement Tool, Am. L. & Econ. Rev. (forthcoming 2025), <https://ssrn.com/abstract=5093851> (manuscript at 5, 8–9)

⁴⁷ Ian Ayres, Joseph Bankman & Daniel Hemel, Toward a Formal Model of Law and the Negative Emotions (2025) (unpublished manuscript).

⁴⁸ We will assume that a tie favors inaction: in other words, individuals will not litter when the private benefit exactly equals the private (emotional and monetary) costs.

With this notation in place, we can begin to analyze the implications of guilt for legal policy.

1. Optimal Lawmaking

Lawmaking itself involves nontrivial costs. These include the cost of drafting new legal rules, the opportunity cost of legislative floor time devoted to debates over new legal rules, and the cost of disseminating new legal rules to the public. We will use the term C_{law} to capture these fixed costs of lawmaking. The cost of lawmaking is distinct from—and prior to—the cost of law enforcement, which we will consider in Section II.A.2. For now, imagine that if a law against littering is passed, the law will not be enforced ($P_{law} \bullet F = 0$) except through the mechanism of law-dependent guilt.

Given this setup, should the legislature pass a law against littering? The short answer is: It depends! The longer answer is that it depends upon which of three effects—the *substitution effect*, the *marginal effect*, or the *infra-marginal effect*—predominates.

a. Substitution Effect

Most straightforwardly, the existence of law-independent guilt can substitute for a formal legal prohibition on socially deleterious behavior. Consider the case where law-independent guilt, on its own, is sufficient to deter littering: $G_{ind} \geq B$. Under these circumstances, there is no reason for society to bear the cost of lawmaking (C_{law}); the emotional penalty of transgressing the norm against littering is enough.⁴⁹ More generally, the optimal number of legal rules will be lower when the value of G_{ind} is very high because law-independent guilt substitutes for legal reinforcement of moral norms.

b. Marginal Effect

Now imagine that law-independent guilt (G_{ind}) takes on an intermediate value. Law-independent guilt is not large enough to deter littering on its own ($G_{ind} < B$), but it still is large enough to impose significant emotional costs on norm violators. Under these circumstances, law-independent guilt cannot substitute for a legal prohibition on littering. But suppose that if the legislature enacts a law against littering, the sum of law-independent guilt *and* law-dependent guilt will be sufficient to deter the behavior ($G_{ind} + G_{dep} \geq B$). Put another way, the combination of law-independent guilt and law-dependent guilt is high enough to reach the *deterrence threshold*, though law-independent guilt on its own is not.

When law-independent guilt falls in this intermediate range, a law against littering is optimal as long as the benefit of deterring littering exceeds the social cost of lawmaking (C_{law}). This last proviso reflects the *cost-justification constraint*: In order for a law against littering to be

⁴⁹ This substitution effect is implicit in Shavell's analysis. See Shavell, *supra* note 6, at 244 (noting that "[i]t will be best to control behavior solely through the use of morality when"—among other conditions—"morality functions reasonably well by itself").

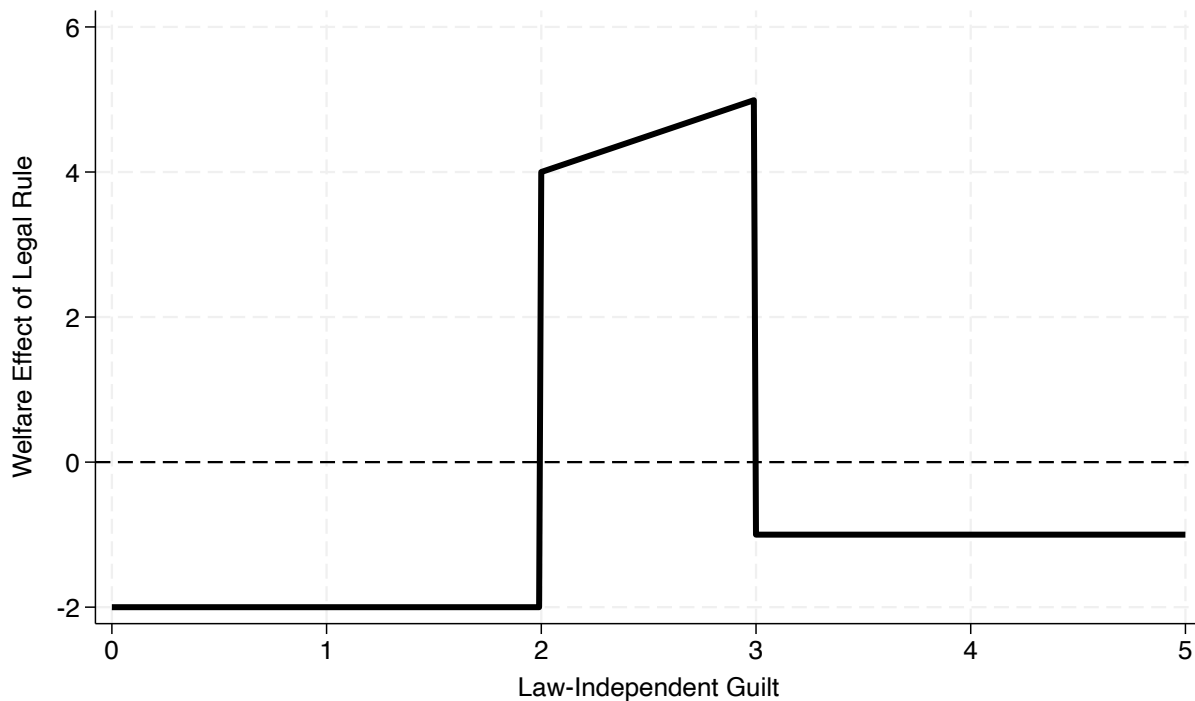
optimal, the social cost of littering ($N - B + G_{ind}$) must be high enough to justify the cost of enacting a law.

The phenomenon described here—where law-independent guilt is high enough such that a law against littering will reach the deterrence threshold and satisfy the cost-justification constraint—is the *marginal effect* of law. We call this the “marginal effect” because it arises from the change in behavior of individuals who are on the margin between littering and not littering—who would litter in the absence of a legal rule but would cease to litter if the moral norm against littering were codified into law.⁵⁰ Note that when the marginal effect is positive (i.e., the law induces norm compliance), law-independent guilt still contributes to the optimality of the legal rule in two ways. First, a higher value of G_{ind} makes it likelier that the sum of G_{ind} and G_{dep} will reach the deterrence threshold. Second, a higher value of law-independent guilt also makes it likelier that a law against littering will satisfy the cost-justification constraint: that the benefit of deterring littering will exceed the social cost of lawmaking. It is worth pausing for a moment to underscore this second point: law-independent guilt increases the social cost of moral norm violations because norm violations—in addition to imposing negative externalities—also give rise to an internality: law-independent guilt. For that reason, law-independent guilt also increases the social benefit of deterring norm violations through the imposition of a legal rule.

c. Inframarginal Effect

Finally, imagine that law-independent guilt is so low that the sum of law-independent guilt and law-dependent guilt is no longer sufficient to deter littering ($G_{ind} + G_{dep} < B$). Now, a law against littering is not optimal. Law-dependent guilt—even when layered on top of law-independent guilt—is not sufficient to reach the deterrence threshold. Moreover, the anti-littering law increases the social cost of littering because litterers now experience law-dependent guilt (in addition to the law-independent guilt that they would suffer in the law’s absence). We call this the *inframarginal effect* because it refers to the effect of having a law that applies to individuals whose behavior does not change (i.e., inframarginal litterers). On top of that, enacting the law entails a social cost (C_{law}), with no corresponding social benefit.

⁵⁰ Kaplow and Shavell’s 2007 article, which analyzes the optimal system of morality but sets aside interactions between morality and law, uses the term “marginal effect” to refer to circumstances in which law-independent guilt changes behavior and the term “inframarginal effect” to refer to circumstances in which law-independent guilt generates negative utility without changing behavior. See Kaplow & Shavell, *supra* note 25, at 501.

Figure 1. Legal Rule's Impact on Welfare for Different Values of Law-Independent Guilt

Notes: Figure 1 illustrates the relationship between law-independent guilt and the welfare effect of a legal rule when the private benefit (B) of the behavior is 3, the negative externality (N) is 6, law-dependent guilt (G_{dep}) is 1, and the cost of lawmaking (C_{law}) is 1. We assume that the law is enforced only through law-dependent guilt ($P_{law} \bullet F = 0$).

Figure 1 illustrates the three phenomena described above—the substitution effect, the marginal legal effect, and the inframarginal legal effect—holding all variables constant except for the amount of law-independent guilt. For purposes of Figure 1, we set the private benefit (B) of the behavior at 3, the negative externality (N) at 6, and the cost of lawmaking (C_{law}) at 1. We assume that the law will generate law-dependent guilt (G_{dep}) of 1 if the law is enacted and individuals fail to comply. We will assume that the law is enforced only through law-dependent guilt ($P_{law} \bullet F = 0$).

On the left side of the figure (where G_{ind} lies between zero and 2), the law has a negative effect on social welfare. This negative effect arises for two reasons. First, the legal prohibition imposes law-dependent guilt ($G_{dep} = 1$) on noncompliers—what we call the inframarginal effect. Second, the law is costly to enact ($C_{law} = 1$). However, the combination of law-independent and law-dependent guilt is not yet sufficient to reach the deterrence threshold, so the law has no beneficial effect on behavior.

In the middle of the figure (where G_{ind} lies between 2 and 3), the law has a positive effect on social welfare. This reflects the marginal effect: the law changes behavior (i.e., induces

individuals to switch from littering to not littering), and the social benefit of that behavioral change increases as law-independent guilt increases. Intuitively, the more guilt that litterers experience in the absence of a legal rule, the more beneficial it will be to deter individuals from violating the anti-littering norm.

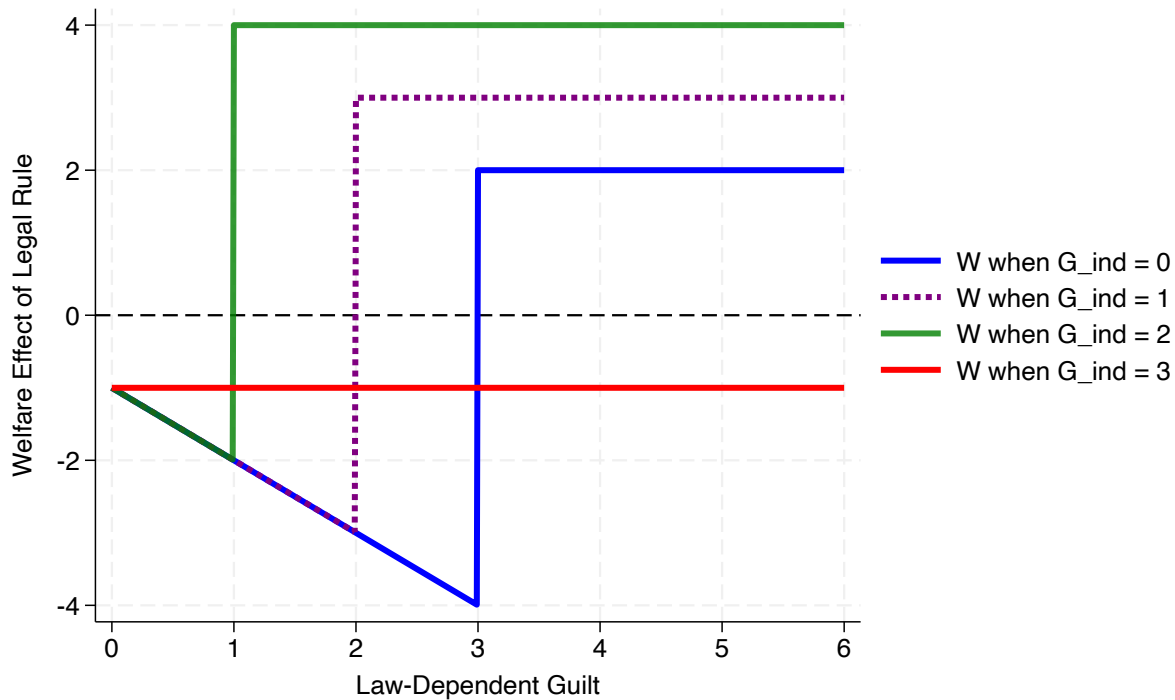
The sharp rise in the welfare effect of the legal rule when law-independent guilt reaches 2 reflects this marginal effect in action. When law-independent guilt is just shy of 2, the combination of law-independent guilt ($G_{ind} < 2$) and law-dependent guilt ($G_{dep} = 1$) is not enough to deter the behavior (because the private benefit, B , is 3). Thus, the only effect of having a law is the social cost of lawmaking ($C_{law} = 1$) plus the cost of law-dependent guilt on inframarginal noncompliers ($G_{dep} = 1$). When law-independent guilt reaches 2, individuals switch from noncompliance to compliance. Now, the benefit of the legal rule is that it eliminates law-independent guilt ($G_{ind} = 2$) and eliminates the net social loss from littering ($N - B = 3$), though it still entails a lawmaking cost ($C_{law} = 1$).

