

Insincere Evidence

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Proving a violation of law is costly. Because of the cost, minor violations of law often go unproven and thus unpunished. To illustrate, almost everyone drives a little faster than the speed limit without getting a ticket. The failure to enforce the law against minor infractions is justifiable from a cost-benefit perspective. The cost of proving a minor violation—for example, a driver broke the speed limit by one mile per hour—outstrips the benefit. But it has the downside of underdeterrence. People drive a little too fast, pollute a little too much, and so on.

This paper explores how insincere rules, meaning rules that misstate lawmakers' preferences, might reduce proof costs and improve enforcement. To demonstrate the argument, suppose lawmakers want drivers to travel no more than 55 mph. A sincere speed limit of 55 mph may cause drivers to go 65 mph, while an insincere speed limit of 45 mph may cause drivers to drop down to, say, 60 mph—closer to lawmakers' ideal. Insincere rules work by creating insincere evidence. In the driving example, the insincere rule is akin to adding 10 mph to the reading on every radar gun.

We distinguish insincere rules from familiar concepts like over-inclusive rules, prophylactic rules, and proxy crimes. We connect insincere rules to burdens of persuasion, showing how they offset each other. Finally, we consider the normative implications of insincere rules for trials, truth, and law enforcement. The logic of insincerity is not confined to speed limits. The conditions necessary for insincerity to work pervade the legal system.

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I. INTRODUCTION

Law aims to deter bad behaviors, but the mere enactment of a statute or regulation is not enough. Laws must be enforced to have effect. Alas, enforcement is expensive. Sometimes enforcement is so expensive that society would be better off without it. A modern controversy illustrates. Some states want transgender people to use the bathroom that matches their biological sex.¹ But the cost of enforcing such a law—inspectors in every stall?²—would exceed any benefit (or purported benefit) that the law would produce.

The bathroom laws are controversial, but laws on other topics like corruption, pollution, theft, and discrimination are not. In a perfect world, these laws would fully deter the targeted behavior. Enforcement costs frustrate that ideal. Can we lower enforcement costs? Scholars and policymakers have spent decades on this question. They have explored solutions like ankle bracelets, red light cameras, extreme fines, and other incentives.³

This paper analyzes a different method for lowering enforcement costs, one that has received little attention but that we believe is widespread in practice: the use of insincere rules to generate insincere evidence.⁴ To explain, a *sincere rule* mandates the rule-maker's preferred behavior while an *insincere rule* mandates something else. If the state wants drivers to stay at or below 55 miles per hour, a sincere rule would set the speed limit at 55 mph, while an insincere rule might set the speed limit at, say, 45 mph.

Insincere rules lower enforcement costs by making violations of law easier to prove. Enforcing laws requires many steps. At a minimum, the state must (1) observe a bad act, (2) identify and apprehend the perpetrator, (3) prove that the perpetrator committed the bad act, and (4) enjoin or punish the perpetrator. Many papers focus on the first, second, and fourth steps in this chain.⁵ We focus on the third step. Proving the commission of a

¹ See, e.g., Eric Lichtblau and Richard Fausset, *U.S. Warns North Carolina That Transgender Bill Violates Civil Rights Laws*, N.Y. TIMES (May 4, 2016), available at <https://www.nytimes.com/2016/05/05/us/north-carolina-transgender-bathroom-bill.html> (describing the law in North Carolina).

² Samantha Michaels, *We Asked Cops How They Plan to Enforce North Carolina's Bathroom Law*, MOTHER JONES (Apr. 7, 2016), available at <https://www.motherjones.com/politics/2016/04/north-carolina-lgbt-bathrooms-hb2-enforcement/> (describing the challenges of enforcement and quoting a police spokeswoman: "We're not checking birth certificates. We just don't have the police power to be able to do that in bathrooms.").

³ See generally Gary S. Becker, *Crime and Punishment: An Economic Approach*, 76 J. POL. ECON. 169, 174 (1968) (providing a germinal analysis of fines and addressing technology too: "It would be cheaper to achieve any given level of activity ... the more highly developed the state of the arts, as determined by technologies like fingerprinting, wire-tapping, computer control, and lie-detecting."); James Byrne & Gary Marx, *Technological Innovations in Crime Prevention and Policing: A Review of the Research on Implementation and Impact*, 20 J. POL. STUD. 17 (2011) (reviewing technological innovations in law enforcement); Bruno S. Frey, *Punishment – and Beyond*, 5 CONTEMP. ECON. 90 (2011).

⁴ One of us introduced insincere rules in a separate paper. See Michael D. Gilbert, *Insincere Rules*, 101 VA. L. REV. 2185 (2015). The current paper explores a different mechanism through which insincere rules can improve compliance. We distinguish the two projects in Part IV.A, *infra*.

⁵ See, e.g., A. Mitchell Polinsky & Steven Shavell, *The Theory of Public Enforcement of Law*, in 1 HANDBOOK OF LAW & ECONOMICS 403, 405 (A. Mitchell Polinsky & Steven Shavell eds., 2007) ("The

wrong is not easy. The state must gather evidence, prepare witnesses and exhibits, try the case, and ultimately convince a judge or jury of the wrong beyond the appropriate burden of persuasion, to say nothing of appeals and retrials. Every step of this process involves costs. Insincere rules make the process easier—make enforcement cheaper—by converting hard cases into easy cases.⁶ Below we develop the argument with rigor. Here we illustrate with an example.

Suppose the state wants drivers to go 55 mph. The state sets the speed limit at 55 mph, meaning the rule is sincere. If a driver gets caught going 85, the case is easy. Yes, the state burns resources monitoring the road, stopping the driver, and administering a fine.⁷ But on the question of guilt the case is open-and-shut: he sped. Now what if a driver gets caught going 56 mph? This case is hard. The driver might fight the ticket. He might argue that the officer made a mistake by failing to hold the radar still. He might argue that the radar measures with error on sharp curves like the one he traversed. Even if the driver is lying, proving it takes work. The officer would likely need to testify, and the state may have to present evidence on the trustworthiness of the radar. The state might lose despite this effort. Deterring someone from going 56 mph is not worth the trouble. By the same logic, deterring someone from going up to 65 mph may not be worth the trouble. Savvy drivers realize this and see that they can drive as fast as 65 mph with impunity.

Now rerun the example with one change: an insincere rule. Instead of setting the speed limit at 55 mph, suppose that the state makes it 45 mph. The case of the driver going 85 mph remains easy. But the case of the driver going 65 mph is now easy as well. Even after accounting for potential errors by the officer and radar, judges and jurors probably would conclude that a driver clocked at 65 mph in a 45-mph zone had broken the law. Foreseeing that proof will be easy, the officer will ticket the driver going 65 mph. And foreseeing the ticket, the driver will slow down. He may slow to 60 mph—closer to the speed that lawmakers wanted in the first place. By making hard cases easy, the insincere rule improves behavior.

Our title captures the mechanism by which insincerity lowers the cost of proof. An insincere rule gives the state a block of “free” or “artificial” evidence that can be used to help prove a violation of law. In the driving example, adopting an insincerely low speed limit is the functional equivalent of handing officers rigged radar guns. Reducing the speed limit from the sincere 55 mph level to the insincere 45 mph level does not change

theoretical core of our analysis addresses the following basic questions: Should the form of the sanction imposed on a liable party be a fine, an imprisonment term, or a combination of the two? Should the rule of liability be strict or fault-based? If violators are caught only with a probability, how should the level of the sanction be adjusted? How much of society’s resources should be devoted to apprehending violators?”).

⁶ Cf. Charles L. Barzun, *Rules of Weight*, 83 NOTRE DAME L. REV. 1957 (2008) (proposing a distinct but conceptually related mechanism in which legal rules might be used to impose specific fact-finding weights on various items of evidence).

⁷ In the economics literature on enforcement, fines are usually treated as costless transfers of wealth from perpetrators to the state. In reality, fines must have some social cost, however small, because they must be administered. See Polinsky & Shavell, *supra* note 5, at 430-31 (analyzing enforcement when fines are socially costly); see also Richard Posner, *An Economic Theory of the Criminal Law*, 85 COLUM. L. REV. 1193, 1207-08 (1985) (noting other frictions that complicate the calibration and administration of penal fines).

the speed that a 65-mph driver was actually going. It simply turns what had been a 10-mph infraction into a 20-mph infraction. This is the functional equivalent of adding an extra 10 mph onto the officer's radar-gun readings.

Insincere rules offer a mechanism by which lawmakers—legislators, agencies, judges—can lower enforcement costs and induce better behavior in regulated parties. The mechanism is very general, as we will explain.⁸ Insincere rules do not require deception; even if everyone knows a rule is insincere, it can still lower proof costs. Insincere rules do not require irrationality among regulated parties. Insincere rules do not require real evidentiary uncertainty (radar guns actually measure with error). They can improve behavior in the face of *perceived* evidentiary uncertainty (people believe that radar guns measure with error). Insincere rules can benefit the state whether its objective is deterrence, corrective justice, or any other end connected to the behavior of regulated parties. Here is a sampling of the kinds of laws to which our analysis applies: blood alcohol content while operating a vehicle; emissions of carbon, lead, or other pollutants; the length, weight, and number of fish caught in protected waters; noise limits at airports and nightclubs; the amounts (e.g., milligrams) of particular ingredients allowed in each dose of medicine; distances between guns and schools, protesters and abortion clinics, smokers and public buildings. These examples canvass precise laws: for example, laws prohibiting the possession of more than “[o]ne ounce of useable marijuana.”⁹ But insincere rules can improve enforcement of vague laws too: for example, laws requiring pharmaceutical companies to “[b]e maintained in a clean and orderly condition,”¹⁰ or prohibiting mergers “the effect of [which] may be substantially to lessen competition.”¹¹

Given the benefits and general applicability of insincere rules, we suspect that this mechanism, while new to scholars, is not new to lawmakers. Scholars have long observed gaps between the law in books and the law in action.¹² Laws mandate one thing while regulated parties do another. Scholars bemoan these gaps,¹³ but perhaps their anguish is misplaced. Perhaps some of these gaps reflect strategic and beneficial uses of insincere rules, with lawmakers intentionally getting the law in books “wrong” in order to get the law in action “right.”

Beyond identifying the potential benefits of insincere evidence, our analysis uncovers an overlooked connection between the substance of law and its processes.

⁸ See *infra* Part III.D.

⁹ RCW 69.50.360(3)(a).

¹⁰ 21 CFR 205.50(a)(4).

¹¹ Clayton Act, ch. 323, § 7, 38 Stat. 730, 731-32 (1914) (current version at 15 U.S.C. § 18 (2012)).

¹² Roscoe Pound, *Laws in Books and Law in Action*, 44 AM. L. REV. 12, 34 (1910). For perspective on the large literature on “gap studies,” see Scott Barclay & Jon B. Gould, *Mind the Gap: The Place of Gap Studies in Sociolegal Scholarship*, 8 ANN. REV. L. & SOC. SCI. 323 (2012).

¹³ For example, Max Rheinstein has called pervasive differences between law and practice “inane.” MAX RHEINSTEIN, MARRIAGE STABILITY, DIVORCE, AND THE LAW 351-53 (1972). Richard Abel states that early gap studies “were frequently directed by the belief that the gap, once revealed, could and should be eliminated.” Richard L. Abel, *Law Books and Books About the Law*, 26 STAN. L. REV. 175, 188 (1973). Roscoe Pound blamed gaps on “our machinery of justice” that is “too slow, too cumbersome and too expensive” and argued that lawyers must “make the law in action conform to the law in the books.” Pound, *supra* note 12, at 35-36.

Speeding tickets are typically civil offenses. Thus, the state’s burden of persuasion would usually be preponderance of the evidence. What would happen if the state’s burden were beyond a reasonable doubt? Given a speed limit of 55 mph, the driver clocked at 85 mph would probably still present an easy case and the driver clocked at 56 would still present a hard case. But the higher burden could hurt the state for many speeds in between. Lowering the speed limit—adopting an insincere rule—would make some of these cases easier. Under the preponderance of the evidence standard, a speed limit of 50 mph might be enough to make a driver clocked at 60 mph an easy case. For proof beyond a reasonable doubt, it might take more insincerity—a speed limit of 45 mph—to make the driver clocked at 60 mph an easy case.

To generalize, insincere evidence can offset the cost of meeting higher burdens of persuasion. The more stringent the burden, the more insincere the law must be. This suggests that rule-makers may adopt the strictest rules in criminal law—which is exactly what some scholars perceive. In a classic paper, Professor Bill Stuntz argued that criminal liability has broadened, leading to a “world in which the law on the books makes everyone a felon.”¹⁴ Our work relates to Stuntz’s. We generalize, improve, and challenge his analysis.¹⁵

As this discussion shows, insincere evidence raises difficult normative questions. It can unwind judicial protections, especially in criminal law. It appears to require dishonesty by the state. (Actually, lawmakers do *not* have to lie or deceive for insincere rules to work, but a wedge does open between their laws and their preferred behavior). Insincere evidence also raises practical problems. In theory, a speed limit of 1 mph would make enforcing a 55-mph speed limit very easy, but in practice it could backfire. Officers might refuse to enforce a 1 mph speed limit; juries might refuse to convict. For reasons like these, we do not believe that insincerity would work or should be adopted in every setting. Our objective is not to champion or vilify insincere evidence, but to study and explain it.

The remainder of this paper does just that. Part I provides background on enforcement and other literatures related to our work. Part II develops our theory. Part III relates our theory to other concepts such as over-inclusive rules, prophylactic rules, proxy crimes, and acoustic separation. Part IV considers normative implications, placing our theory in the broader context of evidence law, enforcement, deterrence, and truth. We conclude with brief remarks on implications for other areas of law.

II. LAW IN BOOKS, LAW IN ACTION

Cyclists ride without helmets. Stores sell alcohol to minors. Truckers drive longer shifts than legally allowed. City ordinances prohibits smoking at bus stops, but smokers linger nearby. A quick glance at just about any slice of life reveals a pervasive and important phenomenon: law mandates one behavior but yields another. Sometimes the slippage is minor, as in our bus stop example. Other times the stakes are high. Twenty

¹⁴ William J. Stuntz, *The Pathological Politics of Criminal Law*, 100 MICH. L. REV. 505, 511 (2001).