On the right side of the figure (once G_{ind} exceeds 3), the law again has a negative effect on social welfare. This reflects the substitution effect: now, law-independent guilt is so high that even in the absence of a law, individuals will be deterred from violating the anti-littering norm. Thus, the only effect of the law is to saddle society with the cost of lawmaking (C_{law}).

In this simple example, having an unenforced law would only increase welfare for intermediate values of law-independent guilt. When G_{ind} is too low or too high, having a law does not change behavior. When law-dependent guilt is low, everyone violates the norm whether or not there is a law, and when law-independent is high, everyone complies with the norm whether or not there is a law. When law does not change behavior, society would be better off with a laissez-faire (or no-law) regime.

Figure 2 shows how the welfare effect of the legal rule varies with both law-dependent and law-independent guilt. Again, we set B equal to 3, N equal to 6, C_{law} equal to 1, and $P_{law} \cdot F$ equal to zero.

Figure 2. Legal Rule's Impact on Welfare for Different Value of Law-Independent Guilt and Law-Dependent Guilt



Notes: Figure 2 illustrates the relationship between law-dependent guilt and the welfare effect of a legal rule for different levels of law-independent guilt when the private benefit (B) of the behavior is 3, the negative externality (N) is 6, and the cost of lawmaking (C_{law}) is 1. We assume that the law is enforced only through law-dependent guilt ($P_{law} \bullet F = 0$).

The blue line illustrates the effect of the legal rule on welfare when law-independent guilt is zero—when the law proscribes a *malum prohibitum* offense that is only perceived as wrongful because it is illegal. For example, turning right on red while driving in New York City might qualify as a *malum prohibitum* offense because the behavior—which is legal elsewhere in the country—would not be considered immoral except for the fact that it is banned in the Big Apple. The behavior still may be quite harmful, though, as right turns on red significantly increase risks to pedestrians and cyclists.⁵¹ In other words, the negative externality (N) is plausibly much higher than the private benefit (B) even though law-independent guilt is zero.

Because law-independent guilt is zero in the *malum prohibitum* case, it takes a larger amount of law-dependent guilt before we reach the deterrence threshold (which sets in here where G_{dep} equals 3). Until that critical point, the law has a negative effect on social welfare due to the combination of law-dependent guilt and the fixed cost of enacting the law. Once law-

⁵¹ See David F. Preusser et al., The Effect of Right-Turn-on-Red on Pedestrian and Bicyclist Accidents, 13 J. Safety Research 45, 52 (1982) (finding that pedestrian and cyclist accidents increased significantly in states that adopted permissive right-turn-on-red laws in the 1970s).

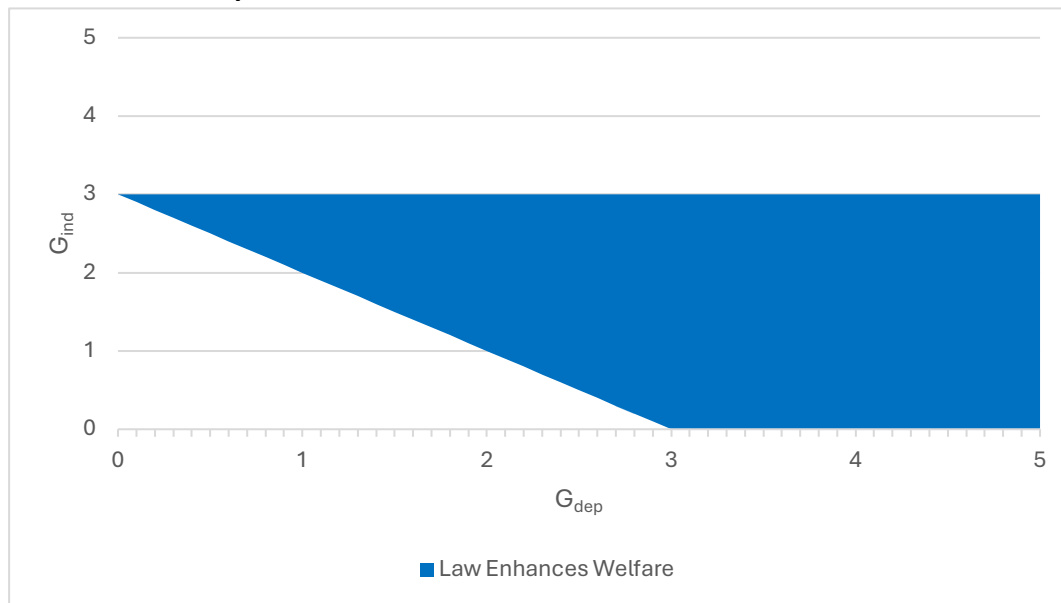
dependent guilt reaches the deterrence threshold, the welfare effect of the legal rule jumps into the positive range because the rule successfully deters harmful conduct.

The purple and green lines in Figure 2 illustrate the effect of the legal rule on welfare when law-independent guilt falls into an intermediate range (here, $G_{ind} = 1$ and $G_{ind} = 2$, respectively). Here, the legal rule proscribes conduct that is considered to be *malum in se*—but not so egregious that guilt on its own will deter the behavior. Our running example of littering plausibly fits this description. These lines follow the same general pattern as the blue line (the *malum prohibitum* case), but with two important differences. First, the higher the value of G_{ind} , the more quickly we reach the deterrence threshold because a higher value of law-independent guilt bolsters the deterrent effect of law-dependent guilt. Second, once we have reached the deterrence threshold, the welfare benefit of the legal rule is greater than in the *malum prohibitum* case because in addition to eliminating the negative externality, the legal rule eliminates the law-independent guilt that norm violators would otherwise face. In other words, an intermediate level of law-independent guilt makes deterrence easier to achieve and more beneficial to society.

The red line in Figure 2 illustrates the effect of the legal rule on welfare when law-independent guilt takes on a high value (here, $G_{ind} = 3$). For example, in a highly patriotic society, flag burning might be a behavior that can be fully deterred even without an explicit legal prohibition. Because the behavior can be deterred by law-independent guilt alone, enacting the law at nonzero cost entails a waste of resources. Again, we see the substitution effect in action: law-independent guilt replaces the need for a legal prohibition (and, indeed, renders the legal prohibition suboptimal).

Figure 3 offers a further illustration of the relationship between the two types of guilt. The orange-shaded area of Figure 3 delimits regions in which a law enforced exclusively through law-dependent guilt enhances welfare. When law-independent guilt is sufficiently high ($G_{ind} \geq 3$), a legal prohibition is not optimal because individuals will comply with the norm even when society does not incur enactment costs. When the combination of law-independent guilt and law-dependent guilt together is insufficient to induce compliance, a legal prohibition is also not optimal because a law would waste enactment costs and law-dependent guilt. (This area is depicted in the Figure 3 as the white triangle on the lower left side). When law-independent guilt is insufficient to induce compliance but the combination of law-independent and law-dependent guilt is sufficient to induce compliance, law is optimal because for those values, the marginal effect predominates (so long as the cost-justification constraint is also satisfied).

Figure 3. Analysis of When Law Enhances Welfare for Different Value of Law-Independent Guilt and Law-Dependent Guilt



Notes: Figure 3 illustrates the region in which law enhances welfare varying the levels of law-dependent and law-independent guilt when the private benefit (B) of the behavior is 3, the negative externality (N) is 6, and the cost of lawmaking (C_{law}) is 1. We assume that the law is enforced only through law-dependent guilt ($P_{law} \bullet F = 0$).

Finally, note that law-dependent guilt in Figure 3 is always nonnegative. In other words, total guilt always increases or stays the same when a moral norm is codified into law. While the assumption of nonnegative law-dependent guilt helps to simplify our first-cut analysis, it may not always hold in the real world. For example, some individuals may have a taste for lawbreaking: they may derive positive utility from violating a norm simply because that norm is codified into law.⁵² Less sociopathically (and perhaps more commonly), law may “crowd out” intrinsic motivations for compliance with moral and social norms.⁵³

⁵² On the preferences of lawbreakers, see generally Ingwer Borg & Dieter Hermann, Personal Values of Lawbreakers, 164 *Personality & Individual Differences* 110104 (2020).

⁵³ For overviews of the literature on motivational crowding out, see generally Christopher P. Reinders Folmer, Crowding-Out Effects of Laws, Policies and Incentives on Compliant Behaviour, in *The Cambridge Handbook of Compliance* 326 (Benjamin van Rooij & D. Daniel Sokol eds., 2021); and Kristen Underhill, When Extrinsic Incentives Displace Intrinsic Motivation: Designing Legal Carrots and Sticks to Confront the Challenge of Motivational Crowding-Out, 33 *Yale J. on Reg.* 213, 224–32 (2016). Most of the empirical literature on motivational crowding out focuses on non-legal rewards and penalties. See *id.* at 228–29; see, e.g., Uri Gneezy & Aldo Rustichini, A Fine is a Price, 29 *J. Legal Stud.* 1 (2000) (reporting that the introduction of a small fine on parents who picked their children up late from Israeli daycares increased the incidence of late pick-ups). For an exploration of the mechanisms of crowd-out, see generally Lewis Kornhauser, Yijia Lu & Stephan Tontrup, Testing a Fine Is a Price in the Lab, 63 *Int’l Rev. Law & Econ.* 105931 (2020).

Insofar as legal rules crowd out the guilt experienced by individuals who violate moral norms, the policy implications of the marginal and inframarginal effects are the reverse of the above. First, an unenforced legal rule will undermine deterrence because the moral cost of violating the legal rule will be less than the moral cost of violating the uncodified norm. If the proscribed behavior is harmful on net (e.g., littering), the marginal effect of the legal rule on social welfare will be negative (i.e., social welfare will decrease when individuals change their behavior in response to the legal rule). But second, and more subtly, the inframarginal effect of the legal rule on social welfare will be positive: individuals who would violate both the codified moral norm and the legal rule are *better off* with the legal rule because they experience less guilt. When this positive inframarginal effect outweighs the negative marginal effect, the fact that a legal rule crowds out intrinsic motivations to comply with a social norm may be an argument *in favor* of adopting the legal rule (e.g., the benefit of relieving guilt experienced by inframarginal litterers may exceed the social cost of an increase in littering). We will explore the implications of crowding out in more detail in Section III.D, where we extend our model of negative moral emotions to the positive moral emotion of virtue.

2. Optimal Law Enforcement

We now shift our focus from the optimality of a legal rule to the optimal level of law enforcement. Here, we will assume that a law (in our running example, a ban on littering) is already in place and consider whether the government should invest resources in enforcing the law.