¹⁵ See *infra* Part IV.E.

years after the Clean Water Act, 10,000 dischargers still lacked permits.¹⁶ Around the world, governments fail systematically to protect the rights enshrined in their national constitutions.¹⁷ The legal scholar Roscoe Pound captured this regularity with a memorable phrase: there is a gap between the “law in books” and the “law in action.”¹⁸

Why do gaps arise? Prior scholarship has answers.¹⁹ Consider the Holmesian “bad man” deliberating over whether to break the law.²⁰ This person is not deterred by any abstract force of nature or internal commitment to justice. Instead, he weighs the expected benefits of breaking the law (profits, revenge, the pleasure of listening to illegally-downloaded music) against the expected costs (potential fines, imprisonment, social opprobrium). If the benefits exceed the costs, the bad man breaks the law. The law in books is whatever the statutes or regulations say. The law in action is what the bad man is actually deterred from doing.²¹

The state can close the gap between the law in books and the law in action by increasing the expected cost of breaking the law.²² It has many levers for doing so. It can raise the probability that a transgressor will be caught in the act.²³ More cops usually means less crime. Alternatively, the state can adopt heavier sanctions.²⁴ Want to reduce littering in parks? Replace small fines with imprisonment.

¹⁶ See Daniel A. Farber, *Taking Slippage Seriously: Noncompliance and Creative Compliance in Environmental Law*, 23 HARV. ENVTL. L. REV. 297, 304 (1999) (citing ROBERT W. ADLER ET AL., THE CLEAN WATER ACT: 20 YEARS LATER 151 (1993)).

¹⁷ See generally David S. Law & Mila Versteeg, *Sham Constitutions*, 101 CALIF. L. REV. 863 (2013). Perhaps constitutions get ignored because political actors do not pay a price for violating law. See generally Frederick Schauer, *The Political Risks (if any) of Breaking the Law*, 4 J. LEGAL ANALYSIS 83 (2012) (making this argument).

¹⁸ Pound, *supra* note 12, at 14–15. See also Karl N. Llewellyn, *A Realistic Jurisprudence—The Next Step*, 30 COLUM. L. REV. 431, 439 n.9 (1930) (distinguishing “paper” rules from “real” or “working” rules); EUGENE EHRLICH, FUNDAMENTAL PRINCIPLES OF THE SOCIOLOGY OF LAW xxvii (Walter L. Moll trans., Russell & Russell, Inc. 1962) (1936) (distinguishing legal propositions from “living” law); Jason S. Johnston, *Bayesian Fact-Finding and Efficiency: Toward an Economic Theory of Liability Under Certainty*, 61 S. CAL. L. REV. 137, 139 (1987) (distinguishing “nominal” and “administered” rules).

¹⁹ For overviews of the literature, see Nuno Garoupa, *The Theory of Optimal Law Enforcement*, 11 J. ECON. SURV. 267, 267–68 (1997); A. Mitchell Polinsky & Steven Shavell, *The Economic Theory of Public Enforcement of Law*, 38 J. ECON. LIT. 45, 45 (2000) [hereinafter Polinsky & Shavell, *Economic Theory of Public Enforcement of Law*]; and A. Mitchell Polinsky & Steven Shavell, *Public Enforcement of Law*, in 5 THE NEW PALGRAVE DICTIONARY OF ECONOMICS 38 (Steven N. Durlauf & Lawrence E. Blume eds., 2d ed. 2008). This literature presents the law and economics perspective on the “gap.” For philosophical perspective, see, for example, Larry Alexander, *The Gap*, 14 HARV. J.L. & PUB. POL’Y 695 (1991); HEIDI M. HURD, MORAL COMBAT 185-202 (1999).

²⁰ See Oliver Wendell Holmes, *The Path of the Law*, 10 HARV. L. REV. 457, 459 (1997) (“You can see very plainly that a bad man has as much reason as a good one for wishing to avoid an encounter with the public force A man who cares nothing for an ethical rule which is believed and practised by his neighbors is likely nevertheless to care a good deal to avoid being made to pay money, and will want to keep out of jail if he can.”).

²¹ *Id.* (“If you want to know the law and nothing else, you must look at it as a bad man. . .”).

²² See generally Becker, *supra* note 3.

²³ See generally *id.*

²⁴ See generally *id.* Relatedly, the government can affect *perceptions* of the sanction. See Bert I. Huang, *Shallow Signals*, 126 HARV. L. REV. 2227, 2234–35 (2013) (analyzing the failure to publicize when one actor has permission to engage in behavior that is forbidden for other actors). The state can also

Professor Gary Becker developed the latter idea, arguing that a combination of fewer police and severe sanctions will efficiently deter bad men from breaking the law.²⁵ To illustrate, suppose that drivers will stop at red lights only if the expected cost of running the light is \$100 or more. How can the state set the expected cost at \$100? It can install a red-light camera at every intersection, making the probability of getting caught 100 percent, and set the fine at \$100. Or it can secretly install one red-light camera in every hundred intersections, making the probability of getting caught one percent, and set the fine at \$10,000.²⁶ The expected cost of running the light is the same ($1\% \times \$10,000 = \100), but the latter approach economizes on red-light cameras, saving the state money.²⁷

Becker's prescription works in theory but faces challenges in practice. Publicity and morals place an upper bound on sanctions. "Tough on crime" makes for good politics. "Tough on trivial regulatory infractions" does not. A street vendor in New York received a \$2,250 fine for using a table that was an inch too tall and two inches too close to a store entrance.²⁸ A student was fined \$675,000 for illegally downloading 30 songs.²⁹ Run-of-the-mill traffic violations in California cost \$500.³⁰ Sanctions like these generate negative attention and political pressure, making it hard for politicians to follow Becker's severe-sanction advice.

Even if they could, severe sanctions might not deliver on the promise. Becker's approach fails when law-breakers exhibit certain cognitive biases. Some people might treat the very low probability of punishment for breaking the law as a zero probability of punishment.³¹ The threat of a sanction, even a severe one, will not deter these people.

effectively raise sanctions by increasing the costs to defendants of defending themselves. Cf. J.J. Prescott, *Improving Access to Justice in State Courts with Platform Technology*, 70 VAND. L. REV. 1993 (2017) (proposing solutions to the high cost of accessing the justice system); Maximilian Bulinski & J.J. Prescott, *Online Case Resolution Systems: Enhancing Access, Fairness, Accuracy, and Efficiency*, 21 MICH. J. OF RACE & L. 205 (2016) (same).

²⁵ See Becker, *supra* note 3, at 183-84.

²⁶ For simplicity, we assume drivers cannot tell which intersections have cameras. Thus, they assume the probability of getting caught at any given intersection equals one percent.

²⁷ According to a 2001 study, a single red-light camera costs about \$50,000. <https://www.cdc.gov/motorvehiclesafety/calculator/factsheet/redlight.html>.

²⁸ Sally Goldenberg, *Street Vendor Selling Cellphone Cases Fined 2G Fine for Inches*, N.Y. POST (Oct. 8, 2012, 4:00 AM), <http://nypost.com/2012/10/08/street-vendor-selling-cellphone-cases-fined-2g-fine-for-inches/>, archived at <http://perma.cc/E5Q4-4Z45>.

²⁹ Denise Lavoie, *Joel Tenenbaum Boston University Student Download Fine: Court Won't Reduce \$675,000 Penalty*, HUFFINGTON POST (May 21, 2012, 11:10 AM), http://www.huffingtonpost.com/2012/05/21/joel-tenenbaum-boston-uni_n_1533319.html, archived at <http://perma.cc/45RG-8KLB>.

³⁰ Editorial, *Relief from the high cost of traffic tickets — for some Californians, at least*, L.A. TIMES, (Aug. 11, 2017), available at <https://www.latimes.com/opinion/editorials/la-ed-fairer-traffic-ticket-20170811-story.html> ("The state's exorbitant traffic fines are tough for anyone to pay, so laden as they are with add-on fees that inflate a \$100 ticket to nearly \$500 in the end.").

³¹ On the underweighting on low probability risks, see for example Ralph Hertwig, Greg Barron, Elke U. Weber, & Ido Erev, *Decisions from Experience and the Effect of Rare Events in Risky Choice*, 15 PSYCHOL. SCI. 534 (2004); Greg Barron & Ido Erev, *Small Feedback-based Decisions and Their Limited Correspondence to Description-based Decisions*, 16 J. BEHAV. DEC. MAKING 215 (2003); Dov Zohar & Ido Erev, *On the difficulty of promoting workers' safety behaviour: Overcoming the under-weighting of routine risks*, 7 INT. J. RISK ASSESSMENT & MGMT 122 (2007).

Others might heavily discount future punishments relative to current benefits.³² For them, today's pleasure is a greater concern than next month's pain. Again, severe penalties will not deter these people, as long as there is a big enough lag between the benefit of breaking the law and the punishment.

If the state cannot enact severe enough sanctions, or if those sanctions fail to achieve deterrence, then another option remains: increase the odds of detection. The state can detect violations more accurately and more quickly by hiring more enforcement officers (cops, forest rangers, air-quality regulators), purchasing more surveillance equipment (drones, listening devices, testing kits), and paying more informants (street criminals, whistleblowers, foreign agents). These investments increase the probability of a law breaker getting caught. But this approach faces a political and moral objection. All of these investments are costly. The resources may be needed elsewhere. Spending another \$1,000 on schools may do more for society than spending another \$1,000 on red-light cameras.

Given this tradeoff, slippage against the law in the books is inevitable. In a sense, it is even desirable. As Professors Mitchell Polinsky and Steven Shavell put it, "optimal enforcement tends to be characterized by some degree of underdeterrence . . . because allowing some underdeterrence conserves enforcement resources."³³ In other words, society is better off with some lawbreaking—but with money for roads and schools—than with no lawbreaking but no money for other needs.

Of course, if enforcement were costless there would be no gap between the law in the books and the law in action. Gaps only arise because the costs of enforcing the law sometimes exceed the benefits. No one contests that enforcement is costly.³⁴ But what if

³² For critical reviews of models related to present-bias, see Ariel Rubinstein, "Economics and Psychology"? *The Case of Hyperbolic Discounting*, 44 INT'L ECON. REV. 1207 (2003) and Shane Frederick, George Loewenstein, & Ted O'Donoghue, *Time Discounting and Time Preference: A Critical Review*, 40 J. ECON. LIT. 351 (2002). For recent empirical work on this topic, see Jess Benhabib, Alberto Bisin, & Andrew Schotter, *Present-bias, quasi-hyperbolic discounting, and fixed costs*, 69 GAMES & ECON. BEHAVIOR 205 (2010).

³³ Polinsky & Shavell, *Economic Theory of Public Enforcement of Law*, supra note 19, at 70. "Optimal" enforcement means social welfare-maximizing enforcement. The dominant strand in the enforcement literature assumes that the state maximizes social welfare. See, e.g., Becker, supra note 3, at 207; Polinsky & Shavell, *Economic Theory of Public Enforcement of Law*, supra note 19, at 49. A second line, growing from public choice theory, examines enforcement when the state is self-interested. See, e.g., David Friedman, *Why Not Hang Them All: The Virtues of Inefficient Punishment*, 107 J. POL. ECON. 259, 262 (1999); Nuno Garoupa & Daniel Klerman, *Optimal Law Enforcement with a Rent-Seeking Government*, 4 AM. L. & ECON. REV. 116, 116–17 (2002). In both cases, enforcement costs can limit enforcement. Sometimes non-enforcement today can lead to deteriorating behavior tomorrow. See Omri Ben-Shahar, *The Erosion of Rights by Past Breach*, 1 AM. L. & ECON. REV. 190 (1999). This temporal dynamic complicates the cost-benefit analysis, but the same fundamental tradeoff remains.

³⁴ Cf. DOUGLASS NORTH, NOBEL PRIZE LECTURE, available at <https://www.nobelprize.org/prizes/economic-sciences/1993/north/lecture/> ("Only under the conditions of costless bargaining will the actors reach the solution that maximizes aggregate income regardless of the institutional arrangements. When it is costly to transact then institutions matter. And it is costly to transact.").

enforcement costs could be reduced? The state could elicit better behavior and still have money for schools and roads.

Policymakers have long sought to lower enforcement costs. Their ideas have included technological innovations like red-light cameras, ankle bracelets, and smoke stack monitors.³⁵ These innovations help, but enforcement is still costly. In the following pages we describe a different strategy with general applicability for reducing enforcement costs. The strategy we consider does not arise out of technical innovation but instead out of legal innovation regarding the content of law.

III. ENFORCEMENT AND INSINCERITY

This Part develops our theory. We begin by pinpointing an underappreciated source of enforcement costs: a violation of law must be proved before a penalty can be imposed. Like the costs of police, the costs of proof lead to underenforcement of laws. We show how insincere rules can reduce proof costs. Lawmakers can achieve better compliance by misrepresenting the conditions under which a wrong has been committed. In short, hard cases can be turned into easy cases. We discuss when this mechanism works or fails, and we identify important implications for burdens of persuasion.

A. The Costs of Proof

The ideas we develop have broad application, as we will explain.³⁶ However, to keep things as clear as possible, we begin by focusing on the simple example raised in the Introduction. To repeat the setup, suppose that lawmakers have decided drivers should travel no faster than 55 mph on a particular stretch of highway. This speed strikes the optimal balance of convenience, safety, and other factors. How might lawmakers go about enacting and enforcing the speed limit?

A natural option would be to enact a 55 mph speed limit and deploy cops to watch for speeding vehicles. Of course, there are many other details to consider. How many police should be assigned to monitor this highway? How severe should the punishment for speeding be? Others have explored these questions and we will not discuss them.³⁷ We assume that the state has already optimized these levers as best it can.³⁸

Our focus is on the proof process. Even when a violation of the speed limit is committed and detected, it is not certain that a penalty will be imposed. The driver can always dispute a ticket. And if the driver disputes the ticket, the state cannot impose the legal penalty without first proving in court that a violation has occurred.

Much goes into proving a violation of law, even in this simple setting. Prosecutors, judges, clerks, and possibly jurors need to devote time and resources to the case. The

³⁵ See generally Byrne & Marx, *supra* note 3.

³⁶ See *infra* Part III.D.

³⁷ See *supra* note 19 (citing several good overviews of the existing literature).