Recall from above that individuals will engage in the illegal behavior if and only if the private benefit exceeds the sum of law-independent and law-dependent guilt plus the expected cost of the legal sanction: $B > G_{\text{ind}} + G_{\text{dep}} + P_{\text{law}} \cdot F$. We will assume that the fine (F) is a pure transfer from individuals to the government that does not impact social welfare directly. Furthermore, we will assume that the fine is set at some maximum value less than infinity. This second assumption is important because if fines were uncapped, the government could always deter the illegal behavior with minimal investment in law enforcement. This second assumption is also realistic because noncompliers have limited resources and because the government may wish to cap the fine on one type of offense (here, littering) in order to maintain marginal deterrence for more egregious offenses.⁵⁴

The probability of detection by law enforcement (P_{law}) is an increasing function of the government's investment in law enforcement (E). For now, we will assume a linear relationship between the probability of detection and the investment in law enforcement: $P_{\text{law}} = pE$, where P_{law} can never be lower than zero or greater than one. However, our basic points regarding the potential for substitution and complementarity between guilt and law enforcement will continue

⁵⁴ The assumption of non-infinite fines is common in the law and economics literature. See, e.g., Louis Kaplow, The Optimal Probability and Magnitude of Fines for Acts That Definitely Are Undesirable, 12 Int'l Rev. L. & Econ. 3, 5 (1992).

to apply when the relationship between P_{law} and E is nonlinear: for example, when investments in law enforcement yield diminishing marginal returns.⁵⁵

a. Substitution Effect

Similarly to the substitution effect in Section II.A.1, guilt can substitute for law enforcement when guilt is sufficiently high to deter the harmful behavior on its own. Note that here—where we are assuming that a legal rule is already in place—we can focus on total guilt ($G = G_{ind} + G_{dep}$) without differentiating between law-independent and law-dependent guilt because both are present. When total guilt exceeds the private benefit of littering (B), the optimal level of law enforcement is zero because guilt on its own is a sufficient deterrent, and any investment in law enforcement would be an unnecessary social cost.

When total guilt is less than the private benefit of littering ($G < B$), the relationship between guilt and the optimal level of law enforcement becomes more nuanced. The optimal level of law enforcement (E^*) is the minimal amount sufficient to deter littering, provided that E^* is still less than the social cost of littering.⁵⁶ Figure 4 illustrates the relationship between guilt and the optimal investment in law enforcement when the probability of detection is $0.1E$ and the fine for littering is set at 5. As above, we set the private benefit (B) equal to 3 and the negative externality (N) equal to 6. The downward slope starting at $G = 1$ reflects the substitution of guilt for law enforcement effort. Once G reaches 3, substitution is complete, and no investment in law enforcement is optimal because guilt on its own deters.

⁵⁵ In a separate working paper, we demonstrate that our main results carry over to a model in which P_{law} is concave on values of E greater than zero. See Ayres et al., *supra* note 47.

⁵⁶ Formally, the optimal level of law enforcement investment is the amount necessary to reach the deterrence threshold:

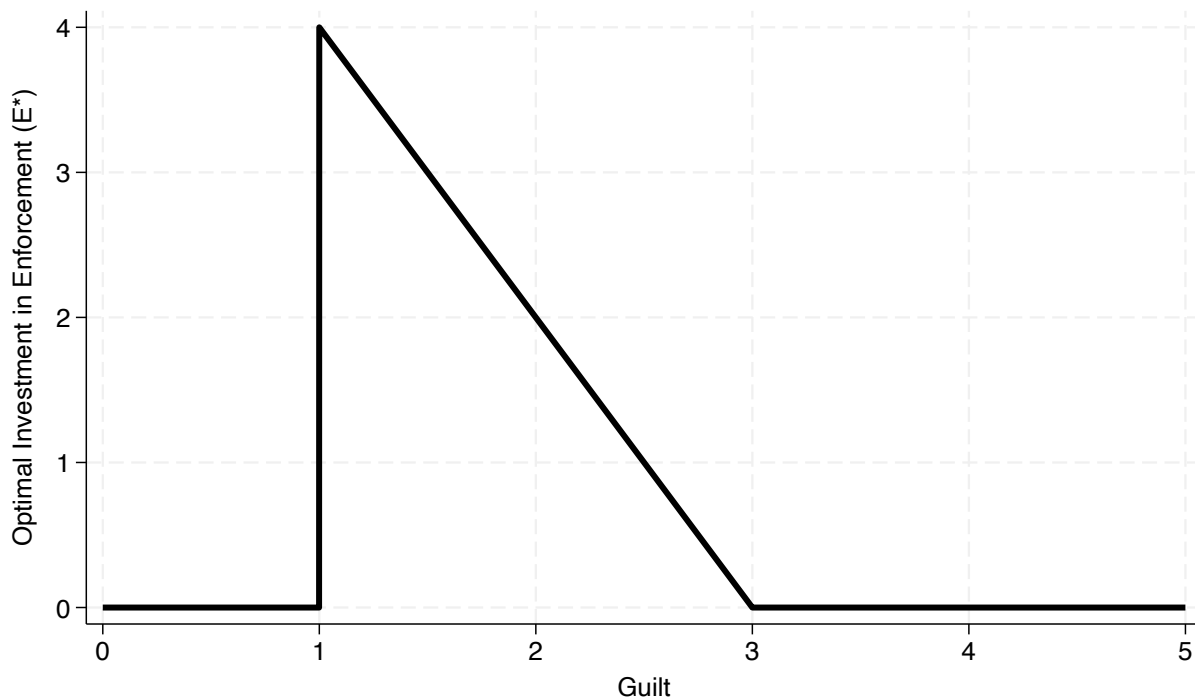
$$B = G + pE^* \cdot F$$

Or, rearranging terms:

$$E^* = \frac{B - G}{pF}$$

provided that the cost-justification constraint is satisfied:

$$E^* < N - B + G$$

Figure 4. Relationship Between Guilt and Optimal Investment in Law Enforcement

Notes: Figure 4 illustrates the relationship between guilt and the optimal investment in law enforcement (E^*) when the private benefit (B) of the behavior is 3, the negative externality (N) is 6, the probability of detection (P_{law}) is $0.1E$, and the fine (F) is 5.

b. Marginal Effect

Above, we used the term “marginal effect” to describe the scenario in which law-independent guilt on its own cannot deter harmful behavior but the combination of law-independent and law-dependent guilt can. In the enforcement context, an analogous marginal effect arises where total guilt on its own cannot deter harmful behavior but the combination of total guilt and the threat of legal sanction can. The discontinuous upward jump in the optimal level of law enforcement at $G = 1$ in Figure 4 illustrates this marginal effect in action.

To elaborate: Recall from above that the optimal investment in law enforcement is subject to a cost-justification constraint: the level of enforcement must be less than the social cost of littering ($E^* < N - B + G$). When the government invests in law enforcement up to that point, litterers will be deterred if and only if the private benefit of littering is less than or equal to the sum of guilt and the expected legal sanction. If the private benefit of littering exceeds the sum of guilt and the expected legal sanction, then enforcement will fail to deter and thus the optimal level of law enforcement will be zero. Accordingly, for any investment in law enforcement to be optimal, it must be the case that total guilt (G) is sufficiently high that (1) law enforcement can push the private cost of littering up to the deterrence threshold, and (2) when the level of law

enforcement is set at the deterrence threshold, the cost-justification constraint is satisfied. The optimal level of law enforcement will be zero unless guilt equals or exceeds that critical point.⁵⁷

Turning back to Figure 4, we see that the optimal investment in law enforcement is zero until guilt reaches a critical point (namely, the point at which the maximum cost-justified investment is sufficient to deter littering). Once total guilt reaches that point, then it becomes optimal for the government to invest in law enforcement because the government can change behavior through a cost-justified expenditure. As total guilt increases further, the optimal investment in law enforcement declines as the substitution effect kicks in. The marginal effect here is the complementarity between guilt and law enforcement at the critical point where the cost-justification constraint can be satisfied and the deterrence threshold can be reached ($G = 1$ in Figure 4).

Intuitively, there are two reasons why guilt raises the optimal level of law enforcement investment at the critical point: guilt makes it easier to deter littering and makes it likelier that deterrence will be cost-justified. We refer to this as the marginal effect because—again—it arises from the effect on individuals at the margin between littering and not littering who change their behavior as a result of law enforcement.

c. Inframarginal Effect

Finally, we turn to the region in which litterers are not deterred (the left side of Figure 4). Here, one might think that no level of investment in law enforcement above zero could be optimal because enforcement achieves no behavior-changing benefit and entails a real resource cost. However, recall from above that according to one conception of guilt, lawbreakers experience less guilt when they are caught than when they get away with the violation.⁵⁸ According to that view, detection by law enforcement *ameliorates* guilt. When this amelioration effect applies, lawbreakers experience guilt of $G - A$ when their violation is detected and G otherwise.

Amelioration of guilt offers an additional reason—separate from deterrence—for the government to invest in law enforcement. In theory, amelioration of guilt could provide a rationale for the government to invest in law enforcement even when enforcement will not deter littering. Realistically, we would be surprised if amelioration independently justifies enforcement except in very rare cases. However, when there are multiple types of individuals—some who can

⁵⁷ To find the critical point, we substitute the equation for the deterrence threshold in note 56 into the equation for the cost-justification constraint and arrive at:

$$N - B + G = \frac{B-G}{pF}$$

Rearranging terms, we arrive at:

$$G = \frac{B-pF}{1+pF}.$$

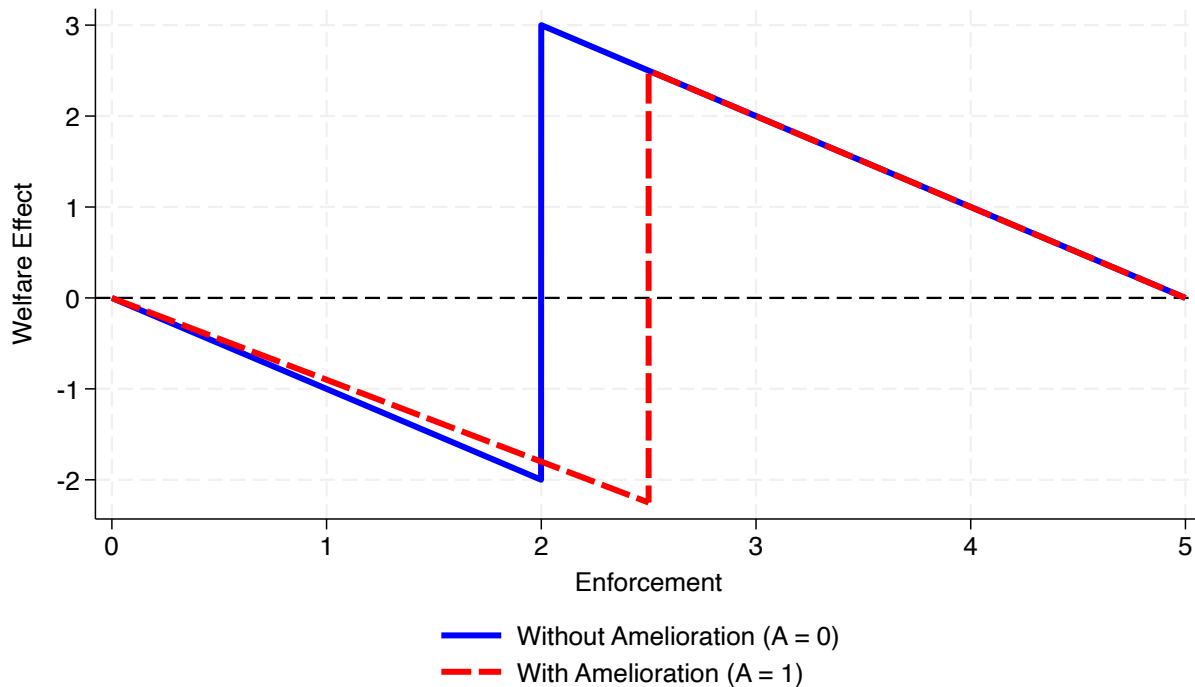
⁵⁸ See Mungan, *supra* note 6; *supra* text accompanying *supra* notes 26–29. Amelioration can be seen as a kind of negative shame, which will be discussed in the next section.

be deterred through enforcement and some who are inframarginal litterers—the amelioration benefit with respect to inframarginal litterers may combine with the deterrence effect on marginal litterers to justify a higher level of enforcement.