³⁸ For completeness, we could also assume that the state will reoptimize these levels to account for any changes to the setup we introduce in the following pages. The point is that we are abstracting from these standard enforcement considerations.

ticketing officer needs to take the stand to testify. Time that these actors spend on traffic cases is time *not* spent on other, more serious cases. Assuming the officer relied on something more than subjective observation, details will need to be provided about how the driver's speed was measured. Was it measured by the officer's speedometer while pacing the driver down a length of road?³⁹ By a hand-held radar or laser gun?⁴⁰ By aerial surveillance drone?⁴¹ None of these detection technologies is perfect.⁴² Absent special laws to the contrary,⁴³ the state would need to prove the accuracy of whatever method the officer used to estimate the driver's speed.⁴⁴ In principle, this would include not only the accuracy of the detection method (use of a radar gun) but also the accuracy of any techniques used to calibrate the detection method (calibration of a radar gun by speedometer or tuning fork), which themselves have different rates of error.⁴⁵ Even with every piece of foundational testimony in place, uncertainty will remain.⁴⁶

Now consider the driver's defense. The driver could take the stand to testify—perhaps compellingly—that he was not speeding. To bolster this argument, the driver might call a disinterested passenger to testify that the driver was obeying the speed limit at the time of the stop. The driver might also point to factors that could have thrown off

³⁹ See David Brown, *Fight Your Speeding Ticket: Determining Your Speed*, NOLO, retrieved August 2, 2018 from <https://www.nolo.com/legal-encyclopedia/free-books/beat-ticket-book/chapter6-1.html> (describing different forms of speed detection and commenting on their comparative accuracies).

⁴⁰ *Id.*

⁴¹ *Id.*

⁴² See, e.g., National Highway Traffic Safety Administration, U.S. Department of Transportation, LIDAR Speed-Measuring Device Performance Specifications, March 2013, available at <https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/809811-lidarspeedmeasuringdevice.pdf>, at 7, 10, 12, 17–28 (providing test procedures and tolerances for how much inaccuracy a LIDAR unit may exhibit in different operating conditions).

⁴³ E.g., VA. CODE ANN. § 46.2-882 (West) (providing that a radar gun reading “shall be accepted as prima facie evidence” of the speed a vehicle was driving, and providing that “a certificate, or a true copy thereof, showing the calibration or accuracy of ... any tuning fork employed in calibrating or testing the radar ... and when and by whom the calibration was made, shall be admissible [to address questions about calibration or accuracy]” as long as such calibration or testing was conducted within the last six months). *But cf.* State v. Bonar, 40 Ohio App. 2d 360, 319 N.E.2d 388, 389 (Ohio Ct. App. 1973) (finding that the state's failure to present evidence of a radar gun's accuracy, while not rendering the evidence inadmissible, does entitle the defendant to a directed verdict when the state's only evidence was the radar gun reading).

⁴⁴ See, e.g., FED. R. EVID. 901 (requiring in federal courts, as in most state courts, that the proponent of evidence must show that the evidence is what it purports to be, including, for example, the basis for believing that a process or system—i.e. radar gun—produces an accurate result). See also FED. R. EVID. 104(b) (providing that when evidence is relevant only upon the support of a foundational fact, evidence must be introduced sufficient to support a finding that the foundational fact exists).

⁴⁵ See, e.g., John Jendzurski Nicholas G. Paulter, *Calibration of Speed Enforcement Down-The-Road Radars*, 114 J. OF RES. OF THE NAT'L INST. OF STANDARDS AND TECH. 137 (2009) (comparing the accuracy of different techniques for calibrating radar guns).

⁴⁶ See, e.g., *Mobile Speed Cameras*, BBC INSIDE OUT — SOUTH WEST (February 28, 2005) <http://www.bbc.co.uk/insideout/southwest/series7/speed-cameras.shtml> (illustrating some potential errors in speed detection and describing case studies of individuals who successfully opposed tickets based on speed gun readings).

the reading of a radar gun: detection angles, intervening vehicles, and reflective surfaces;⁴⁷ wind or weather conditions;⁴⁸ the officer's shaky hands or inexperience.⁴⁹

If the proof process in even this simple example sounds like an ordeal, imagine how much more involved it would be in other settings. In antitrust practice, the state's proof that a merger could have anticompetitive effects will often involve hundreds of hours of depositions and live testimony, and thousands of pages of reports and exhibits. In 1934, the trial of monopolization charges against Alcoa took 2 years and 3 months from start to finish.⁵⁰ Securities fraud, environmental regulations, tax fraud, banking regulations, discrimination claims brought by the EEOC—in all these areas and many others, the costs of proof can be substantial.

One takeaway from this discussion is that the state's detection of a violation of law does not end the costs it faces in seeking to enforce the law. Proving a violation is as costly as the proof process makes it.

A second takeaway is that even the state's decision to shoulder the cost of proving a violation does not guarantee that a violator will actually be punished. The judge or jury could always be unpersuaded by the state's evidence, in which case the lawbreaker walks away scot-free.⁵¹

Not all cases are equally difficult though. All else equal, the probability of a state loss would seem to shrink as the extent of the violation grows.⁵² This is easily illustrated. Suppose that a hypothetical driver has been ticketed for going 90 mph in a 55-mph zone. The officer testifies that the driver appeared to be going about this speed, and that the radar gun confirmed it. Can the driver really undermine this evidence? Setting aside the possibility of pure fabrication by the officer, uncertainty around the measurement seems

⁴⁷ *E.g.* Myatt v. Com., 11 Va. App. 163, 166 (1990) (discussing expert testimony about “[t]he reflective qualities of the appellant's motor vehicle, the presence of the tractor-trailer truck behind the appellant's vehicle, the angle of the radar unit with respect to the highway, and its height above the highway” as factors properly challenging a radar unit's accuracy on a particular occasion).

⁴⁸ *See, e.g.*, Brown, *supra* note 39 (discussing how wind and weather conditions might cause spurious radar readings).

⁴⁹ *Cf.* DECATUR GHD & SCOUT USER'S MANUAL § 7.4, available at <http://www.decatoureurope.com/uploads/Brochures/GHD-SCOUT%20User%20Manual%206-10-10-E.pdf> (“Fan interference is the most common form of interference that you are likely to experience [when trying to measure driving speeds]. It is caused when the radar measures the speed of the vehicle blower fan.”); *id.* at § 12 (“Q. Will my radar work while my vehicle is moving? A. No, the GHD and SCOUT radar guns are a stationary only models, so your vehicle should be parked. You need to hold the radar steady while operating it.”).

⁵⁰ *See* Spencer Weber Waller, *The Story of Alcoa: The Enduring Question of Market Power, Conduct, and Remedy in Monopolization Cases*, in ANTITRUST STORIES 121, 127-29 (Eleanor Fox & Daniel Crane eds., 2007).

⁵¹ We ignore the possibility that the cost to the defendant of trial, even if he wins, may itself act as a form of punishment and deterrent. Accounting for this possibility appears to complicate matters without fundamentally changing our results.

⁵² Holding all else equal means, among other things, holding fixed the amount of resources that the defendant is willing to spend on fighting the charge or claim. We accept that—depending on punishments and collateral implications—defendants might often feel more compelled to fight larger alleged infractions. Our point is to identify a marginal property of the system that applies regardless of what defendants choose to do with their resources.

unlikely to win the day. The radar gun may be imperfect, but not *that* imperfect. Proving that the driver was speeding seems almost certain.

Now suppose the driver has been ticketed for going 56 mph in the 55-mph zone. Even small uncertainties suddenly loom large. The state can call all the experts it wants in trying to bolster the 56-mph reading. But considering all the possible ways that the radar could have been a mere 1 mph high, the fact-finder could remain unpersuaded. The odds of the state winning at trial now seem low—maybe no better than a coin flip.

This thought experiment shows that even when a violation of law is detected, there may be good reasons for the state to decline to enforce. It should not attempt to prove a violation unless the expected benefits of doing so exceed the costs.

We can capture this with a simple equation. When the state chooses to enforce the law, it pays a cost of C . This cost could be fixed, or it could vary, increasing for harder cases (the state needs more evidence) and decreasing for easier cases. The benefit of enforcement is B , which is not fixed. B grows with the magnitude of the infraction. Intuitively, the state gets more benefit from penalizing a 90-mph speeder than it does from penalizing a 56-mph speeder. Proof is never certain; there is always a chance that the state's case falls apart. Thus, the benefit must be discounted by the probability of conviction, p , which varies with the extent of the violation, as discussed above. A rational state would never seek to enforce the law unless $pB > C$. Rearranging terms for clarity, the state would not enforce unless $B > C/p$.

Figure 1 illustrates. The benefit line captures B , the social gain from successfully penalizing a speeding driver. It reflects the gain from penalizing a violation of a certain size.⁵³ Punishing a driver going 85 yields a large benefit, punishing a driver going 65 yields a small benefit, and punishing a driver going 55 or slower yields no benefit at all.⁵⁴ The cost line captures C/p . It illustrates the opportunity cost of trying to prove a given violation of law. For large violations, like speeds of 90 mph and above, the probability of victory is almost certain (p approaches 1), so the line simply reflects C , the resources that go into putting on witnesses and presenting evidence at trial. For smaller violations, like speeds of 56 mph, the cost line reflects these same social expenses scaled up to account for the possibility that the state could lose (C/p grows as p approaches 0). The intuition works like this: as the probability of conviction shrinks, the social resources expended on prosecution are less likely to yield a benefit.⁵⁵ Thus, the opportunity cost of attempting to

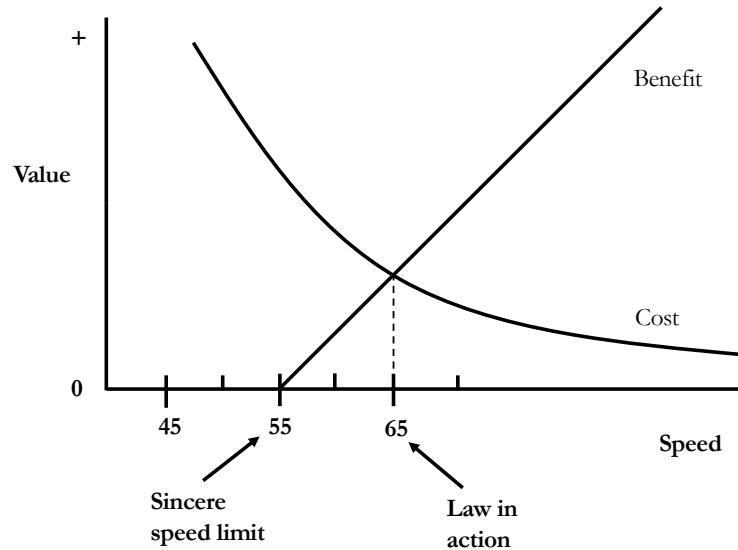
⁵³ Nothing turns on this being the only value that the state perceives from enforcing the law. Fines, for example, may be an important source of revenue for the state. And the public at large may derive some form of deontological value from seeing popular laws enforced. These additional benefits could be factored into the following analysis with few real changes in result or prediction. Note also that while the benefit line in Figure 1 originates at 55 mph—implying that deterring drivers from going 54 mph provides no benefit to society—nothing in our analysis is particularly sensitive to this assumption. Finally, we assign the benefit line a specific shape in Figure 1, starting at zero at the legal limit. Nothing turns on the shape, as long as it slopes upward.

⁵⁴ Consistent with this description, the benefit line slopes upward. One could characterize the benefits of enforcement in different ways, and the line could take different shapes. However, this is not critical to our results. As long as the benefit line is not vertical, insincere rules can improve enforcement.

⁵⁵ Recall that we assume that the state gets no deterrence benefit from a loss at trial. See *supra* note 53. This is not critical to our results.

punish a lawbreaker grows as the difficulty of the case rises. Resources wasted on a loss could have been spent elsewhere.

Figure 1. Social Cost and Benefit of Trying to Prove a Wrong



As Figure 1 shows, the state should not even try to prove small violations of the speed limit. The cost of attempting to enforce the law against a driver clocked at 60 mph exceeds the benefit. The speed at which the lines intersect is the breakeven point. This does not occur until 65 mph. It is irrational for the state to enforce the law against drivers going less than 65 mph.

Recall Justice Holmes's suggestion that one should consider law from the perspective of the bad man.⁵⁶ Figure 1 shows that being clocked at speeds above the legal limit does not necessarily carry with it even the threat of punishment. Correctly observing or intuiting this, the bad man realizes that he can go as fast as 65 mph without fear of any punishment at all, whether his speeding is detected or not. The speed limit in the books is 55 mph, but the speed limit in action is 65 mph.⁵⁷

This illustrates another source of gaps between law in books and law in action. It is similar to the rational slippage that results from a decision to spend less on police so that resources will be available for schools and roads, but it is a distinct and additional source of slippage that result from the cost of the proof process. Being connected to the proof

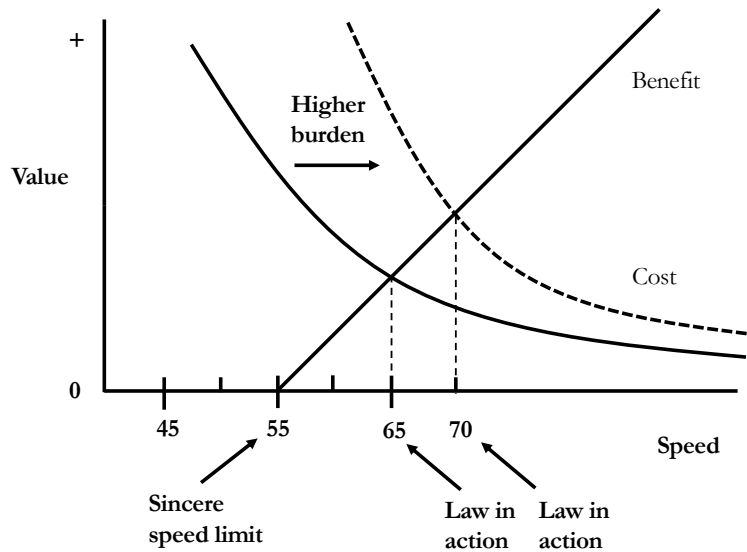
⁵⁶ See *supra* notes 20-21 and accompanying text.