In one respect, the inframarginal effect in the optimal enforcement context is similar to the inframarginal effect in our optimal lawmaking analysis: both pertain to individuals whose behavior does not change as a result of legal policy (i.e., inframarginal litterers). But whereas the inframarginal effect of the legal rule worked to increase total guilt by adding law-dependent guilt, the inframarginal effect of law enforcement potentially operates to reduce total guilt through amelioration.

Finally, note that the amelioration effect of law enforcement—the reduction in guilt experienced by litterers who are caught—may have marginal implications as well (i.e., may affect whether individuals engage in littering in the first place). When enforcement ameliorates guilt (and when individuals correctly anticipate that they will experience amelioration if they are caught), then the deterrence effect of law enforcement is weaker. Amelioration weakens the deterrence effect of enforcement because when lawbreakers are detected and fined, they experience a reduction in guilt that partially offsets the disutility from the fine.

Figure 5. Expected Welfare Effects of Different Levels of Enforcement With and Without Amelioration



Notes: Figure 5 illustrates the welfare effect of varying levels of enforcement (E) when the private benefit (B) of the behavior is 3, the negative externality (N) is 6, the probability of detection (P_{law}) is $0.1E$, and the fine (F) is 5. Guilt (G) is 2. We set the welfare effect equal to zero when $E = 0$. The blue line reflects guilt without amelioration. The red dotted line reflects guilt with amelioration ($A = 1$), where amelioration is contingent upon detection.

Figure 5 illustrates the relationship between enforcement and the expected welfare of enforcement with and without amelioration. We set all parameters at the same values as in Figure 4 except for guilt (which we hold constant at $G = 2$). The solid blue line reflects the relationship between enforcement (E) and welfare without any amelioration effect. The red dotted line reflects the relationship between enforcement and welfare with an amelioration effect (A) of 1 that is contingent upon detection. In other words, the red dotted line reflects a scenario where an individual who engages in littering and is caught experiences guilt of 1 instead of 2.

On the left side of Figure 5, where enforcement is less than 2, the amelioration effect increases expected welfare because litterers—all of whom are inframarginal—experience less guilt when they are, with some probability, caught by law enforcement. When enforcement reaches a level of 2, the combined effect of enforcement and guilt is sufficient to deter littering in

the scenario without amelioration.⁵⁹ In the scenario with amelioration, by contrast, the deterrence threshold is not attained until enforcement reaches 2.5 because amelioration reduces the deterrence effect of guilt. Once the deterrence threshold has been attained, further investment in enforcement reduces welfare because additional enforcement is costly and no longer necessary.

Here, the optimal level of enforcement is indeed higher with amelioration than without—but for a subtly different reason than the one emphasized by Mungan. Without amelioration, the government can deter littering with an investment in enforcement of 2. With amelioration, by contrast, the government must make a larger investment in enforcement to deter littering ($E = 2.5$) because the expectation of amelioration weakens deterrence. Thus, while amelioration increases expected welfare when litterers are inframarginal, amelioration also raises the deterrence threshold (which, in Figure 5, has the effect of reducing total welfare at the point where enforcement is set optimally).

Summing up: Guilt affects the optimal level of law enforcement in three ways. First, and most straightforwardly, guilt may operate as a substitute for law enforcement. Second, guilt may make it more likely that a cost-justified investment in law enforcement can reach the deterrence threshold. Third, the amelioration effect of detection on guilt may alter the optimal level of law enforcement either because enforcement ameliorates the guilt experienced by inframarginal violators or because amelioration counteracts the deterrence effect of enforcement.

B. Shame

Our analysis in Section II.A—and in particular, our differentiation among the substitution effect, the marginal effect, and the inframarginal effect—applies as well to shame, though as we shall see, the analysis of shame introduces several twists. As above, we assume that all individuals have the same utility function. We will also assume that violation of a moral norm or legal rule can be detected by community members or by law enforcement. P_{com} represents the probability of community detection, while P_{law} represents the probability of detection by law enforcement. Like guilt, shame can arise when an individual is found to have violated a moral norm (law-independent shame, or S_{ind}); individuals experience additional law-dependent shame (S_{dep}) when the moral norm is backed up by law.⁶⁰

⁵⁹ An individual will engage in littering if and only if $B > G + pE(F - A)$. Thus, the deterrence threshold is given by $E = \frac{B-G}{p(F-A)}$. When $B = 3$, $G = 2$, $p = 0.1$, and $F = 5$, the deterrence threshold is 2 when A is 0, while the deterrence threshold is 2.5 when A is 1.

⁶⁰ When the anti-littering norm is a moral norm but not a legal prohibition, individuals will litter if and only if:

$$B > G_{\text{ind}} + P_{\text{com}} \cdot S_{\text{ind}}$$

When littering is also illegal, we assume that individuals who litter will experience the same quantum of shame whether their conduct is detected by the community, or police (or both). When littering is illegal, individuals will litter if and only if:

1. Optimal Lawmaking

Again, the optimality of a law against littering will depend upon the substitution effect, the marginal effect, and the inframarginal effect.

a. Substitution Effect

Similarly to guilt, shame may substitute for a law against littering when the expected disutility from community-detected, law-independent shame ($P_{com} \bullet S_{ind}$) is sufficiently high that a legal rule is unnecessary to reach the deterrence threshold.⁶¹ In those circumstances, there is no reason for society to bear the cost of lawmaking. We illustrate this substitution effect in Figure 6, where—analogously to Figure 3—a high value of S_{ind} means that a law against littering is not optimal. Note that when the substitution effect applies, the relationship between shame and the optimality of a legal rule is the reverse of what Kahan anticipated—the phenomenon of shame provides a reason for society to adopt *fewer* legal rules⁶²—though as we will see in a moment, Kahan’s intuition that shame and legal rules might be complements applies under other conditions.

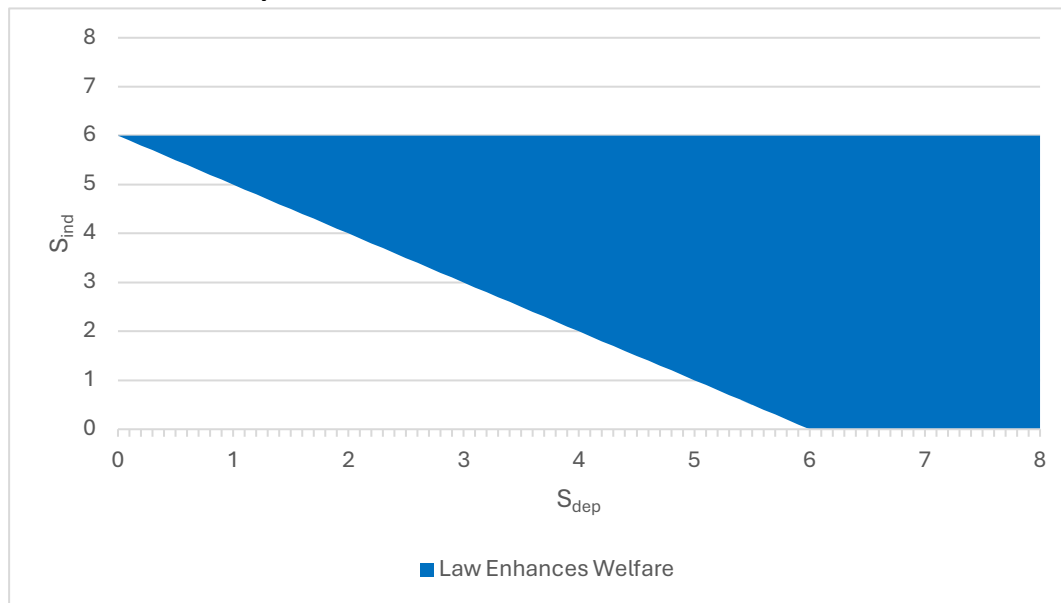
$$B > G_{ind} + (P_{com} + P_{law} - P_{com} \bullet P_{law})(S_{ind} + S_{dep}) + P_{law} \bullet F$$

The term $(P_{com} + P_{law} - P_{com} \bullet P_{law})$ is the probability that the violation is subject to at least one form of public or private detection.

⁶¹ S_{ind} may require not just that the violation be detected by the community, but that the violation be common knowledge. See Ian Ayres & Barry Nalebuff, Common Knowledge as a Barrier to Negotiation. 44 UCLA L. Rev. 1631 (1997) (observing first-order knowledge can have distinct behavioral impacts than higher-order knowledge required for common knowledge).

⁶² See Kahan, *supra* note 7, at 641; *supra* text accompanying note 34.

Figure 6. Analysis of When Law Enhances Welfare for Different Value of Law-Independent Shame and Law-Dependent Shame



Notes: Figure 6 illustrates the region in which law enhances welfare varying the levels of law-dependent and law-independent shame when the private benefit (B) of the behavior is 3, the negative externality (N) is 6, and the cost of lawmaking (C_{law}) is 1. We assume G_{ind} and G_{dep} are zero, that the probability of detection by law enforcement (P_{law}) is zero, and that violations are detected by the community with $P_{com} = 0.5$.

b. Marginal Effect

Analogously to law-independent guilt above, a law against littering will be optimal when law-independent shame falls into an intermediate range. For now, we will assume that the level of law enforcement is zero (and thus $P_{law} = 0$), so shame can arise only from community detection.⁶³ Again, the *marginal effect* arises when individuals on the margin between complying and not complying with the moral norm change their behavior due to the existence of a legal rule (specifically, because of the law-dependent shame that they expect to experience if their violation of the legal rule is detected by the community).

For example, the norm against parking in front of a fire hydrant might be one for which the marginal effect dominates. In the absence of a legal prohibition, drivers might experience some amount of law-independent shame when their neighbors see them parking in front of a fire hydrant because obstructing access to fire hydrants raises the risk of fire damage to the entire

⁶³ Formally, an anti-littering law will be optimal when:

$$P_{com} \cdot S_{ind} < B < P_{com} \cdot (S_{dep} + S_{ind})$$

Provided that the cost-justification constraint is satisfied:

$$N - B + P_{com} \cdot S_{ind} > C_{law}$$

neighborhood. Yet law-independent shame may not be sufficient to deter the harmful behavior. The legal prohibition against parking in front of a fire hydrant intensifies the shame experienced by norm violators—potentially so much so that expected total shame becomes a sufficient deterrent without more.

c. Inframarginal Effect

When law-independent shame falls below the intermediate range in equation, the addition of law-dependent shame will not raise total shame to the deterrence threshold and thus the cost of lawmaking will be wasted. Moreover, a legal rule will further reduce the utility of litterers by saddling them with law-dependent shame (conditional on their littering being detected by the community). Thus, as with law-dependent guilt, law-dependent shame will increase the social cost of having a legal rule when the legal rule fails to change behavior (i.e., when litterers are inframarginal).

2. Optimal Law Enforcement

How does shame affect the optimal level of law enforcement when a legal rule is already in place? Again, we will assume—for the sake of simplicity—a linear relationship between the investment in enforcement and the probability of detection by law enforcement ($P_{law} = pE$), though our central claims hold as long as P_{law} is an increasing function of E . Since we are assuming the existence of an anti-littering law as a background condition, we can combine law-independent and law-dependent shame and focus on total shame (S). We will assume that the probability of community detection (P_{com}) remains constant throughout.

a. Substitution Effect

Similarly to guilt, shame can serve as a substitute for costly investment in law enforcement. When shame arising from community detection is sufficiently high, shame on its own will deter the illegal behavior, and no investment in law enforcement is necessary.⁶⁴ Even when shame arising from community detection is not sufficient to deter the illegal behavior, shame can lower the deterrence threshold and thereby reduce the amount that the government must invest in law enforcement in order to eliminate the harmful behavior (e.g., to eradicate littering).⁶⁵

b. Marginal Effect

Shame also can enhance the deterrence effect of enforcement by increasing the disutility that noncompliers experience when detected. In this respect, shame differs from guilt, which—

⁶⁴ Formally, this circumstance arises when $P_{com} \cdot S > B$.

⁶⁵ Formally, the deterrence threshold is:

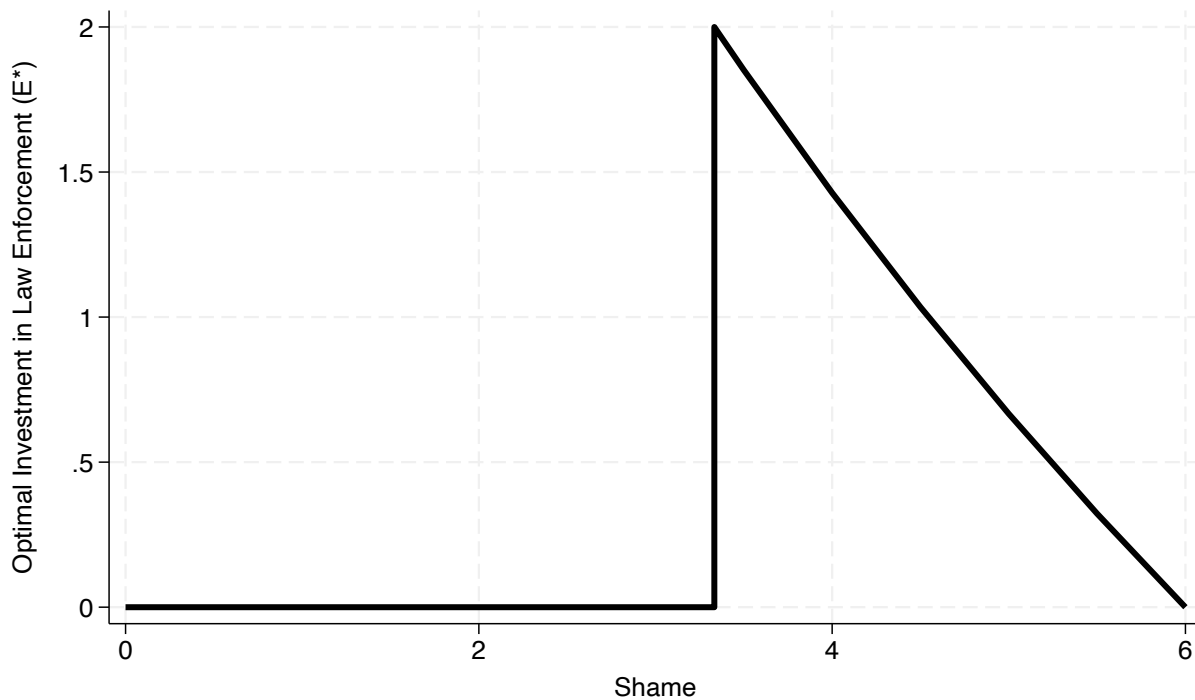
$$B = (P_{com} + p \cdot E - P_{com} \cdot p \cdot E) \cdot S + p \cdot E \cdot F$$

The cost-justification threshold is:

$$N - B + P_{com} \cdot S_{ind} \geq E^*$$

as noted above—may be alleviated by detection. Shame functions as an additional penalty—on top of the fine (F)—that noncompliers experience when their violation is detected by law enforcement.

Figure 7 illustrates both the substitution effect and marginal effect of shame with respect to optimal law enforcement. Below a certain shame threshold ($S = 3.33$), the investment in law enforcement that would be necessary to reach the deterrence threshold is not cost-justified. The sharp rise in E^* once shame reaches 3.33 reflects the marginal effect: at that point, the combination of shame and law enforcement changes the behavior of individuals who are (in our running example) on the margin between littering and not. Figure 7 has the same general shape as Figure 4 (which depicted the relationship between guilt and the optimal investment in law enforcement), but the critical point where the marginal effect kicks in is lower for guilt ($G = 1$) than for shame ($S = 3.33$). This is because the deterrence effect of shame—unlike the deterrence effect of guilt—must be discounted by the probability of detection.

Figure 7. Relationship Between Shame and Optimal Investment in Law Enforcement

Notes: Figure 7 illustrates the relationship between shame and the optimal investment in law enforcement (E^*) when the private benefit (B) of the behavior is 3, the negative externality (N) is 6, the probability of detection by law enforcement (P_{law}) is $0.1E$, and the probability of community detection (P_{com}) is 0.5. We assume that G_{ind} and G_{dep} are zero.

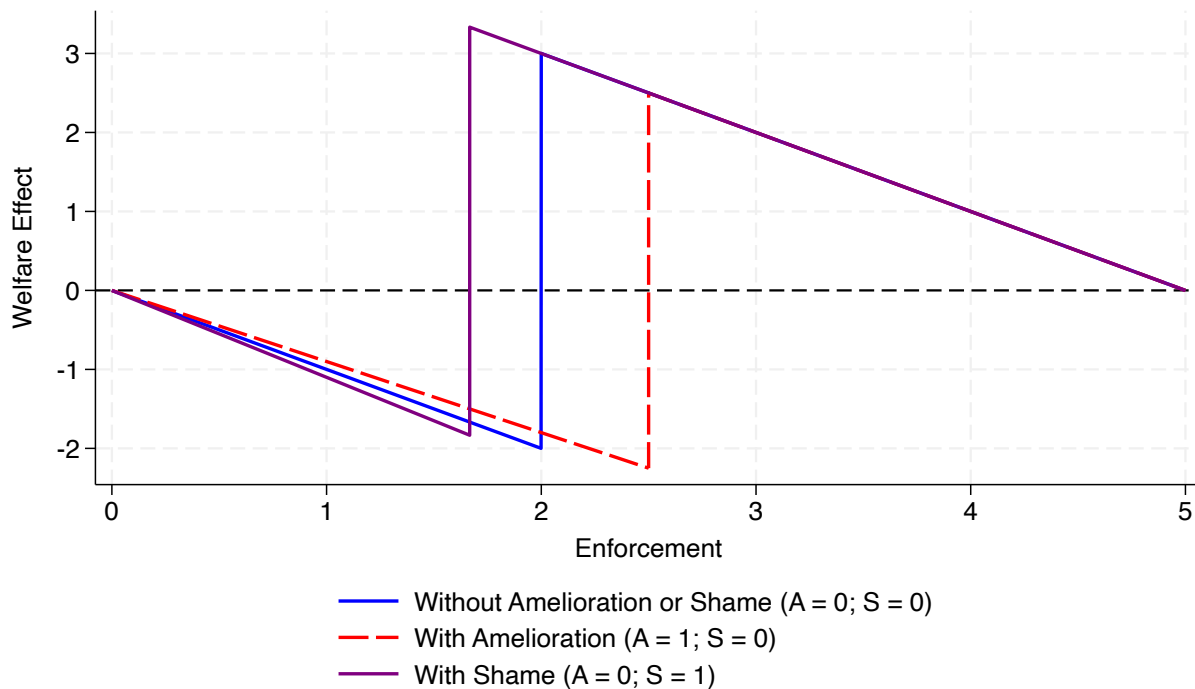
c. Inframarginal Effect

Finally, when shame is the dominant negative emotion, enforcement against inframarginal litterers increases the social cost of littering by exposing them to shame. Thus, when total shame falls below the critical point necessary for cost-justified deterrence, the optimal investment in law enforcement is zero because enforcement accomplishes no positive good and inflicts an additional cost on inframarginal litterers (the cost of shame).

One way to understand the relationship between shame and law enforcement is as the mirror image of the amelioration effect discussed in Section II.A. Whereas amelioration increases the benefit of law enforcement against inframarginal litterers, shame does the opposite. And whereas amelioration increases the level of law enforcement necessary to reach the deterrence threshold, shame also does the opposite.

To underscore this point, Figure 8 reproduces Figure 5 but adds a line reflecting the relationship between enforcement and welfare when shame is equal to 1. For purposes of Figure 8, we assume that shame arises only from detection by law enforcement (i.e., the probability of community detection, P_{com} , is set at zero).

Figure 8. Expected Welfare Impacts of Different Levels of Enforcement With and Without Amelioration and Shame



Notes: Figure 8 illustrates the welfare effect of varying levels of enforcement (E) when the private benefit (B) of the behavior is 3, the negative externality (N) is 6, the probability of detection (P_{law}) is $0.1E$, and the fine (F) is 5. Guilt (G) is 2. We set the welfare effect equal to zero when $E = 0$. The blue line reflects guilt without amelioration. The red dotted line reflects guilt with amelioration ($A = 1$), where amelioration is contingent upon detection. The purple line reflects the addition of shame ($S = 1$), where shame is contingent upon detection.

On the left side of Figure 8 (before enforcement reaches 1.67), expected shame increases the social cost of law enforcement because inframarginal litterers who are detected by law enforcement experience the disutility of shame. However, the prospect of shame also reduces the deterrence threshold (i.e., the level at which enforcement is sufficient to deter littering) from 2 to 1.67. From that point onward, additional investment in law enforcement is unnecessary and therefore suboptimal. Beyond the deterrence threshold, shame and law enforcement effort are—consistent with Teichman’s suggestion⁶⁶—substitutes.

Summing up: Shame, like guilt, can increase or decrease the optimal number of legal rules and the optimal level of law enforcement depending upon which of three effects—the substitution effect, the marginal effect, or the inframarginal effect—predominates. When norm violators are inframarginal, shame increases the social costs of legal rules and law enforcement by imposing disutility on norm violators without generating any deterrence benefit. At the same

⁶⁶ See Teichman, *supra* note 43; *supra* text accompanying notes 43–44.

time, shame can serve as a complement to legal rules and law enforcement when shame makes it easier for the law to deter harmful behavior. But when shame is sufficiently high, complementarity transforms into substitution: shame deters on its own and renders costly investments in lawmaking and law enforcement unnecessary.

III. Implications and Extensions

We begin this final part by explaining how the policy implications of our model differ depending on whether guilt or shame is the more prevalent phenomenon in a particular society. We then connect our model to the debate in legal scholarship over explicit shaming sanctions. Finally, we extend our model of guilt and shame to the related moral emotions of resentment and virtue.

A. Guilt Cultures vs. Shame Cultures

Starting with the cultural anthropologist Ruth Benedict's influential 1946 book *The Chrysanthemum and the Sword*,⁶⁷ social scientists have distinguished between "guilt cultures" and "shame cultures." Benedict argued that the early Puritans in colonial America had sought to construct a "guilt culture," while Japan—the focus of Benedict's study—had developed a culture in which shame overshadowed guilt.⁶⁸ Benedict's thesis—and in particular her characterization of Japan as a "shame culture"—has proven to be controversial,⁶⁹ but many anthropologists continue to defend the validity of the guilt culture/shame culture distinction more broadly. For example, anthropologist Daniel Fessler has studied the frequency of negative emotions among people in urban Southern California and the Indonesian province of Bengkulu and finds that study participants in Southern California are much more likely to express guilt-like emotions than their Bengkulu counterparts, whereas study participants in Bengkulu are much more likely to express shame-like sentiments than Californians.⁷⁰ Indeed, Fessler notes that the Kota Bengkulu dialect of Malay "does not contain a word that can be readily translated as 'guilt,'" adding that "[g]uilt-like events were simply not discussed in Bengkulu."⁷¹ Fellow anthropologist Joseph Henrich argues that shame dominates in many societies regulated by kin-based institutions, while "guilt rises to prominence in individualistic societies" and especially in societies that are "Western, educated, industrialized, rich, and democratic," or "WEIRD."⁷² Recently, several authors—

⁶⁷ Ruth Benedict, *The Chrysanthemum and the Sword: Patterns of Japanese Culture* (First Mariner Books ed. 2005) (1946).