⁵⁷ Note that this does not mean the bad man *will* drive 65 mph. He may go faster yet if he thinks that he will not be detected, or if he values speeding more than he fears the potential punishment, or if his risk preferences or time preferences make it rational to further violate the law. We do not endeavor to specify all those additional parameters in this simple model. What Figure 1 does show is that the law imposes no incentive whatsoever to induce the bad man to go *slower* than 65 mph.

process gives this source of slippage some concerning properties but also opens up novel avenues for mitigation.

To start with the concerning properties, consider what happens to enforcement as the burden of persuasion rises. Speeding is typically a civil offense, so our example implicitly assumes that the state’s burden of persuasion is preponderance of the evidence. In criminal cases, due process demands that the state prove a violation of law beyond a reasonable doubt.⁵⁸ Suppose we were to change the burden of persuasion in our driving example, raising it from proof by a preponderance of the evidence to proof beyond a reasonable doubt.⁵⁹ For any given size of infraction, the state must have a weaker case under the reasonable doubt standard than it does under the preponderance standard. Graphically, this equates to an outward shift of the cost curve, as Figure 2 illustrates.⁶⁰

Figure 2. Greater Slippage under Higher Burdens of Persuasion



The breakeven point at which the state should start trying to enforce the law has shifted rightward. The speed limit remains 55 mph, but under the higher burden of persuasion, drivers can go as fast as 70 mph, not just 65 mph, with impunity.⁶¹ The higher the burden of persuasion, the greater the violation of law must be before it will be rational

⁵⁸ See *In re Winship*, 397 U.S. 358, 364 (1970) (holding “that the Due Process Clause protects the accused against conviction except upon proof beyond a reasonable doubt of every fact necessary to constitute the crime with which he is charged.”).

⁵⁹ See Sean P. Sullivan, *A Likelihood Story: The Theory of Legal Fact-Finding*, 90 U. COLO. L. REV. 1, 18-22 (2019) (commenting on the interpretation of these intermediate standards).

⁶⁰ Recall that the cost curve is defined as C/p . The probability of conviction is everywhere lower under the higher burden of persuasion. Since p is everywhere lower, the cost curve is everywhere higher under the higher burden of persuasion.

⁶¹ These numbers are stylized. In reality, a switch to the reasonable doubt standard could result in much greater slippage than this.

for the state to enforce. That is, higher burdens of persuasion lead to ever greater gaps between the law in books and the law in action.

The point is not that higher burdens of persuasion are bad. The received wisdom is that the social costs of proving guilt beyond a reasonable doubt are justified by the benefit of avoiding false positives. The guilty people who go free under this standard represent the price we pay to reduce wrongful convictions.⁶² This false positive versus false negative tradeoff is well known.⁶³ Figure 2 illustrates something that is not well known. As the burden of persuasion rises, the band of marginal violations that the state will not enforce also expands. The cost of raising the burden of persuasion is not just that more guilty people go free. The cost is also that *all* bad men are empowered to violate the law a little more extensively than they could before.

The discussion up to this point can be summarized succinctly: underdeterrence is inevitable when proof is costly. The reason is not any of the traditional sources explored in the literature like monitoring costs or inadequacy of the threatened sanction. Rather, this underdeterrence traces to the costs of proving a violation of law. Proof is expensive, particularly when the violation is small and the burden of persuasion is heavy.

If proof costs frustrate enforcement, one wonders what lawmakers could do to combat the problem.⁶⁴ Committing additional resources to fund the litigation of small violations is not the answer. This would only throw money away on a gamble for which the costs have already been shown to outweigh the benefits. What lawmakers would ideally do is lower the cost of proof. How might this be achieved?

One idea might be to lower the burden of persuasion. Figure 2 shows that raising the burden of persuasion increases the cost of proof, thereby increasing the gap between the law in books and the law in action. If lawmakers could lower the burden of persuasion, they could shrink this gap. The idea of varying the burden of persuasion to improve enforcement has received considerable scholarly attention.⁶⁵ But while the idea works in

⁶² See, e.g., *Addington v. Texas*, 441 U.S. 418, 423–24 (1979) (“In a criminal case . . . the interests of the defendant are of such magnitude that . . . they have been protected by standards of proof designed to exclude as nearly as possible the likelihood of an erroneous [conviction]. In the administration of criminal justice, our society imposes almost the entire risk of error upon itself”); *In re Winship*, 397 U.S. at 372 (1970) (Harlan, J., concurring) (“I view the requirement of proof beyond a reasonable doubt in a criminal case as bottomed on a fundamental value determination of our society that it is far worse to convict an innocent man than to let a guilty man go free.”); 2 MCCORMICK ON EVIDENCE § 341 (Kenneth S. Broun ed., 7th ed. 2013) (“Society has judged that it is significantly worse for an innocent person to be found guilty of a crime than for a guilty person to go free. . .”).

⁶³ See generally LARRY LAUDAN, *TRUTH, ERROR, AND CRIMINAL LAW* (2006).

⁶⁴ The idea that legislators should act in conscious consideration of the implications of the proof process and rules of evidence is not novel. See, e.g., JEREMY BENTHAM, *THE WORKS OF JEREMY BENTHAM*, vol. 6, ch. 3–4 (1843) (discussing the ends of a legal system of proof and the duties of the legislator in relation to proof and evidence problems).

⁶⁵ E.g., Louis Kaplow, *Likelihood Ratio Tests and Legal Decision Rules*, 16 AM. L. ECON. REV. 1, 35 (2014); Louis Kaplow, *Burden of Proof*, 121 YALE L.J. 738 (2012); Louis Kaplow, *On the Optimal Burden of Proof*, 119 J. POL. ECON. 1104 (2011); Michael L. Davis, *The Value of Truth and the Optimal Standard of Proof in Legal Disputes*, 10 J. L., ECON. & ORG. 343 (1994); see also James Andreoni, *Reasonable Doubt and the Optimal Magnitude of Fines: Should the Penalty Fit the Crime?*, 22 RAND J. ECON. 385 (1991) (discussing possible interdependence between the severity of a crime and fact-finders’

theory, it has little practical potential. The justice system has long encompassed roughly three burdens of persuasion,⁶⁶ and there is little appetite for introducing more.⁶⁷ Even if there were such an appetite, the constitutional mandate of proof beyond a reasonable doubt in criminal cases would frustrate efforts to vary the burden in important circumstances.⁶⁸ And even without these hurdles, it might simply be too difficult to articulate burdens of persuasion with any greater granularity. Even the existing burdens of persuasion seem to draw distinctions finer than the legal system can handle.⁶⁹

Fine tuning the burden of persuasion is not the answer. Fortunately, this does not end the analysis. There is another strategy that lawmakers could use.

B. The Benefits of Insincerity

The state can lower the cost of proof, and thereby improve compliance, by redefining the content of a wrong. Recall that lawmakers believe the optimal speed is 55 mph. What if they do not adopt a sincere speed limit of 55 mph but instead an insincere speed limit of 45 mph? Previously the probability of convicting a driver clocked at 60 mph was relatively low, so the opportunity cost of ticketing such a driver was high. With a 45-mph speed limit, the probability of convicting a driver clocked at 60 mph is higher, making the opportunity cost of enforcing the law lower. In short, the state can now enforce the speed limit more aggressively than before.

Figure 3 illustrates. The optimal speed remains 55 mph. Thus, the benefit line does not change position. What changes is the cost curve. It shifts inward. This captures the fact that cases which were previously hard have now become easier. For any given degree of speeding, the probability of successful proof has gone up. A 1-mph violation has become an easier-to-prove 11-mph violation. A 5-mph violation has become a 15-mph violation, and so on. Thus, the cost of proving every violation has gone down.

subjective burden of persuasion); Jack B. Weinstein, *Some Difficulties in Devising Rules for Determining Truth in Judicial Trials*, 66 COLUM. L. REV. 223, 236 (1966) (commenting that, while affording criminal defendants the benefits of a high burden of persuasion is a “deliberate choice ... based upon deeply held moral values and ethical judgments[,]” in the case of a “particularly dangerous crime indulged in by relatively small numbers of the population and a relatively small number of suspects, a perfectly rational argument could be developed for conviction on the least shadow of a doubt.”).

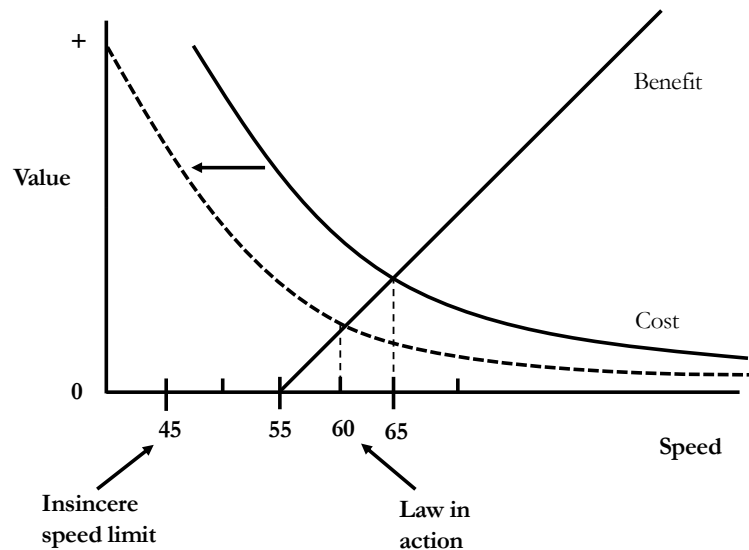
⁶⁶ See MCCORMICK ON EVIDENCE, supra note 62, at §§ 339-341 (summarizing and discussing the common burdens of persuasion); Sullivan, supra note 59, at 18-19 (same).

⁶⁷ Cf. *Michelson v. United States*, 335 U.S. 469, 486 (1948) (Jackson, J.) (explaining that while a significant part of the law of evidence is archaic, paradoxical, and irrational, it should not be disturbed because “[S]omehow it has proved a workable even if clumsy system ... [and so to] pull one misshapen stone out of the grotesque structure is more likely simply to upset its present balance between adverse interests than to establish a rational edifice.”).

⁶⁸ The clear-and-convincing evidence standard, for example, has long been criticized as vague and inconsistent in its application across proceedings. See supra notes 58, 62 and accompanying text.

⁶⁹ Cf. 2 MCCORMICK ON EVIDENCE, supra note 62, at § 340 (commenting that “no high degree of precisions can be attained” through things like alternative articulations of intermediate burdens of persuasion).

Figure 3. The Insincere Rule



The shift in the cost curve changes the breakeven point at which enforcement becomes worthwhile. As illustrated in Figure 3, when the speed limit is set at the sincere 55 mph level, it is irrational for the state to try to prove violations of the speed limit by drivers clocked at anything less than 65 mph. When the speed limit is reduced to the insincere level of 45 mph, it becomes rational to prove violations at speeds of 60 mph. The gap between the law in the books and the law in action looks even worse than before. Previously it was 10 mph;⁷⁰ now it is 15 mph.⁷¹ But the state has actually improved behavior. Now drivers travel 60 mph instead of 65 mph.⁷²

We want to emphasize that the state does *not* achieve the mandate of the insincere rule. Drivers still violate the posted speed limit. But the state does not care. It focuses on what the bad man prioritizes: the point at which enforcement becomes rational for the state. This is what determines the law in action. By reducing the cost of proof, the insincere rule gives the state a credible threat of punishment against some infractions for which it was previously helpless. Consequently, the bad man slows down.

C. Interpretation and Implications

Our title, *Insincere Evidence*, captures the mechanism by which insincerity reduces proof costs. An insincere rule gives the state a block of “free” or “artificial” evidence that can be used to help prove a violation of law. In the driving example, adopting an

⁷⁰ Under the sincere speed limit of 55 mph, Figure 3 indicates a breakeven point of 65 mph. Thus, the gap between the law in action and the law in the books is $65 - 55 = 10$ mph.

⁷¹ Under the insincere speed limit of 45 mph, Figure 3 indicates a breakeven point of 60 mph. Thus, the gap between the law in action and the law in the books is $60 - 45 = 15$ mph.

⁷² We have not specified a utility function or strategy for drivers. For ease of exposition, we just assume that drivers go as fast as they can without triggering enforcement.

insincerely low speed limit is the functional equivalent of the state secretly giving police officers rigged radar guns that tack an extra 10 mph onto every reading.

In retrospect, this property is obvious. The effect of moving the speed limit from the sincere (55 mph) level to the insincere (45 mph) level is not to change the speed that a 65-mph driver was actually going. The effect is simply to turn what had been a 10-mph infraction into what is now a 20-mph infraction. That is no different than simply adding 10 mph onto whatever speed the radar gun would have otherwise shown.

In practice, however, an insincere rule could out-perform the rigged radar gun. Judges and jurors are unlikely to convict if they learn that the radar was manipulated. By contrast, an insincere rule could function even if the fact-finder doubted its sincerity.

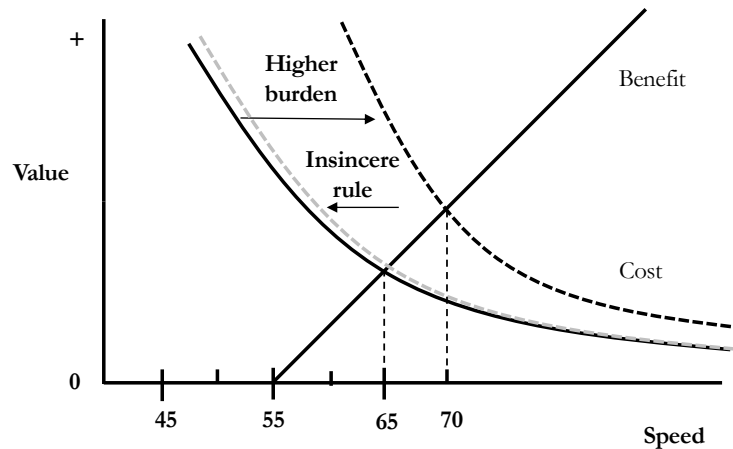
The difference relates to the location of the insincerity. With a rigged radar gun, insincerity is about the facts. The finding of legally operative facts is the province of the fact-finder (judge or jury). The fact-finder would not only be entitled to reject falsified evidence, but arguably required to do so. By contrast, with an insincere rule, insincerity is about the law. The statement of legal standards is the province of lawmakers, not fact-finders. In a legal proceeding, under the charge of deciding whether the evidence shows that *the posted speed limit* has been violated, the fact-finder might well answer in the affirmative even if she personally doubts the optimality of that speed limit.

We should emphasize this point. The rule-maker does *not* have to fool the judge, the jury, the regulated parties, or anyone else in order for the insincere rule to reduce the cost of proof. *Everyone* can understand and agree that 55 mph is the optimal speed, even though the speed limit is 45 mph. As long as the judge or jury applies the law as written—they weigh the evidence against the *posted* speed limit—then the logic works. In reality, judges and juries might often behave this way. They might not know the optimal speed, so they just enforce the law as written, or they might understand that enforcing the law as written will draw actual speeds closer to the optimum.

We have connected insincere rules to artificial evidence. Now we connect insincere rules to burdens of persuasion. Just as insincere rules and rigged radar guns have the same theoretical effect on deterrence and enforcement, there is a functional equivalence between adopting an insincere rule and lightening the state's burden of persuasion.

Figure 4 illustrates. To understand the figure, consider a series of events. To begin, the state's burden is preponderance of evidence. This corresponds to the solid cost curve which intersects the benefit curve at 65 mph. Now suppose that the state is suddenly required to meet the higher burden of proof beyond a reasonable doubt. This change has the effect of shifting the cost curve to the right, as illustrated by the dashed, black cost curve which intersects the benefit curve at 70 mph. The gap between the law in the books and the law in action has widened. Finally, suppose that lawmakers react to this higher burden of persuasion—and the weaker enforcement achieved under it—by reducing the speed limit to an insincerely low level. As illustrated by the dashed, gray cost line, the insincere speed limit mitigates the increase in proof costs created by the higher burden of persuasion. With a little bit more insincerity, this offset would have returned the cost curve to the initial preponderance-of-the-evidence level.

Figure 4. Equivalence of Insincere Rule and Reduced Burden of Persuasion



This may seem alarming. Consider criminal defendants and their constitutional right to the protection afforded by proof beyond a reasonable doubt. One implication of Figure 4 is that the benefit of this protection may be weakened, or even eliminated, by the simple act of more strictly defining what constitutes a wrong. While this is an accurate statement, any alarm arising from it owes only to a naïve view of the protection that a burden of persuasion affords. Figure 4 does not show that insincere rules threaten the protection of the reasonable doubt standard; it shows that the reasonable doubt standard is not—by itself—much protection. The benefit enjoyed by a defendant is a function of both the burden of persuasion *and* the definition of a wrong.⁷³ To the extent that the Constitution constrains only one of these levers, its protection has never been more than what Figure 4 suggests it to be.

There is a more constructive way to think about the equivalence of insincere rules and burdens of persuasion. As noted, scholars have long discussed manipulation of burdens of persuasion as a way of achieving more efficient deterrence outcomes. Burdens of persuasion are not susceptible to fine tuning, and thus have failed to deliver on this idea. But many substantive legal thresholds *are* susceptible to detailed refinement and this may be a practical way to unlock the promise of variable burdens of persuasion.

D. Generalizations and Applications

We have explained our idea using a simple speed limit example. But the idea is not limited to this context. Insincere rules can improve the behavior of regulated parties in any setting that meets the following three conditions: (1) the cost of proof decreases as the magnitude of the legal violation grows; (2) the rule-maker can adjust the content of

⁷³ See Richard H. McAdams, *The Political Economy of Criminal Law and Procedure: The Pessimists' View*, in *CRIMINAL LAW CONVERSATIONS* 519-20 (Paul H. Robinson, Stephen Garvey, & Kimberly Kessler Ferzan eds.) (2009) (arguing that the state can make violations of law easier to prove by lightening the burden of persuasion or by changing the elements of the crime).

the law in a way that converts relatively minor violations of law into relatively major violations; and (3) adjudicators (judges, jurors, parents, etc.) apply the law as written.

To emphasize the generality of these conditions, we highlight several that do not appear on the list. As explained above, the rule-maker does not have to fool anyone. Judges, jurors, regulated parties, the public—everyone can know that the law in books is insincere. This does not matter. As long as the judge or jury weighs the evidence against the stated rule—the actual, duly-enacted law—then the cost of proof goes down. In many settings it seems reasonable to assume that judges and jurors will behave exactly this way. They may have no strong sense of what the sincere law would be (what is the optimal mercury emissions from a power plant?), in which case they simply apply the law in books. Or they may prioritize the law in action, not the law in books, and realize that enforcing the insincere law in books will improve the law in action.

To be clear, the logic above does not *require* anyone to know the law is insincere. In some cases, some or all actors may mistakenly believe that the law is sincere when it is insincere. This does not matter. Think again of the speed limit example. If bad men observe a posted speed limit of 45 mph, and if they learn from experience or intuition that they can go as fast as 60 mph with impunity, they will go 60 mph. It does not matter whether they believe that the 45-mph speed limit is sincere or not.

Here is another condition that does not appear on our list: irrationality. Some people might imagine that insincere rules improve behavior through a psychological mechanism. Judge Calabresi has argued that “use of . . . ‘technically incorrect’ language”—the First Amendment says Congress shall not abridge speech, but occasionally it does—“can bring us closer to the desired result than would use of more precise language.”⁷⁴ He attributes this to a kind of psychological bias: “If we admit that the state can regulate religion, we are psychologically. . . more likely to allow such regulation than if we say that there can be no regulation of religion and then from time to time” regulate it anyway.⁷⁵ Our idea does not hinge on psychology. Insincere rules can lower proof costs, and therefore improve behavior, even if everyone is strictly rational, meaning they mechanically weigh the personal benefit of violating the rule against the pain of punishment.

To function as we describe, insincere rules also do not require measurement error. In our speeding example, we assume (correctly) that radar guns measure speeds with error. Those errors create evidentiary uncertainty. Insincere speed limits overcome that uncertainty by turning close calls (56 mph reading in a 55-mph zone) into sure things (56 mph reading in a 45-mph zone). But measurement error is not required. *Perceived* measurement error suffices. If judges or jurors believe that radar guns measure with error, then they will not convict drivers clocked at one mile-per-hour over the speed limit—even if radar guns are actually flawless. They will, however, convict drivers clocked at 11 miles-per-hour over the limit. Insincere rules can overcome perceived as well as real measurement errors.

⁷⁴ GUIDO CALABRESI, A COMMON LAW FOR THE AGE OF STATUTES 173 (1982).

⁷⁵ *Id.*

Here is yet another condition that is not required: a scalar variable. Our speed limit example is scalar. The speed limit can move up or down continuously, as though set by a dial. Moreover, the speed limit is precise in the sense that most everyone agrees, conceptually if not empirically, on what constitutes a violation of the posted speed limit. Laws addressing countless subjects have this objective, scalar feature and are good candidates for insincere rules: blood alcohol content while driving; emissions of mercury, sulfur, carbon, or other pollutants; the length, weight, and number of fish caught; the time of day when hunters can hunt and marchers can march; decibel limits at airports and nightclubs; the number of milligrams of acetaminophen or other ingredients in each dose of medicine; distances between guns and schools, protesters and abortion clinics, and campaigners and voting booths. The list goes on.

In fact, the logic of insincerity reaches beyond this broad class of laws. The underlying variable does not have to be precise. Consider a regulation requiring that facilities storing prescription drugs have “adequate” lighting.⁷⁶ “Adequate” is vague; no one can say what exactly adequate means, so no one can say for sure when lighting is inadequate. Thus, a claim that a facility has inadequate lighting might fail in court because of differing opinions. To solve this problem, the state can require that facilities have “excellent” lighting. Like “adequate,” the term “excellent” is vague. Nevertheless, it helps. Evidence that a facility is somewhat dimly-lit may fail to convince a judge when the standard is “adequate” but easily convince a judge if the standard is “excellent.” Foreseeing the ease of proof, the facility will install better lighting if the standard switches from “adequate” to “excellent.”

The previous example is straightforward but mundane. Another example with greater economic heft is the lack of a *de minimis* standard in U.S. antitrust law. Unlike the European Union, which provides a safe harbor for small violations of European competition laws,⁷⁷ U.S. antitrust law has never evolved a clear minimum injury requirement.⁷⁸ In both regimes, small antitrust violations are likely to go unpunished as too minor to warrant the cost of enforcement. But moderate violations may be easier to prove in the U.S. than they are in the E.U., due to the lack of a *de minimis* standard. If so, compliance with the antitrust laws may be better in U.S.

Or consider an even more fundamental example. Some scholars argue that the reasonable person standard in tort demands a higher level of care than most people are capable of exercising on a regular basis.⁷⁹ This is consistent with an insincere evidence strategy. The cost of proving liability makes small acts of negligence too costly to prove,

⁷⁶ See, e.g., 21 CFR 205.50.

⁷⁷ See 2014 O.J. (C 291) 1 (describing conditions under which “agreements of minor importance ... do not appreciably restrict competition under Article 101(1) of the Treaty on the Functioning of the European Union”).

⁷⁸ U.S. law does have qualitative standards for the requisite degree of injury. E.g., Clayton Act, ch. 323, § 7, 38 Stat. 730, 731-32 (1914) (current version at 15 U.S.C. § 18 (2012)) (prohibiting mergers, the effects of which “may be substantially to lessen competition, or to tend to create a monopoly”).

⁷⁹ E.g., Fleming James Jr., *The Qualities of the Reasonable Man in Negligence Cases*, 16 Mo. L. REV. 1, 1-2 (1951) (“[M]any of the actor’s shortcomings such as awkwardness, faulty perception, or poor judgment, are not taken into account [in the reasonable man standard] if they fall below the general level of the community. This means that individuals are often held guilty of legal fault for failing to live up to a standard which as a matter of fact they cannot meet.”).

leading to under-deterrence. The system corrects by requiring an insincerely strict standard of care. Small acts of negligence that would be hard to prove under a more subjective reasonable person standard are relatively easy to prove under an artificially demanding objective standard.

The logic of insincerity extends further yet. It does not require even a vaguely scalar variable. It can also work with “lumpy” variables, like elements of a crime. To make a violation of law easier to prove, subtract an element from the offense. We explain and comment further on this idea below.⁸⁰

Finally, insincere rules can benefit rule-makers even when deterrence is not the objective. Like much of the enforcement literature,⁸¹ we have assumed that the sole goal of enforcement is deterrence. In reality, rule-makers might have other (or additional) objectives, like retribution, incapacitation, or some notion of corrective justice. If rule-makers can further these objectives by drawing the behavior of regulated parties toward their ideal, then insincere evidence may be attractive.

In sum, the conditions needed for insincere evidence to lower the cost of proof are simple and general. This means insincere rules can be deployed across the legal system. Are they? Professor Stuntz, to whom we will return,⁸² argues that criminal liability has broadened, leading to a “world in which the law on the books makes everyone a felon.”⁸³ Professor Farber characterizes environmental standards as “threat points in negotiation,” arguing that “the criticism that regulatory standards are too harsh loses some of its force, once it is recognized that the standards are often only partially implemented.”⁸⁴ In principal, the IRS requires extensive recordkeeping, but in practice taxpayers have “been held to a somewhat less rigorous standard.”⁸⁵ A New Jersey legislator proposed to double fines for speeding, and then, when his proposal failed, introduced a bill to reduce speed limits.⁸⁶ All of these examples and many others are consistent with the use of insincere rules to generate insincere evidence.

E. The Limits of Insincere Evidence

Perhaps this sounds too good to be true. The strategy of mitigating proof costs through insincere evidence exhibits all the benefits of theft over honest toil.⁸⁷ It drives down the cost of proving a violation of law, making it easier for the state to punish transgressors. In so doing, it increases the state’s ability to deter violations of law, and

⁸⁰ See *infra* Part IV.E (discussing adding and subtracting elements and the connection between our theory of insincere rules and the work of Professor Stuntz).

⁸¹ See *supra* Part II.

⁸² See *infra* Part IV.E.

⁸³ Stuntz, *supra* note 14, at 510–11.

⁸⁴ Farber, *supra* note 16, at 315–16.

⁸⁵ Stephen A. Zorn, *The Federal Income Tax Treatment of Gambling: Fairness or Obsolete Moralism?*, 49 TAX LAW. 1, 48 (1995)..

⁸⁶ David Levinsky, *Asking Motorists to Slow It Down*, BURLINGTON COUNTY TIMES, May 16, 2013, at A1.

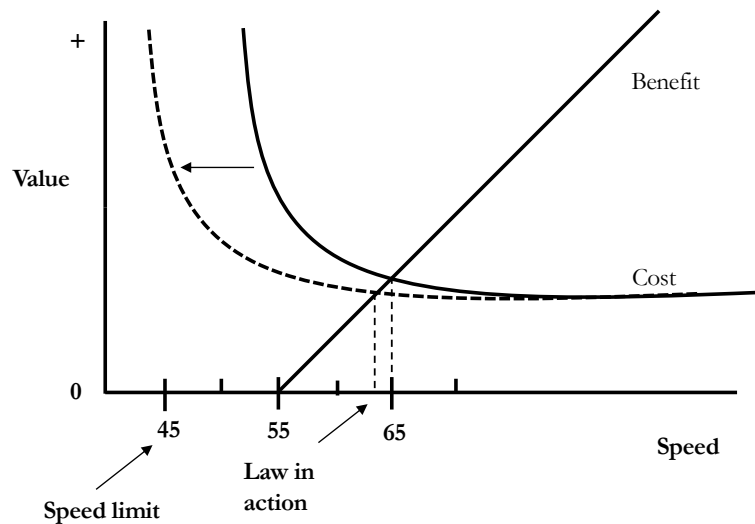
⁸⁷ BERTRAND RUSSEL, INTRODUCTION TO MATHEMATICAL PHILOSOPHY 71 (1919) (“The method of ‘postulating’ what we want has many advantages; they are the same as the advantages of theft over honest toil.”).

more efficiently incentivizes compliance with laws. And it does all of this at seemingly no cost to the state or society. No new police need to be hired. No new penalties need to be administered. At no greater cost than the ink needed to change the law, social benefits are unlocked.