⁶⁸ *Id.* at 222–23.

⁶⁹ See Millie R. Creighton, *Revisiting Shame and Guilt Cultures: A Forty-Year Pilgrimage*, 18 *Ethos* 279, 280–81 (1990) ("The strong Japanese reaction against being designated culture by Benedict stemmed in part from the belief that Westerners viewed guilt as belonging to a higher level of moral development than shame and hence considered cultures integrated by guilt sanctions to be superior to those integrated by shame sanctions.").

⁷⁰ See Daniel M.T. Fessler, *Shame in Two Cultures: Implications for Evolutionary Approaches*, 4 *J. Cognition & Culture* 207, 216, 221–23 (2004).

⁷¹ *Id.* at 223.

⁷² See Joseph Henrich, *The WEIRDest People in the World: How the West Became Psychologically Peculiar and Particularly Prosperous* 34–35 (2020).

including sociologist Marcel van Herpen—have argued that the spread of social media in the United States has accelerated a trend away from guilt and toward shame as the dominant negative emotion among Americans.⁷³

For purposes of this essay, we remain agnostic as to whether any particular society is dominated by guilt or by shame. The two emotions are likely to coexist in many societies and are likely to take on different forms in different cultural contexts.⁷⁴ What our analysis reveals is that a society's position on the spectrum between the ideal types of a "guilt culture" and "shame culture" is likely to have important implications for legal policy. Moreover, if indeed the United States is transitioning from a guilt society to a shame society—as van Herpen and other scholars suggest—then that shift may shape the legal rules that we should adopt and the way in which we enforce our laws.

To illustrate: Consider first the scenario where there is a low probability that any violation of a legal rule will be detected by the community or by law enforcement. Many rules of income taxation fit this description: returns are private, so fellow community members are unlikely to detect violations, and the audit rate is well below 1%.⁷⁵ In a guilt society, an unenforced legal rule still may engender compliance due to the deterrence effect of law-dependent guilt; however, if guilt on its own fails to deter, then the inframarginal effect of law-dependent guilt will be severely negative. In a shame society, by contrast, the legal rule is less likely to generate compliance on its own, but the social cost of noncompliance will be lower because without detection, there is no shame. The only social cost of the unenforced legal rule, then, would be the fixed cost of lawmaking. Put another way, guilt—and, in particular, law-dependent guilt—raises the stakes for unenforced legal rules: these rules have both a larger upside and a larger downside in guilt societies.

The implications of enforcement, too, are very different in guilt societies and shame societies. In a guilt society, enforcement potentially has a positive inframarginal effect because it

⁷³ See Marcel H. van Herpen, *The Rise of the Shame Society: America's Change from a Guilt Culture into a Shame Culture*, at xii–xiii, xviii, 16–24 (2022); see also Andy Crouch, *The Return of Shame*, *Christianity Today* (Mar. 2015), <https://www.christianitytoday.com/2015/03/andy-crouch-gospel-in-age-of-public-shame> (arguing that "honor and shame are becoming dominant forces in the American context"); David Brooks, *The Shame Culture*, *N.Y. Times* (Mar. 15, 2016), <https://www.nytimes.com/2016/03/15/opinion/the-shame-culture.html> (echoing Crouch's observation). Benedict arguably foretold this trend, observing in 1946 that "shame is an increasingly heavy burden in the United States and guilt is less extremely felt than in earlier generations." Benedict, *supra* note 67, at 223.

⁷⁴ See Creighton, *supra* note 69, at 302–03.

⁷⁵ The low audit rate partly reflects years of congressional cuts to the Internal Revenue Service's budgets, but even when the IRS was at its inflation-adjusted peak in 2010, the audit rate for individual income tax filers was still only 1%. See Internal Revenue Service, *Statistics of Income Division, Table 17. Examination Coverage and Recommended Additional Tax After Examination, by Type and Size of Return, Tax Years (2010)–2020*, <https://www.irs.gov/pub/irs-soi/22dbso3t17exfull.xlsx> (last visited Jan. 23, 2025); Congressional Research Service, *IN12172, Changes to IRS Funding in the Debt Limit Deal 2* (July 19, 2023), <https://crsreports.congress.gov/product/pdf/IN/IN12172>.

ameliorates the guilt of noncompliers who are caught, but this amelioration effect may attenuate the deterrence effect of enforcement insofar as it reduces the expected disutility of violating a legal rule. In a shame society, the reverse is true: enforcement has a negative inframarginal effect because detected noncompliers experience the disutility of shame, but shame enhances the deterrence effect of law enforcement because shame increases the total cost of getting caught. Thus, shame raises the stakes for investments in law enforcement: again, the potential return on investment is higher because the deterrence effect is larger, but the social cost of enforcement is also higher in cases where enforcement fails to deter.

The upshot, then, is not that the optimal number of legal rules or the optimal level of law enforcement is higher in guilt societies than in shame societies (or vice versa). Rather, the takeaway is that the stakes of legal rules and law enforcement systematically differ between guilt societies and shame societies, with legal rules having larger potential benefits and costs in guilt societies and investments in law enforcement having larger potential benefits and costs in shame societies. Although this insight does not generate specific prescriptions for policy, it does help policymakers decide where to allocate their attention depending on the cultural context in which they work, with legal rules requiring more careful scrutiny in guilt societies (both for their potential upsides and downsides) and law enforcement investments meriting more thorough evaluation in shame societies.

B. Reframing the Shame Debate

Our model of guilt and shame in Part II allows us to reframe—and advance—the decades-old debate among legal scholars regarding the appropriate role of shaming sanctions. Explicit “shaming sanctions” (e.g., special bumper stickers for convicted drunk drivers) represent only a small subset of the possible ways in which policymakers can influence the extent to which individuals who violate moral norms or legal rules experience shame. When prosecutors hold a press conference or issue a press release to announce an indictment or conviction, they expose defendants to law-dependent shame—shame that might be avoided if cases were resolved confidentially. Even the decision to enact a legal rule in the first place can cause noncompliers to experience additional shame. Moreover, as Marcel van Herpen observes, policies in a wide range of areas can affect whether a society develops a “guilt culture” or a “shame culture.”⁷⁶ For example, laws like Australia’s strict social media ban for children under the age of 16 may reduce the likelihood that shame cultures will develop among teens and persist into adulthood.⁷⁷ The so-called “right to be forgotten” under European Union law⁷⁸ also may have a shame-ameliorating

⁷⁶ See van Herpen, *supra* note 73, at 117–18.

⁷⁷ The efficacy of such a ban will, to be sure, depend on the age verification measures in place and the penalties for social media sites that violate the law. On the details of Australia’s scheme, see Yan Zhuang, *How Australia Will (or Won’t) Keep Children Off Social Media*, N.Y. Times (Nov. 28, 2024), <https://nytimes.com/2024/11/28/world/australia/australia-social-media-ban.html>.

⁷⁸ See Case C-131/12, *Google Spain SL v. Agencia Española Protección de Datos*, 3 C.M.L.R. 50 (2014).

effect insofar as it limits the period for which negative information about an individual's past transgressions will persist on the Internet.

In short, even a polity that eschews explicit shaming sanctions will inevitably make choices that affect the extent to which individuals experience shame. Moreover, it is not obvious that we should seek to eliminate shame from the repertoire of human experience.⁷⁹ Shame arises when and because individuals care about the opinions of others—when they view themselves not purely as lone rangers but as part of a collective.⁸⁰ While some scholars—including van Herpen—believe that “a guilt society is a better place to live in than a shame society,”⁸¹ this view is vulnerable to critique on cultural relativism grounds: the denigration of shame in the scholarly literature arguably reflects a bias in favor of Western, individualistic values rather than a transcultural truth about the best way to achieve the good life.

What, then—if anything—can we say to contribute to the shame debate, beyond the observation that explicit shaming sanctions are not the only way that law affects shame? First, our model emphasizes that shame—like guilt, and like incarceration, but unlike monetary fines—generates a negative inframarginal effect on social welfare. That is, shame imposes a cost on noncompliers that is not offset by a benefit to the government. By contrast, monetary fines reflect a transfer of resources from an individual to the government rather than a loss to society as a whole. As a result, the imposition of shame—through explicit shaming sanctions or as a byproduct of other policies—will be optimal only when fines alone cannot deter harmful behavior. Thus, when negative externalities are relatively modest—and thus when monetary fines equal to the size of the negative externality are unlikely to run into problems of judgment proofness—policymakers should generally seek to achieve compliance through fines alone without cultivating shame.

Second, our analysis shows that in some circumstances, increasing the amount of shame associated with the violation of a moral norm or legal rule will reduce the aggregate amount of shame that individuals experience. Indeed, at times, the introduction of explicit shaming sanctions may reduce shame overall. This observation—though potentially counterintuitive on first glance—follows from the fact that even in the absence of explicit shaming sanctions, individuals who violate moral norms or legal rules may experience shame. Explicit shaming sanctions generate a shame-increasing inframarginal effect but a shame-relieving marginal effect: they impose shame on individuals to whom they apply but potentially reduce the amount of shame experienced by the individuals whom they deter.

⁷⁹ Cf. Henrich, *supra* note 72, at 31 (arguing that “[w]e should celebrate human diversity, including psychological diversity,” and warning of the dangers of “denigrating” societies based on whether they conform to the “WEIRD” model).

⁸⁰ See Ying Wong & Jeanne Tsai, Cultural Models of Shame and Guilt, in *The Self-Conscious Emotions: Theory and Research* 209, 214–15 (2007).

⁸¹ See van Herpen, *supra* note 73, at 190–91.

Our observation that explicit shaming sanctions may reduce shame overall does not necessarily mean that opposition to shaming sanctions is wrong-headed. Rather, our observation sharpens the distinction between opposition to explicit shaming sanctions and opposition to shame-increasing public policies writ large. More generally, our analysis resonates with the scholarly reevaluation of shame in recent years, which emphasizes the societal benefits of shame alongside its individual emotional costs. For example, psychologist Olwen Bradford—in her study of guilt and shame among Mandarin speakers in Taiwan—writes that certain forms of shame “protect social harmony” because the prospect of shame is “enough to deter the actor from committing the transgression” that otherwise would have threatened social peace.⁸² Our model clarifies the circumstances in which shame increases social welfare through its deterrence effect on marginal actors.

C. Resentment

While our analysis so far has focused on negative moral emotions experienced by individuals who violate norms and rules themselves, our model can be extended—with modifications—to resentment, the negative emotion that individuals experience when they learn that others have violated a moral norm or legal rule without appropriate legal consequence.

Like guilt, resentment is the subject of a small literature in law and economics, though we know of no comprehensive account of the relationship between resentment and legal policy. Adam Smith—whom one scholar describes as, “if not a founder, at least a prophet of law and economics”⁸³—wrote his 1759 book *The Theory of Moral Sentiments* that “[t]he sentiment which . . . most immediately and directly prompts us to punish, is resentment,”⁸⁴ though Smith does not go on to explain how resentment affects the optimal number of legal rules or the optimal investment in law enforcement. Guido Calabresi and Douglas Melamed briefly discussed resentment in their pathbreaking 1972 article *Property Rules, Liability Rules, and Inalienability: One View of the Cathedral*, observing (in a footnote) that resentment might arise when individuals fail to obtain entitlements that they value.⁸⁵ Richard Posner—writing eight years later—added that “resentment . . . can provide the motivational basis of an economically efficient system of punishment” by “enhancing the credibility of the threat to retaliate” against lawbreakers.⁸⁶

Although these scattered statements do not amount to a unified theory of resentment and legal policy, the writings of Smith, Calabresi and Melamed, and Posner do underscore two

⁸² See Olwen A. Bradford, *The Individual Experience of Guilt and Shame in Chinese Culture*, 10 *Culture & Psychol.* 29, 46 (2004).