There are indeed benefits to an insincere rule. But there are also situations in which insincerity is an ineffective strategy. There are also situations in which insincerity may backfire. We explore several of these below.

To begin, the benefits of adopting an insincere rule depend on how much the possibility of losing at trial factors into enforcement decisions. Figures 5 illustrate this point. Unlike the figures above, this figure depicts a cost curve that is already becoming flat when it intersects the benefit curve. Shifting this cost curve to the left hardly changes the intersection point: the law in action is 65 mph under the sincere rule and about 64 mph under the insincere rule. Intuitively, the fixed costs of proof (things like the cost of preparing for trial) are the main drivers of slippage against the posted speed limit. Since adopting an insincere rule does not change any of these costs, its adoption has little effect on behavior. To restate that point, the benefit of the insincere rule grows from the artificial evidence that it gives the state to make its case. If the state does not need that evidence because the violation is already easy to prove, then the insincere rule does not help.

Figure 5. Comparative Benefit of Insincere Rule



One conclusion that seems to follow is that insincere rules may provide the most benefit when applied to causes and crimes that require the state to meet high burdens of persuasion. The higher the burden, the greater the possibility of a loss. This is probably right, but the proposition could be taken too far. With different assumptions about the shapes of the cost and benefit curves, the effect of an insincere rule could be magnified, even under the preponderance standard. And even if the insincere rule does not imply as large a benefit under the preponderance standard as it does under higher burdens of

persuasion, its effect is still not zero. To the extent that insincere rules improve compliance without creating social costs, the approach might still be attractive.

But *do* insincere rules really have no social costs? In practice, there are at least two actors whose behavior could be distorted by insincere rules to the detriment of society: “good men” and credulous law enforcement agents.

To start with the first and more intuitive of these costs, everything thus far has assumed a society composed entirely of Holmesian “bad men.” This assumption helps to focus analysis and is frequently relied upon in the enforcement literature. In reality, there may be “good men” who follow the law more-or-less to the letter.⁸⁸ In the language of economics, these people have a “taste” for obeying the law.

Good men are a problem for the strategy. To see why, consider how an insincere speed limit would work in a society composed of both good and bad men. The insincere limit will cause everyone to slow down. Bad men might go 60 mph instead of 65 mph, which is good. But good men will go 45 mph instead of 55 mph, which is bad.⁸⁹ The benefit of the insincere rule in correcting the behavior of the bad men is offset—and possibly overtaken—by the distorting effect of the insincere rule on the behavior of the good men.

This is an important caveat, but it does not change the fundamental availability of insincerity as a cost mitigation strategy. In a society composed of both good and bad men, some insincerity may still be efficient if the cost-mitigation benefits outweigh the distorting effects. As the proportion of good men in the population declines, the cost of distorting their behavior shrinks and the benefit of insincerity grows.⁹⁰

A second potential cost of generating insincere evidence lies in the risk of overenforcement. The intuition runs as follows. Suppose, as before, that lawmakers want drivers to go 55 mph and thus adopt an insincere speed limit of 45 mph. What happens if law enforcement agents conclude that driving faster than 45 mph is socially harmful? Their conclusion is wrong: lawmakers think that driving faster than 55 mph is harmful, not driving between 45 and 55 mph. But if these credulous law enforcers fail to realize this, and if they act on their erroneous conclusions, then they will seek to enforce the speed limit at speeds lower than what lawmakers want.

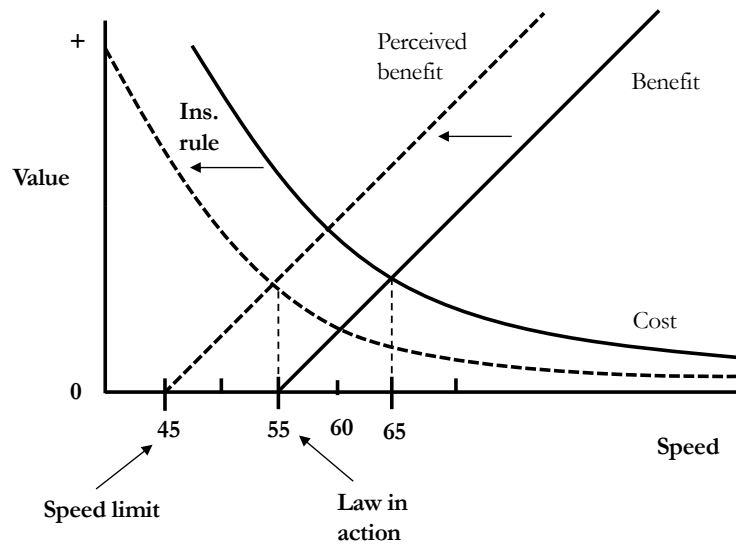
⁸⁸ See generally TOM TYLER, *WHY PEOPLE OBEY THE LAW* (2006); Robert Cooter, *Do Good Laws Make Good Citizens: An Economic Analysis of Internalized Norms*, 86 VA. L. REV. 1577 (2000). *But see* FREDERICK SCHAUER, *THE FORCE OF LAW* 57-74 (2015) (raising doubts about the existence of good men, or at least providing considerable evidence that many people do not obey the law simply because it is “law”).

⁸⁹ This is bad not only because good men go too slow, but because the speed differential between good and bad men increases from 10 mph under the sincere rule to 15 mph under the insincere rule. Higher speed differentials tend to cause more accidents. We thank Judge Easterbrook for a conversation on this point.

⁹⁰ We assume that the numbers of good and bad men in society are exogenous. In fact, the numbers could be endogenous, meaning they change as rules become increasingly insincere. This is an interesting possibility, but it does not fundamentally alter our analysis.

Figure 6 illustrates. Lawmakers want drivers to go 55 mph and have adopted an insincere speed limit of 45 mph to better achieve this end. While the solid benefit line captures the true social benefits of enforcing the law, credulous agents of the state think that 45 mph is the sincerely optimal speed, and thus act as though the dashed benefit line reflects the social benefits of enforcing the law. These credulous agents will try to prove violations at lower speeds than they would if acting from the sincere benefit curve. They begin enforcing the law at 55 mph, where the insincere cost and erroneous benefit curves intersect. This is bad. Punishing drivers for speeds around 55 mph entails greater social cost than benefit. These credulous agents over-enforce the law.

Figure 6. Overenforcement



Again, this is an important caveat, but it does not doom the strategy. The problem does not arise if agents of the state focus on the correct benefit curve. They might be directed to the correct curve by lawmakers or be sophisticated enough to intuit its location. Even if the agents remain credulous, lawmakers may have levers for limiting over-enforcement, such as budgetary limitations or department policies. Consider, for example, a Pennsylvania law stating that speeding drivers shall not be convicted unless “the speed recorded is six or more miles per hour in excess of the legal speed limit.”⁹¹ Finally, even if the agents are hopelessly credulous and lawmakers are unable to correct their behavior, there may still be instances in which the adoption of an insincere rule

⁹¹ 75 Pa. C.S.A. 3368 section (c)(4). This law does not eliminate hard cases. If the posted speed limit is 55 mph, and if an officer clocks a driver at 62 mph, the officer might have trouble proving that the driver exceeded the speed limit by at least six miles per hour. To avoid this, officers, might wait until drivers exceed the limit by, say, 10 mph. This is consistent with our argument. The Pennsylvania rule, coupled with officers’ own incentives, mitigates overenforcement.

confers more benefits (in terms of reduced proof costs) than costs (in terms of over-enforcement).⁹²

This discussion of agents provides an opportunity to address a concern about discrimination in enforcement. If the speed limit is sincerely set at 55 mph, officers have legal authority to stop drivers going faster than 55 mph, including drivers going only, say, 56 mph. The officers might ticket them, even though this is not cost-justified. Perhaps this is done to harass certain drivers, like racial minorities. A reasonable apprehension is that insincere rules could exacerbate this problem. Instead of having legal authority to stop anyone exceeding the sincere 55 mph limit, officers could now stop anyone exceeding the insincere 45 mph limit.

We share the overarching concern about discrimination in law enforcement. But insincere rules do not necessarily make this problem worse. Insincerity would only increase the opportunity for discriminatory enforcement if it increased the set of drivers who violate the law. Our analysis, however, is consistent with everyone violating the law either way. The drivers that exceed the insincerely low speed limit would exceed the sincere speed limit as well. Thus, the insincere rule does not increase the number of people subject to discriminatory enforcement.

Suppose it did. If the generation of insincere evidence exacerbated discrimination, and if there was no way to counter that discrimination (e.g., better training or agent screening), then we face a tradeoff. Insincere rules create benefits by improving the behavior of regulated parties, and they create costs by exacerbating discrimination by enforcers. To optimize this tradeoff, rule-makers can tinker with the rule. Perhaps it should be less insincere than otherwise—for example, 50 mph instead of 45 mph. Perhaps it should be sincere. Or perhaps it should be insincere in the other direction. If the state sets the speed limit at 75 mph, drivers go too fast, which is bad. But, because few people exceed the rule, discrimination by officers is limited, and that is good.⁹³

F. Summary

The purpose of this Part is to explain how insincere rules can reduce proof costs and thus improve compliance with law. We can summarize the argument in short order. Enforcement costs cause underdeterrence. Proving a violation of law is an underexplored but potentially important source of enforcement costs. Anything that lowers the costs of proof lowers enforcement costs, and thus improves behavior. Insincere rules lower proof costs. They do this by turning minor violations (ordinarily cost-prohibitive to prove in court) into major violations. Driving 56 mph is a minor violation of a sincere speed limit of 55 mph but a major violation of an insincere speed limit of 45 mph. Insincere rules will generally not lead to fully optimal behavior, and they are subject to potential costs

⁹² The net benefit of an insincere rule with credulous enforcers depends on assumptions about the shape and positions of the social cost and benefit curves, among other things.

⁹³ *Cf.* Richard H. McAdams, Dhammika Dharmapala, & Nuno Garoupa, *Punitive Police? Agency Costs, Law Enforcement, and Criminal Procedure*, 45 J. LEGAL STUDIES 105 (2016) (explaining that “criminal procedure protections [can] offset excessive enforcement zeal”).

and limitations. The principle of the strategy is robust, however, and seems suited to modest deployment in many settings.

IV. DISTINGUISHING INSINCERE EVIDENCE

Besides us, scholars have not used the language of insincere evidence to consider the relationship between the costs of proof and the efficiency of enforcement. Scholars have, however, described several concepts that relate to our argument in various ways. These include conduct rules, decision rules, over-inclusive rules, and the like. This Part distinguishes our focus. Putting distance between these ideas makes all of them clearer.

A. Gilbert on Insincere Rules

In 2015, one of us (Gilbert) published a paper titled *Insincere Rules*. That paper argued that lawmakers could improve behavior with artificially demanding rules. To adapt one of the paper's examples, suppose lawmakers want factories to emit no more than 60 units of pollution. An insincere rule might cap emissions at 50 units with the expectation that factories would rationally choose to emit 60 units of pollution, the actual amount that lawmakers wanted in the first place.

Gilbert's paper introduced the term insincere rules, and the conclusion of that paper—"By making the law in books wrong, lawmakers can get the law in action right"⁹⁴—resembles ours here. What makes the present paper different is the context in which insincerity is considered. Our focus on the proof process differs in fundamental ways from the two channels that Gilbert initially investigated: (1) the use of insincerity as a means of increasing sanctions, and (2) the use of insincerity to deceive bad men.

Take the first channel. As explained, one way for lawmakers to improve compliance is by increasing penalties. Gilbert showed that when lawmakers cannot increase penalties directly—because of public outcry against very high fines, for example—they may be able to increase fines indirectly by tightening rules. If a fine of \$1,000 per day for every unit of pollution above 60 units is unpopular, lawmakers might achieve similar deterrence with a fine of \$500 per day for every unit of pollution above 50 units. A factory emitting 70 units of pollution pays the same price either way ($\$1,000 \times 10 = \$10,000$ is the same as $\$500 \times 20 = \$10,000$), but the latter strategy does not appear to involve as severe a penalty, and thus may be more politically feasible.⁹⁵

Now consider Gilbert's second channel, which involved deception. Suppose the pollution law did not involve a fine but an injunction: if a factory emits more than the pollution cap, the factory will be enjoined (via a monitor) to comply with the legal limit moving forward. Insincerity may allow enforcement agents to appear more aggressive than they really are. If agents want pollution capped at 60 units and lawmakers set the law at that level, factory owners may exploit detection problems and other frictions to

⁹⁴ Gilbert, *supra* note 4, at 2187.

⁹⁵ To express the idea in a different way, the insincere rule takes a particular behavior that used to be classified as something akin to a misdemeanor and reclassifies it into something akin to a felony. Because felonies carry larger fines, the insincere rule enhances punishment. It does so without changing the fines for either misdemeanors or felonies.

emit 70 units of pollution. Now suppose lawmakers set the cap at 50 units and factory owners *believe* this is what enforcement agents actually want. The same rational exploitation of detection problems may lead them to emit 60 units of pollution, just what the enforcement agents wanted in the first place. Unlike our focus in this paper, Gilbert’s channel requires deception. Insincerity does not work unless factory owners are duped into thinking that the insincere rule is sincere. Our approach does not require deception. Even if the bad man may realize that lawmakers have adopted an insincere rule, the reduction in proof costs remains the same.

In sum, Gilbert introduced insincere rules but studied only two mechanisms by which they might elicit better behavior. Neither of those mechanisms overlaps with the channel we develop here. Our focus is on the use of insincerity as a means of lowering proof costs. The ability of an insincere rule to reduce the cost of proof is very general: it does not depend on political appetites and does not require credulous criminals. The properties of the insincerity we consider are also unique. The propagation of insincere rules through the proof process—summarized in Part II—is fundamentally different from what Gilbert developed in his earlier work. Insincere evidence thus adds to the mechanisms Gilbert studied, and is, we suspect, more common in practice.

B. Conduct and Decision Rules

Professor Meir Dan-Cohen distinguishes “conduct” rules, which direct the public on how to behave, from “decision” rules, which direct officials on how to treat people who violate the law.⁹⁶ For example, a conduct rule forbids theft, while a decision rule instructs judges to punish theft unless it is committed under circumstances like duress. Dan-Cohen argues that with “acoustic separation,” members of the public do not perceive decision rules, just conduct rules, which improves behavior and outcomes.⁹⁷ People commit fewer thefts because they do not realize that duress is a defense. Yet when thefts do occur, judges have the flexibility to excuse them. Acoustic separation “permits the law to maintain higher degrees of both deterrence and leniency than could otherwise coexist.”⁹⁸

Lawmakers might try to achieve acoustic separation, though Dan-Cohen did not push this possibility.⁹⁹ Suppose they did. Would this approximate an insincere rule?

⁹⁶ See generally Meir Dan-Cohen, *Decision Rules and Conduct Rules: On Acoustic Separation in Criminal Law*, 97 HARV. L. REV. 625 (1984). Dan-Cohen traces his work to Bentham. See *id.*; see also GERALD J. POSTEMA, *BENTHAM AND THE COMMON LAW TRADITION* 408, 448–52 (1986) (explaining Bentham’s distinction between the law directing social interaction and the law providing parameters for adjudication).

⁹⁷ See Dan-Cohen, *supra* note 96, at 630–34.

⁹⁸ *Id.* at 665.

⁹⁹ *Id.* at 635: “[A]ctual legal systems may in fact avail themselves of the benefits of acoustic separation by engaging in ‘selective transmission’—that is, the transmission of different normative messages to officials and to the general public, respectively.... I shall refer to these techniques as strategies of selective transmission. The term ‘strategies’ calls for an explanation. My use of the term should not be understood to connote deliberate, purposeful human action. Imputing to the law strategies of selective transmission does not, therefore, imply a conspiracy view of lawmaking in which legislators, judges, and other decisionmakers plot strategies for segregating their normative communications more effectively. Instead, strategies of selective transmission may be ... strategies without a strategist[.]” (internal citations omitted).

The answer is no. By Dan-Cohen’s account, lawmakers want the public to obey the conduct rule. People should act as though theft is forbidden. In contrast, lawmakers *never* want the public to obey an insincere rule. They adopt the insincere rule with the hope and expectation that people will violate it. In the driving example, lawmakers adopt a speed limit of 45 mph to elicit a speed like 60 mph. If people strictly obey the speed limit—as we discussed in the case of too many “good men,” for example¹⁰⁰—the insincere rule fails to function as expected.

Indeed, one way to think about insincere evidence is that it represents a strategic response to the failure of acoustic separation. Insincere rules presuppose that people have discovered the decision rule. In our running example, the sincere speed limit (55 mph) is the conduct rule, and the speed limit coupled with the enforcement strategy (stop people going 65 mph or faster) is the decision rule. Our starting point is the assumption that people know the decision rule, so they choose to drive 65 mph. Changing the conduct rule, which everyone ignores, from 55 mph to 45 mph changes the decision rule, which everyone heeds, from 65 mph to 60 mph. Where acoustic separation has failed, insincere rules may succeed.

C. Over-Inclusive Rules

As every law student learns, rules are generally over- and under-inclusive when assessed against their purpose.¹⁰¹ Consider the 26th Amendment, which enfranchises Americans aged 18 years or older.¹⁰² Assume that the purpose of the age requirement is to confine suffrage to those with sufficient maturity and knowledge to cast votes in a socially responsible way.¹⁰³ The age requirement is both over- and under-inclusive given this purpose. The requirement is over-inclusive because it forbids too much: some 17-year-olds are mature, knowledgeable, and responsible, yet they cannot vote.¹⁰⁴ And it is under-inclusive because it permits too much: some 18-year-olds are not mature, knowledgeable, or responsible, yet they can vote. Good rules balance the costs of over- and under-inclusiveness.¹⁰⁵

One might wonder if insincere rules have these features. Suppose lawmakers want drivers to go 55 mph and adopt an insincere speed limit of 45 mph. Is this simply an over-inclusive rule—one that prohibits speeds (from 45 to 55 mph) that do not actually concern lawmakers at all?

¹⁰⁰ See *supra* Part III.E.

¹⁰¹ For a discussion, see FREDERICK SCHAUER, PLAYING BY THE RULES: A PHILOSOPHICAL EXAMINATION OF RULE-BASED DECISION-MAKING IN LAW AND IN LIFE 31-34 (1993).

¹⁰² U.S. CONST. amend. XXVI.

¹⁰³ Some may dispute this. In the United States, the amendment was tied to the draft. See, e.g., Jenny Diamond Cheng, *Voting Rights for Millennials: Breathing New Life into the 26th Amendment*, 67 SYRACUSE L. REV. 653, 668 (2017) (“This initial burst of interest in eighteen-year-old voting lasted about five years and largely revolved around the perceived injustice of drafting soldiers who were considered too young to vote.”). This does not matter for our purposes.

¹⁰⁴ And their vote today may affect whether they get conscripted at age 18.

¹⁰⁵ “Good” rules do other things too. See generally Cass R. Sunstein, *Problems with Rules*, 83 CALIF. L. REV. 953 (1995); SCHAUER, *supra* note 101.

The answer is no. Over-inclusiveness harms lawmakers. In the voting context, if lawmakers want every responsible person to vote, they are unhappy when their rule disenfranchises responsible 17-year-olds. This does not mean they will change the rule. Perhaps the 18-year requirement strikes the best balance between the costs of under- and over-inclusiveness. But lawmakers still lament the extent to which the rule is over-inclusive. By contrast, insincerity does *not* harm lawmakers. They are happy to adopt a 45 mph speed limit—stricter than their sincere preference—because it elicits better behavior by regulated parties.

Here is another way to see the distinction. Lawmakers want and expect people to obey over-inclusive rules. In the voting example, lawmakers want everyone younger than 18 to stay away from the polls, regardless of whether they are responsible. In contrast, lawmakers do *not* want or expect people to obey insincere rules. They adopt insincere rules with the hope and expectation that *everyone* will violate them.

D. Prophylactic Rules

Scholars use the term “prophylactic rules” in different ways. The standard definition runs as follows: prophylactic rules are judge-made rules that overprotect constitutional rights.¹⁰⁶ The classic example is the *Miranda* warning.¹⁰⁷ If police coerce a suspect into confessing, the Fifth Amendment’s privilege against self-incrimination prevents them from using the confession in court. In *Miranda v. Arizona*, the Supreme Court went further in holding that, for many confessions to be admissible, police must have told suspects that they have the right to silence and counsel, and the suspects must have voluntarily waived these rights.¹⁰⁸ The *Miranda* warning overprotects the privilege against self-incrimination. It provides more protection for criminal suspects than the Fifth Amendment requires.

Scholars disagree on whether prophylactic rules are common or rare, legitimate or illegitimate.¹⁰⁹ Prophylactic rules also have a converse (albeit one without a name): rules that under-enforce constitutional rights.¹¹⁰

¹⁰⁶ Evan H. Caminker, *Miranda and Some Puzzles of ‘Prophylactic’ Rules*, 70 U. CIN. L. REV. 1, 1. For other definitions, see *id.* at n.2; Brian K. Landsberg, *Safeguarding Constitutional Rights: The Uses and Limits of Prophylactic Rules*, 66 TENN. L. REV. 925, 926-930 (1999).

¹⁰⁷ See Caminker, *supra* note 106; see also Mitchell N. Berman, *Constitutional Decision Rules*, 90 VA. L. REV. 1 (2004).

¹⁰⁸ See, e.g., *Miranda v. Arizona*, 384 U.S. 436, 444 (1966) (“The defendant may waive effectuation of these rights, provided the waiver is made voluntarily, knowingly and intelligently.”); *Moran v. Burbine*, 475 U.S. 412, 421 (1986) (elaborating that a waiver of *Miranda* rights “must have been voluntary in the sense that it was the product of a free and deliberate choice rather than intimidation, coercion, or deception” and that it also “must have been made with a full awareness of both the nature of the right being abandoned and the consequences of the decision to abandon it”).

¹⁰⁹ See Joseph D. Grano, *Prophylactic Rules in Criminal Procedure: A Question of Article III Legitimacy*, 80 NW. U. L. REV. 100 (1985) (arguing that some prophylactic rules like the *Miranda* warning are illegitimate); David A. Strauss, *The Ubiquity of Prophylactic Rules*, 55 U. CHI. L. REV. 190 (1988) (arguing that prophylactic rules are common, necessary, and legitimate).

¹¹⁰ Lawrence Gene Sager, *Fair Measure: The Legal Status of Underenforced Constitutional Norms*, 91 HARV. L. REV. 1212 (1978). According to Professor Mitchell Berman, “the debate over

These details do not concern us; our objective is simply to show that neither prophylactic rules nor their converse are the same as insincere rules. To see the difference, consider a question: why do courts adopt prophylactic rules? Professor Evan Caminker provides an explanation in the Fifth Amendment context:

[A] seemingly straightforward, case-by-case inquiry into whether a constitutional norm has been transgressed will result in what might be called “adjudication errors,” meaning the production of false-negatives and false-positives. . . . [S]ometimes, the Court will conclude that the likelihood of false-negatives is unacceptably high; in other words, the direct doctrinal inquiry actually proves to be insufficiently protective of the constitutional values at stake given the persistence of unconstitutional conduct. I believe this is the best, and a fully sufficient, explanation for and justification of *Miranda's* so-called prophylactic rule[.]¹¹¹

This logic is familiar from above. Rules, including constitutional doctrines, are both over- and under-inclusive. The precursor to *Miranda* was a totality-of-circumstances test. Courts considered, on a case-by-case basis, whether a suspect’s confession was coerced. In practice, this was imperfect.¹¹² Some coerced confessions were admitted (the approach was under-inclusive); some uncoerced confessions were excluded (the approach was over-inclusive). In *Miranda*, the Court concluded that the balance was off. The problem of under-inclusiveness was too great and the costs of mistakenly admitting coerced confessions were too high. The solution lay in rebalancing the rule. The *Miranda* warning overprotects the Fifth Amendment in the sense that it is self-evidently over-inclusive. This has the undesirable effect of excluding many uncoerced confessions from evidence, but may still strike the best balance of under- and over-inclusion costs.

As this discussion shows, prophylactic rules are akin to over-inclusive rules. The distinction between insincere rules and prophylactic rules is thus the same as above. Lawmakers lament the over-inclusiveness of prophylactic rules, but they expect people to follow them. Lawmakers welcome the over-inclusiveness of insincere rules, and they do not expect people to follow them.

E. Pathological Laws

Insincere rules are distinct from many common legal concepts, but they resemble one important idea in criminal law. In 2001, Professor William Stuntz published a paper called *The Pathological Politics of Criminal Law*. Consider this quote from his article:

Suppose a given criminal statute contains elements ABC; suppose further that C is hard to prove, but prosecutors believe they know when it exists. Legislatures can make it easier to convict offenders by adding

prophylactic rules is parasitic upon a more fundamental contest over the logical structure of constitutional adjudication.” Berman, *supra* note 107, at 50.

¹¹¹ Caminker, *supra* note 106, at 9 (2001).

¹¹² Richard H. Fallon, Jr., *Implementing the Constitution*, 111 HARV. L. REV. 54, 66 (1997); Berman, *supra* note 107, at 134-36.

new crime AB, leaving it to prosecutors to decide when C is present and when it is not.¹¹³

Stuntz characterizes this scenario in different ways. In one, he explains the replacement of crime ABC with crime AB in terms of enforcement costs: “Substituting an easy-to-prove crime for one that is harder to establish obviously makes criminal litigation cheaper for the government.”¹¹⁴ We would put it like this: Stuntz imagines a multi-element, binary, insincere rule.

We can unpack this phrase. Our running example, speed limits, involves a single-element offense. Whether a driver breaks the law depends on one variable, speed. Imagine a multi-element offense instead. Suppose a motorcyclist engages in reckless driving when he (1) drives faster than 55 miles per hour and (2) raises his front tire more than five inches off the ground. As we have explained, the cost of proof will prevent perfect enforcement. The law in books is 55 mph/five inches, but the law in action is, say, 65 mph/eight inches. Lawmakers could benefit from an insincere rule. They could make the law in books, say, 45 mph/two inches. This might improve the law in action. Because the law involves more than one element, and because the threshold for each element is insincere, this is a multi-element, insincere rule. The logic behind the rule—how it elicits better behavior—matches the logic from above. The only difference is we have two elements instead of one.

Consider another distinction: elements and thresholds. Elements of an offense can be added or subtracted. Reckless driving can have two elements (speed and wheelies) or just one element (speed). Once the elements are determined, each gets a threshold.¹¹⁵ Driving turns into speeding when it surpasses the speed limit. Likewise, lawful wheelies become unlawful at some threshold—say, five inches off the ground.

When a threshold reaches zero, its element disappears.¹¹⁶ To illustrate, suppose again that a motorcyclist engages in reckless driving when he (1) drives faster than 55 and (2) raises his front tire more than five inches. This is the law in books. The law in action is 65 mph/eight inches. To shrink this gap, the state adopts an insincere rule. It lowers the wheelie threshold—from five inches to three inches and so on. When the threshold reaches zero, the wheelie element evaporates. Now reckless driving is a one-element crime rather than a two-element crime. It depends on speed only.

Given this logic, a lawmaker calibrating an insincere rule can approach the wheelie threshold in two ways. She can treat it as continuous, dropping the threshold from five inches to four, two, or whatever will elicit the best behavior. Or she can treat it as binary: the threshold stays at five inches, or it drops to zero, meaning the element goes away. There is no choice between.

¹¹³ Stuntz, *supra* note 14, at 519.

¹¹⁴ *Id.* at 520.

¹¹⁵ We assume continuous variables.

¹¹⁶ Equivalently, when the threshold reaches zero, the element remains, but proof of the element becomes certain and costless.

Recall our description of Stuntz: he gestures at a multi-element, binary, insincere rule. Now the phrase makes sense. The crimes ABC and AB are multi-element. The crime AB is insincere. The state does not want to punish AB; it criminalizes AB only to lower the cost of enforcing ABC. The insincere rule is binary. The state does not lower the threshold on element C or even contemplate doing so. It simply eliminates C.