⁸³ Paul G. Mahoney, *Adam Smith, Prophet of Law and Economics*, 46 *J. Legal Stud.* 207, 208 (2017).

⁸⁴ Adam Smith, *The Theory of Moral Sentiments* 79 (Knud Haakonssen ed., 2002) (1759).

⁸⁵ See Guido Calabresi & A. Douglas Melamed, *Property Rules, Liability Rules, and Inalienability: One View of the Cathedral*, 85 *Harv. L. Rev.* 1089, 1108 n.36 (1972).

⁸⁶ Richard A. Posner, *Retribution and Related Concepts of Punishment*, 91 *J. Legal Stud.* 71, 77, 92 (1980).

general truths. First, resentment is, in Smith's words, "a disagreeable passion"⁸⁷—or in Calabresi and Melamed's framing, a real (though difficult-to-measure) social cost.⁸⁸ For that reason, legal policy should seek to reduce resentment in the aggregate. But second, resentment can be a useful emotion insofar as it resolves a credible commitment problem facing legal policy. When punishment is costly to impose, criminal law is time inconsistent—particularly when the relevant offenses are nonviolent and the incapacitation benefits of punishment are minimal. Especially when prisons are overcrowded, it is tempting for the government to declare a one-time amnesty and thereby reduce the costs of punishment with respect to past (and thus undeterrable) crimes. The time inconsistency of punishment undermines the law's deterrence effect insofar as offenders anticipate that the government will fail to follow through on its punitive threats.⁸⁹ Yet when citizens experience resentment—and when they obtain utility from inflicting punishment on violators of moral norms and legal rules—punishment becomes *ex post* rational from the perspective of the political community and thus *ex ante* credible from the perspective of potential offenders.

Our formal model in Part II yields additional payoffs for the study of resentment. Resentment, like guilt and shame, can be law-independent or law-dependent. Law-independent resentment arises when individuals observe others violating moral norms and experience a negative emotion as a result. Law-dependent resentment reflects the additional amount of negative emotion experienced by observers of norm transgressions when the norm is codified in law. Because resentment does not operate on the violator, it cannot substitute for the deterrence effect of a legal rule. However, resentment still may affect the optimality of legal rules and the optimal level of law enforcement.

In extending our model to resentment, we must make one modification to our approach. So far, we have been using a representative agent model: either everyone litters or everyone refrains from littering. But presumably, resentment arises only when individuals who comply with moral norms or legal rules observe others violating those moral norms or legal rules (i.e., noncompliers do not resent other noncompliers). Thus, the very phenomenon of resentment depends upon there being at least two types of individuals. We can accommodate this aspect of resentment by assuming that there is one type of individual (Type 1) whose behavior is influenced by law and another type (Type 2) who always comply. We will assume that resentment is experienced only by Type 2s—and only if Type 1s fail to comply.

As with law-independent guilt and shame, law-independent resentment can strengthen the case for adopting legal rules such as a littering ban. This is because law-independent

⁸⁷ Smith, *supra* note 84, at 19.

⁸⁸ See Calabresi & Melamed, *supra* note 85, at 1108 n.36.

⁸⁹ On criminal law's credible commitment problem, see generally Daniel J. Hemel, *Capital Taxation in the Middle of History*, 99 *N.Y.U. L. Rev.* 1554, 1627–31 (2024). For a game theoretic account of the relationship between resentment and credible commitment, see Erik O. Kimbrough & Alexander Vostroknutov, *Resentment and Punishment* (Apr. 17, 2023) (unpublished manuscript), <https://ssrn.com/abstract=4429652>.

resentment—though it does not affect the first-order behavior of litterers—raises littering’s social cost. With law-independent resentment, the social cost of littering rises from $N - B$ to $N - B + R_{ind}$, where R_{ind} reflects law-independent resentment experienced by Type 2s. Law-independent resentment thus loosens the cost-justification constraint on lawmaking. To illustrate: Suppose that litterers do not experience guilt or shame, and suppose that E^* represents the level of enforcement necessary to reach the deterrence threshold. For a legal rule to be cost-justified, it must be the case that:

$$N - B - E^* > C_{law}$$

Now imagine that Type 2s who observe littering experience law-independent resentment of R_{ind} . We will assume for now that Type 2 observers accurately estimate the prevalence of littering (e.g., because they see the consequences) and experience resentment whether or not they observe a litterer in the act.⁹⁰ The presence or absence of resentment among Type 2s should not directly affect the incentive of Type 1s to comply with norm, but it can affect whether welfare-minded lawmakers will enact the legal rule. The cost-justification constraint becomes:

$$N - B - E^* + R_{ind} > C_{law}$$

Put another way, law-independent resentment transforms some cost-ineffective laws into cost-effective laws (specifically, those laws for which $N - B - E^* < C_{law} < N - B - E^* + R_{ind}$). Law-independent resentment generates this cost-justifying effect because it raises the social benefit of deterring violations of moral norms.

Law-dependent resentment complicates the analysis. Now, an additional cost of any legal rule that fails to deter harmful behavior is the increase in law-dependent resentment. In other words, law-dependent resentment makes legal rule violations even more costly to society. Thus, while law-independent resentment strengthens the case for more legal rules, law-dependent resentment militates in favor of fewer legal rules.

Resentment also affects the optimal level of law enforcement—and here, the policy implications are crisper. First, law enforcement reduces resentment through a marginal effect (i.e., its effect on individuals who can be deterred from littering). When law enforcement reduces littering, Type 2s experience less resentment. Second, even when all litterers are inframarginal, enforcement potentially generates an ameliorating effect on resentment: Type 2 observers may experience less resentment of litterers when those litterers have been caught and punished. For this reason too, the ameliorating effect of enforcement on resentment may raise the optimal level of enforcement.

One important difference between amelioration in the guilt context and amelioration in the resentment context is that amelioration of resentment does not undermine deterrence,

⁹⁰ Some noncompliance will only induce resentment if the violator’s noncompliance is detected by the community or by the police. In a separate working paper, we consider a model in which resentment is only experienced if the police detect the violation. See Ayres et al., *supra* note 47.

because the observer whose resentment is ameliorated by enforcement is not the individual who is deciding whether to comply. Overall, then, the implications of resentment for optimal enforcement are clearer than the implications of guilt and shame for optimal enforcement. Resentment increases the optimal level of enforcement, whereas guilt and shame have ambiguous implications for the optimal level of enforcement. When the negative emotion of resentment is widespread, deterrence and punishment of norm transgressions and lawbreaking become more important to society.⁹¹

D. Virtue

Finally, we extend our model of negative moral emotions to virtue, the positive emotion that individuals experience when they comply with moral norms or legal rules.⁹² Virtue—like resentment—played an important role in Adam Smith’s early writing,⁹³ but it has largely faded from economists’ view in the centuries since.⁹⁴ Shavell considers virtue alongside guilt in his original analysis of law and morality, though—as with guilt—Shavell conceives of virtue in law-independent terms and does not examine the possibility that the existence of a law may affect the virtue that individuals experience when they comply with a moral norm.⁹⁵ Louis Kaplow and Steve Shavell present a formal model of virtue in an important 2007 study,⁹⁶ but they do not

⁹¹ We note one caveat: Enforcement may increase resentment under highly specific conditions. Suppose that Type 2 individuals underestimate the prevalence of rule violations and that enforcement—by revealing additional violations—causes Type 2 individuals to experience *more* resentment. Suppose as well that the magnitude of punishment is constrained (e.g., due to judgment proofness problems) so that punishment does not ameliorate resentment entirely. Under these circumstances, the phenomenon of resentment could—conceivably—reduce the optimal level of enforcement.

However, there are several reasons to believe that enforcement is unlikely to have a resentment-increasing effect. First, the resentment-increasing effect of enforcement depends on the assumption that Type 2 individuals underestimate the prevalence of rule violations. However, even when Type 2 individuals cannot observe rule violations directly, they typically can observe the level of social harm (e.g., they can see whether there is garbage in a park, or they can see whether tax revenue drops due to evasion). Thus, there is no a priori reason why they should systematically underestimate the prevalence of rule violations. Second, the resentment-increasing effect of enforcement arises only when enforcement causes Type 2 individuals to revise their estimate of the prevalence of rule violations upwards. Typically, enforcement should cause Type 2 individuals to revise their estimate of the prevalence of rule violations downwards because enforcement strengthens deterrence. Third, even when enforcement does cause Type 2 individuals to believe that rule violations are more prevalent, the effect of that change in beliefs on resentment may be offset by the partial amelioration of resentment arising from the punishment of offenders, even when punishment is insufficient to produce full amelioration.

⁹² Our definition of virtue follows Shavell, *supra* note 6, at 230, and Kaplow & Shavell, *supra* note 25, at 497.

⁹³ See Smith, *supra* note 84, at 314–23.

⁹⁴ See Luigino Bruni & Robert Sugden, Reclaiming Virtue Ethics for Economics, 27 *J. Econ. Persp.* 141, 148 (2013) (noting that “there is little explicit analysis of virtue in modern economics”).

⁹⁵ See Shavell, *supra* note 6, at 229–34, 237, 242–43.

⁹⁶ Kaplow & Shavell, *supra* note 25, at 497–99.

consider the relationship between virtue and legal policy or the possibility that legal rules and law enforcement may “crowd out” virtue.⁹⁷

Even though the valence of virtue is the reverse of guilt, many of our observations regarding guilt cross-apply to virtue. Like guilt, virtue can be law-independent or law-dependent. Law-independent virtue is the positive emotion that individuals experience when they comply with a moral norm; law-dependent virtue is the additional utility that individuals experience when they comply with a norm that has been codified into law. Moreover, virtue—like guilt—can decrease or increase the optimal number of legal rules and the optimal level of law enforcement. When law-independent virtue is very high, virtue exerts a substitution effect, inducing compliance with moral norms and rendering legal rules and law enforcement unnecessary. But when neither law-independent virtue nor legal sanctions are sufficient to incentivize compliance on their own, the combination of the two may clear the deterrence threshold and justify legal rules or investments in law enforcement that would have been ineffectual in the absence of moral emotions.

Where guilt and virtue differ most starkly is in their implications for inframarginal actors—individuals whose behavior does not change in response to law. In our main analysis above, the combination of a legal rule and law-dependent guilt generated a negative effect on inframarginal noncompliers: it led to disutility for individuals whose behavior—by definition—did not change.⁹⁸ With virtue, the sign of the inframarginal effect flips. If individuals experience positive emotions when they comply with norms that are codified into law, then inframarginality gives a reason to adopt *more* legal rules: even if behavior does not change, the legal rule will increase utility (i.e., law-dependent virtue) for individuals who would comply with the norm either way.

The crowding out phenomenon complicates this conclusion. In our analysis of guilt, we noted the possibility that legal rules may displace law-independent guilt.⁹⁹ We saw that the crowding out of law-independent guilt undermined law’s deterrence effect but had a positive impact on inframarginal noncompliers, who experience less guilt due to crowd-out. In the case of virtue, the crowding out phenomenon likewise undermines deterrence but—in contrast to the case of guilt—has a negative effect on inframarginal actors because it attenuates the positive emotions that compliers experience. In this respect, the welfare implications of crowding out are clearer in the case of virtue than in the case of guilt. In the case of virtue, crowding out is always negative, whereas in the case of guilt, the welfare consequences of crowding out can be negative

⁹⁷ Kaplow and Shavell discuss a different “crowding out” phenomenon—according to which “our neurological systems tend to become less sensitive or even numb to repetition of the same experience.” See *id.* at 498. This type of crowding out—in which the feeling of virtue arising from compliance with one norm or rule reduces the utility that individuals experience from complying with other norms or rules—is distinct from the “crowding out” effect we discuss here, in which “external rewards . . . crowd out intrinsic motivation.” See Bruni & Sugden, *supra* note 94, at 149.

⁹⁸ See *supra* Section II.A.1.c.

⁹⁹ See text accompanying *supra* note 53.

or positive depending on whether the alleviation of guilt for inframarginal noncompliers outweighs the implications for deterrence.

The crowding out concern is highly relevant to the debate over compulsory voting laws¹⁰⁰ such as Australia's century-old mandate that citizens participate in elections absent a "valid and sufficient" reason for not voting such as a religious objection.¹⁰¹ (The federal-level fine for not voting is 20 Australian dollars¹⁰²—or approximately 13 U.S. dollars—and has not increased with inflation since 1984.¹⁰³) One concern about compulsory voting laws is that they may "crowd out" intrinsic motivations for voting¹⁰⁴—or put another way, that voters may experience less virtue (and that nonvoters may experience less guilt) when voting is compulsory than when voting is voluntary. Perhaps the best evidence of the effect of these laws comes from a study by Patricia Funk of Swiss cantons that abolished compulsory voting requirements over a twenty-five year stretch from the early 1970s to the mid-1990s.¹⁰⁵ Funk finds that the abolition of compulsory voting decreased turnout—even though the fines for not voting were typically less than one U.S. dollar—which would suggest that compulsory voting laws generate a positive deterrence effect notwithstanding the crowding out concern.¹⁰⁶

Yet even if compulsory voting laws do not crowd out intrinsic motivations, these statutes still may impose law-dependent guilt on inframarginal nonvoters. As our model makes clear, crowding out is not the only reason why policymakers should be concerned with the effect of legal rules on moral emotions. Thus, a holistic evaluation of compulsory voting laws would require the analyst to consider all the channels through which legal rules may affect the negative and positive moral emotions that nonvoters and voters experience. Such an evaluation lies well beyond this essay's scope, but by mapping out the various ways in which legal rules interact with guilt, shame, resentment, and virtue, we offer other scholars a framework for analyzing questions such as the desirability of compulsory voting laws.

Crowding out concerns also play an important role in debates over "duty to rescue" laws, which require bystanders to intervene if they see another person in "grave physical harm" and

¹⁰⁰ See Millions in the West Want Mandatory Voting. Are They Right?, *Economist* (Oct. 24, 2024), <https://www.economist.com/the-americas/2024/10/24/millions-in-the-west-want-mandatory-voting-are-they-right>.

¹⁰¹ Commonwealth Electoral Act 1918 § 245 (Austl.).

¹⁰² See *id.* § 245(5)(c)(iii).

¹⁰³ See Tony Shields, Voter Turnout in the 2022 Federal Election Hit a New Low, Threatening Our Democratic Tradition, *Austl. Inst.* (Nov. 22, 2022), <https://australiainstitute.org.au/post/voter-turnout-in-the-2022-federal-election-hit-a-new-low-threatening-our-democratic-tradition>.

¹⁰⁴ See Emilee Booth Chapman, The Distinctive Value of Elections and the Case for Compulsory Voting, 63 *Am. J. Pol. Sci.* 101, 106–07 (2019).

¹⁰⁵ See Patricia Funk, Is There An Expressive Function of Law? An Empirical Analysis of Voting Laws with Symbolic Fines, 9 *Am. L. & Econ. Rev.* 135, 142 tbl.1(2006).

¹⁰⁶ See *id.* at 138, 149 tbl.3.

can render assistance without danger to themselves.¹⁰⁷ In the three U.S. states with duty to rescue statutes—Minnesota,¹⁰⁸ Rhode Island,¹⁰⁹ and Vermont¹¹⁰—violations are punishable as petty misdemeanors or by small fines, and even these light penalties are rarely, if ever, enforced.¹¹¹ William Landes and Richard Posner have suggested that these laws may be counterproductive if they crowd out the positive moral emotions experienced by rescuers.¹¹² David Hyman, in his empirical analysis of “duty to rescue” laws, casts doubt on this claim, writing that “the available data provides no indication that imposing a duty to rescue has any effect whatsoever on the impetus to perform a non-risky rescue.”¹¹³

Again, our model in Part II and its extension to virtue cannot resolve the empirical question of whether duty-to-rescue statutes increase or decrease the rescue rate, though like Hyman, we are skeptical that these statutes are likely to generate large behavioral effects.¹¹⁴ What our analysis does reveal is that the welfare effects of duty-to-rescue laws are not limited to their immediate impact on rescuing behavior. Duty-to-rescue statutes can increase or decrease welfare by changing the amount of positive moral emotion experienced by rescuers and/or the amount of negative moral emotion experienced by nonrescuers. More generally, any welfare analysis of law that omits inframarginal emotional effects is importantly incomplete.

Conclusion

So far, we have demonstrated that the negative moral emotions of guilt and shame may affect the optimal number of legal rules and the optimal level of law enforcement through three different channels. First, guilt and shame may substitute for legal rules and law enforcement when moral emotions on their own are sufficient to induce compliance. Second, guilt and shame may increase the optimal number of legal rules and the optimal level of law enforcement by making it more likely that law will change behavior on the margin and more beneficial when it does. Third, guilt and shame may reduce the optimal number of legal rules—and shame may reduce the

¹⁰⁷ See David A. Hyman, *Rescue without Law: An Empirical Perspective on the Duty to Rescue*, 84 *Tex. L. Rev.* 653, 703 (2006) (noting the crowding out concern).

¹⁰⁸ *Minn. Stat. Ann.* § 604A.01 (West 2025).

¹⁰⁹ *R.I. Gen. Laws Ann.* § 11-56-1 (West 2025).

¹¹⁰ *Vt. Stat. Ann. tit.12*, § 519 (West 2025).

¹¹¹ See Hyman, *supra* note 107, at 685.

¹¹² See William M. Landes & Richard A. Posner, *Salvors, Finders, Good Samaritans, and Other Rescuers: An Economic Study of Law and Altruism*, 7 *J. Legal Stud.* 83, 124 (1978) (“Under a regime of liability for failure to rescue, it would be impossible for a rescuer to prove that he was motivated by altruism—for how could he negate the inference that he really was motivated by fear of liability? This would, in turn, increase the incentive for potential rescuers to substitute away from hazardous activities, thus reducing the unconditional probability of rescue.”). For a critique of Landes and Posner’s argument on grounds unrelated to crowding out, see Ian Ayres, *A Theoretical Fox Meets Empirical Hedgehogs: Competing Approaches to Accident Economics*, 82 *Nw. U. L. Rev.* 837, 841 (1988) (reviewing William M. Landes & Richard A. Posner, *The Economic Structure of Tort Law* (1987)); and Steven Shavell, *Economic Analysis of Accident Law* (1987)).

¹¹³ Hyman, *supra* note 107, at 688.

¹¹⁴ See *id.* at 704 (“[T]he presence or absence of a duty to rescue (let alone ex post awards or public recognition for rescuing) are unlikely to be material factors in whether a rescue occurs.”).

optimal level of law enforcement—when negative moral emotions impose an additional cost on inframarginal noncompliers. Our framework shows how the prescriptions of law and economics vary across guilt cultures and shame cultures, sheds new light on the shaming sanctions debate, and yields new insights into the related moral emotions of resentment and virtue.

Our analysis also opens up promising paths for future research. First, while we have considered the implications of moral emotions for two legal policy parameters—the number of legal rules and the level of law enforcement—future work can extend this analysis to other aspects of legal policy such as the optimal magnitude of fines.¹¹⁵ For example, if moral emotions depend in part on the magnitude of fines, then moral emotions may give policymakers a reason to deviate from the classic Pigouvian prescription that the optimal fine is equal to the size of the negative externality.¹¹⁶ The reason for this is that interactions between fines and moral emotions may undermine the standard assumption that fines represent pure transfers from the individual to the government.

Second, while we have explained how our model applies to guilt, shame, resentment, and virtue, those four emotions do not exhaust the list of moral emotions that human beings experience. For example, the philosopher Stephen Darwall draws a distinction between guilt and “remorse”: whereas guilt “acknowledges culpability for a wrong,” remorse “extends beyond guilt in opening one’s heart to the other and sharing their hurt empathetically in a heartfelt way.”¹¹⁷ Darwall argues that remorse—unlike guilt—invites “heartfelt forgiveness” from a wrongdoer’s victim and therefore may have more positive long-lasting effects.¹¹⁸ While Darwall doubts that law can elicit remorse,¹¹⁹ law may raise or lower the likelihood that individuals feel remorse through the crowding-out (or crowding-in) effects of guilt.¹²⁰

¹¹⁵ For an effort along these lines (though one that is limited to a single moral emotion—guilt—and that conceives of guilt in strictly law-dependent terms), see Mungan, *supra* note 6.

¹¹⁶ See A. C. Pigou, *The Economics of Welfare* 172–203 (4th ed. 1932).

¹¹⁷ Stephen Darwall, *The Heart and Its Attitudes* 7 (2024).

¹¹⁸ See *id.* at 56.

¹¹⁹ See *id.* at 56–57.

¹²⁰ Guilt and resentment may also turn on the number of others who comply with a legal rule or social norm. For example, when the left lane of highway is ending, drivers might feel a tension between resentment if they move over early and see others pass them on the left and guilt if they don’t move over and pass others. The driver is either a “shnook” (i.e., “a meek patsy”) or a “no-goodnik” (i.e., someone who is “unethical”; “a lowlife”). Cf. Leo Rosten, *The New Joys of Yiddish: Completely Updated* 269, 358 (Lawrence Bush ed., 2003) (defining “shnook” and “no-goodnik” and describing both as “American-Yiddish,” or “Yinglish”). Instead of modeling guilt as an exogenous variable, or as a variable that depends only on the existence or nonexistence of a legal rule, we might model it as an increasing function of societal rule compliance. The larger the proportion of the population that is noncompliant, the less guilty an individual feels for violating a rule. This can be because they get disutility from being a shnook (someone who complies when many others are noncompliant) or because they get less disutility from being a no-goodnik if lots of other people are violating the rule. See Joshua Gans, *Passing Thoughts*, *Core Economics* (Aug. 12, 2008), <https://economics.com.au/2008/08/12/passing-thoughts>.

Third and finally, our essay has provided a tractable framework for analyzing the relationship between moral emotions and legal policy, but it is a framework that still must be populated with quantitative or qualitative estimates. Fortunately, clinical psychologists have made some progress in recent decades toward the development of shame measures¹²¹ and have begun to develop methods for distinguishing shame measures from guilt measures.¹²² Future work by legal scholars and social scientists—likely starting in a laboratory setting—may begin to use some of these measures in order to test claims about law’s effect on guilt and shame.

Ultimately, the ambition of normative law-and-economics analysis is to generate insights that can be translated into welfare-improving reforms. Our inquiry into the law and economics of guilt, shame, resentment, and virtue underscores both the theoretical promise and empirical challenges of emotionally informed legal policymaking. To be sure, the contextual contingency of our prescriptions and the difficulty of accurately measuring emotions may dissuade some legal policymakers from taking moral emotions into account when they craft legal rules and allocate enforcement resources. But difficulty of application does not change the fact that moral emotions produce real impacts—positive and negative—on social welfare. Contingency and opacity do not justify turning a blind eye to these effects. And even if our framework fails to influence policy in the near term, it can illuminate the many ways in which legal rules and law enforcement shape our outer actions and inner lives. Insofar as the study of law and the moral emotions accomplishes this much—insofar as it deepens our understanding of human behavior and psychology—then that accomplishment will be, in our view, a virtue.

¹²¹ See M. Kati Lear, Eric B. Lee, Sarah M. Smith & Jason B. Luoma, A Systematic Review of Self-Report Measures of Generalized Shame, 78 *J. Clinical Psychol.* 1261, 1320 (2022).

¹²² See *id.* at 1321–22.