Our work builds on Stuntz. He offered a compelling example that, under one of his characterizations, represents an insincere rule. We improve and generalize the idea. We show that insincerity works even for one element-crimes; adding elements complicates matters without changing the logic. We show that over-inclusiveness is a separate matter (this line is blurry in Stuntz's article). We show that the binary approach Stuntz contemplated is actually an extreme and rather clumsy example of an insincere rule. A continuous approach that fine-tunes the rule can work better and might be more common (more on this below). We connect the substance of the rule to the burden of persuasion in a clearer and fuller way. Finally, we show that insincere rules can operate across enforcement settings, not just in criminal law.

Stuntz studied “pathological politics.” The details of his argument are beyond our scope, but here is a short summary. Legislators make more-or-less everything a crime, and then prosecutors pick and choose whom to prosecute among the law's many offenders. Since more-or-less everything is illegal, proving that any particular person has violated the law—some law, whether minor or serious—is easy. The threat of conviction induces guilty pleas from guilty and innocent offenders alike. Prosecutors' discretionary choices about enforcement determine the law in action. Instead of legislators making law and judges adjudicating it, prosecutors do all of the work. “Criminal law[,]” Stuntz wrote, is “not law at all, but a veil that hides a system that allocates criminal punishment discretionarily.”¹¹⁷

We can extract insincere rules from Stuntz's dark milieu. Enforcement agents might exercise discretion judiciously. When they do, insincere rules can improve rather than worsen the justice system. Furthermore, our analysis pinpoints and solves a tension in Stuntz's analysis. He assumes the state cannot or does not enforce crime ABC, while it can and does enforce AB—even though AB should not be a crime. To make sense of this, Stuntz must assume that the state overcorrects. If ABC is too costly to enforce, then AB is too cheap. If this is what Stuntz has in mind, then the problem is not insincerity *per se* but fine-tuning. The trick is to calibrate. Whenever possible, the state should set the insincere rule so that the point at which prosecutors find it worthwhile to enforce matches the point at which the conduct becomes socially harmful. Perhaps because he focuses on the binary case only, Stuntz does not consider this possibility.

F. Proxy Crimes

Proxy crimes are laws prohibiting behavior that is not itself harmful, but that is associated with behavior that is harmful.¹¹⁸ To give examples, laws prohibiting open

¹¹⁷ Stuntz, *supra* note 14, at 599.

¹¹⁸ See generally Frederick Schauer, *Bentham on Presumed Offences*, 23 UTILITAS 363 (2011). For insightful commentary on the topic, see, for example, *id.*; Richard H. McAdams, *The Political Economy of*

containers of alcohol in vehicles,¹¹⁹ and laws prohibiting possession of burglar's tools,¹²⁰ are proxy crimes. These acts are not harmful by themselves, but they correlate with drunk driving and burgling.¹²¹

To analyze proxy crimes, we focus on the law forbidding open containers of alcohol in vehicles. One way to understand this proxy crime is as follows: the law always means what it says. It always forbids open containers of alcohol in cars. That is what the rule-makers expect and intend, on the theory that open containers very likely lead to harm. On this understanding, "proxy crime" is just another term for a deliberately over-inclusive or prophylactic rule. This kind of proxy crime differs from insincere rules for the usual reasons: lawmakers want and expect regulated parties to violate insincere rules. They do not want or expect people to violate, to any degree, the prohibition on open containers in vehicles.

There is another way to understand the proxy crime. Rule-makers do not intend to forbid all open containers of alcohol in vehicles. In fact, they do not care about open containers in general, they just want to forbid drunk driving. They only expect officers to enforce the law against drunk drivers. By eliminating some pesky elements (the vehicle was moving, the driver was drunk), the proxy crime makes the proof process easier. On this understanding, the "proxy crime" is something like a binary, multi-element, insincere rule, a la Stuntz.¹²²

One contribution of this Article is to divide proxy crimes into two concepts, one being conventional proxy crimes, and the other being insincere rules. These are different concepts, and some scholars seem to run them together. We pull them apart.

Proxy crimes are often criticized for penalizing conduct that is not blameworthy, like driving home sober with a stoppered bottle of wine. Under the conventional conception of proxy crimes, this criticism is inevitable. Conventional proxy crimes are deliberately over-inclusive. Under the insincere conception of proxy crimes, this criticism is not inevitable. If law penalizes blameless conduct, the insincere rule needs fine-tuning.

Entrapment, 96 J. CRIM. L. & CRIMINOLOGY 107, 156-64 (2005-2006); LARRY ALEXANDER & KIMBERLY KESSLER FERZAN, REFLECTIONS ON CRIME AND CULPABILITY: PROBLEMS AND PUZZLES 83-92 (2018).

¹¹⁹ McAdams, *supra* note 118, at 160-61.

¹²⁰ LARRY ALEXANDER & KIMBERLY KESSLER FERZAN, CRIME AND CULPABILITY: A THEORY OF CRIMINAL LAW 309 (2009).

¹²¹ McAdams, *supra* note 118, at 160-61.

¹²² Stuntz did not characterize his analysis as involving proxy crimes. In fact, he never used the word "proxy" in his article. Others understand his analysis in terms of proxies. *See* McAdams, *supra* note 73, at 524 ("In Stuntz's terms, selling drugs outside undercover operations is crime ABC, while selling drugs in undercover operations is DEF; we punish the otherwise harmless behavior DEF because we think it is correlated with ABC.... [T]he undercover offense usually does *not* prove an external offense beyond a reasonable doubt. Yet that turns out to be perfectly ordinary under the proxy approach.").

V. NORMATIVE IMPLICATIONS

Insincere evidence reduces proof costs, thereby increasing the state's ability to punish lawbreaking, thereby improving compliance with law. The strategy does not always work well. Remember those "good men" and credulous enforcers? But it can work very well. And because of this, we believe it could be common in practice.

Assuming it is used, is it laudable? Better compliance with law is a good thing, but the way insincere evidence achieves this end may raise some concerns. One involves prosecutorial discretion, which we addressed above.¹²³ This Part addresses other concerns. First, we consider whether the justifiability of insincere evidence depends on the source of proof costs. Second, we consider whether insincere evidence is too much of an affront to truth. Third, we consider whether cost reduction is a sufficient justification for introducing insincerity into legal standards. In every case, we argue that categorical rejection of insincere evidence is unwarranted.

A. Are There Better Ways to Reduce Costs?

We have assumed that the costs of proof spring from straightforward sources: officers have to testify, lawyers have to draft pleadings, and so on. To some extent these costs are inevitable. They can, however, be modulated by the state and other forces. This raises questions about exactly what kinds of proof costs the state should be permitted to offset with insincere rules.

To simplify, suppose there are two kinds of proof costs: unavoidable costs and avoidable costs. Putting officers on the stand and having lawyers draft critical documents are unavoidable costs. Making officers wait for hours at the courthouse and making lawyers draft redundant documents are avoidable costs. Both costs have the same effect: a gap arises between the law in books and the law in action. But the appropriate strategy for responding to those costs might differ. Insincere rules might be a justifiable response to unavoidable costs but not to avoidable costs. In the latter case, we might prefer the state to improve the enforcement process by shortening wait times and streamlining pleadings. It should not simply enact a stricter rule.

We are sympathetic to the intuition that the argument for insincerity grows as proof costs become unavoidable. The point should not, however, be taken too far.

We have assumed, up to this point, that lawmakers act as benevolent and informed shepherds motivated by the desire to improve efficiency and social order under the law. This assumption—which we make in common with nearly all of the law and economics literature on enforcement¹²⁴—largely obviates the source-of-cost issue. A benevolent lawmaker optimizes all proof costs, not just those reachable by an insincere rule. Put another way, we have assumed that lawmakers will only enact an insincere rule if the benefits outweigh the costs. The benefits, in this framework, will be low if the state can costlessly achieve the same results through streamlined pleadings and better docketing.

¹²³ See *supra* Part III.E.

¹²⁴ See, e.g., Polinsky & Shavell, *Economic Theory of Public Enforcement of Law*, *supra* note 19.

Conversely, if these reforms are themselves costly to implement, the argument against insincere rules becomes less compelling. The seemingly sharp distinction between avoidable and unavoidable costs can thus be seen as simply another part of the cost-benefit analysis surrounding the adoption of an insincere rule.

B. Is This an Affront to Truth?

Another potential concern is that the production of insincere evidence rests on the introduction of systematic falsehoods into law. The strategy reduces proof costs by substituting a disingenuous fact-finding exercise for the genuine questions around which trial would otherwise revolve. Rather than proving the fact of the sincere infraction (whether the defendant violated the speed limit by 1 mph), trial is made to focus on the insincere infraction (whether the defendant violated the speed limit by 11 mph). This is in more than a little tension with one of our core legal values: truth.

It is often said that trials are about nothing but the search for truth. This applies equally to the institution of trial¹²⁵ and the rules that govern it.¹²⁶ Courts expound this view no less than scholars. At its most extreme, the Supreme Court has said that “[t]he fundamental basis upon which all rules of evidence must rest—if they are to rest upon reason—is their adaptation to the successful development of the truth.”¹²⁷ In a similar vein, it has referred to the “very nature” of trial as “a search for truth.”¹²⁸

This may seem problematic for insincere rules. It is odd to think that a system so focused truth may be improved through the introduction of falsehoods. But the situation is not so black and white.

¹²⁵ See Charles R. Nesson, *Incentives to Spoliate Evidence in Civil Litigation: The Need for Vigorous Judicial Action*, 13 CARDOZO L. REV. 793, 793 (1991) (describing “the ideal of the trial as a search for truth”); Robert S. Summers, *Formal Legal Truth And Substantive Truth in Judicial Fact-finding—Their Justified Divergence in Some Particular Cases*, 18 L. & PHIL. 497, 497 (1998) (“Some natural scientists, some social scientists, some philosophers, and many others regularly assume that truth finding is the only important function of trial court procedures and the rules of evidence.”); DAVID W. PECK, *THE COMPLEMENT OF COURT AND COUNSEL* 9 (Association of the Bar of the City of New York 1954) (“The object of a lawsuit is to get at the truth and arrive at the right result. That is the sole objective of the judge, and counsel should never lose sight of that objective in thinking that the end purpose is to win for his side.”); Marvin E. Frankel, *Search for Truth: An Umpireal View*, 123 U. PA. L. REV. 1031, 1033 (1975) (“Trials occur because there are questions of fact. In principle, the paramount objective is the truth.”).

¹²⁶ See Chris William Sanchirico, *Evidence Tampering*, 53 DUKE L.J. 1215, 1220 (2004) (“Most analyses of evidence law take litigation’s prime object to be the discovery of truth about past events.”); William Twining, *Evidence and Legal Theory*, 47 MOD. L. REV. 261, 272 (1984) (“There is undoubtedly a dominant underlying theory of evidence in adjudication, in which the central notions are truth, reason and justice under the law...”); Jack B. Weinstein, *supra* note 65, at 246 (1966) (“In case of conflict, the court’s truth-finding function should receive primary emphasis except when a constitutional limitation requires subservience to some extrinsic public policy.”).

¹²⁷ *Funk v. United States*, 290 U.S. 371, 381 (1933).

¹²⁸ See *Nix v. Whiteside*, 475 U.S. 157, 166 (1986) (“Plainly, [the duty to advocate for one’s client] is limited to legitimate, lawful conduct compatible with the very nature of a trial as a search for truth.”) (emphasis added); *id.* at 174 (describing the lawyer as an “officer of the court and a key component of a system of justice, dedicated to a search for truth”) (emphasis added). *Accord* *Lloyd v. Am. Exp. Lines, Inc.*, 580 F.2d 1179 (3d Cir. 1978) (“Any factfinding process is ultimately a search for truth and justice, and legal precepts that govern the reception of evidence must always be interpreted in light of this.”).

First, even if trials were exclusively devoted to the search for truth, it would not necessarily follow that insincere evidence would be counter to this goal. The truth of what has happened is sought the same under either a sincere rule or an insincere rule. In the driving example, the state seeks to prove that a driver was going 56 mph (a truth in the world); all that differs between the sincere and insincere rule is legal standard to which this behavior is compared.

Second, there are reasons to question just how immutable truth-seeking really is. There are philosophic reasons to doubt whether trials ever uncover truth in an absolute sense of the term.¹²⁹ Litigants do not typically have duties, or even incentives, to develop fully truthful records at trial.¹³⁰ Reasonable arguments can be made that fact-finding is basically a functional concept: “legal truth,” as opposed to a substantive or platonic truth.¹³¹ This creates space for legal truths defined relative to insincere rules.

Third, the rules of evidence and procedure *already* include many examples of laws that frustrate truth-seeking. The most obvious is the requirement of proof beyond a reasonable doubt in criminal cases. This standard is manifestly not facilitating truth seeking.¹³² It is aimed at an important collateral objective: reducing the chances of wrongful conviction when the stakes are high.¹³³ The reasonable doubt standard is a prominent illustration, but it is hardly the only example.

¹²⁹ See generally Sean P. Sullivan, *Challenges for Comparative Fact-Finding*, INT’L J. OF EVID. & PROOF (forthcoming 2019) (questioning when, if ever, a proposition of fact could be proven true by any empirical method); JEROME FRANK, COURTS ON TRIAL: MYTH AND REALITY IN AMERICAN JUSTICE 80-102 (1950) (critiquing the notion that the adversarial process leads to the general discovery of truth).

¹³⁰ See Frank, *supra* note 129 (illustrating ways in which trial attorneys are incentivized to conceal, rather than develop truthful testimony); Frankel, *supra* note 125, at 1032 (“My theme, to be elaborated at some length, is that our adversary system rates truth too low among the values that institutions of justice are meant to serve.”). This is not to say that proposals to the effective have not been voiced. See Frankel, *supra* note 125, at 1052-59 (proposing reform efforts that would impose such duties). To date, however, there seems to be little movement toward such an overhaul of the adversarial system.

¹³¹ See Summers, *supra* note 125, at 498 (“I define as ‘formal legal truth’ whatever is found as fact by the legal fact-finder (judge or lay jurors or both), whether it accords with substantive truth or not.”); cf. Morgan 1956 at 128 (“The trial is a proceeding not for the discovery of truth as such, but for the establishment of a basis of fact for the adjustment of a dispute between litigants. Still it must never be forgotten that its prime objective is to have that basis as close an approximation to the truth as practicable.”).

¹³² Frankel, *supra* note 125, at 1037 (“[I]n the last analysis truth is not the only goal ... the question is not at all ‘guilt or innocence,’ but only whether guilt has been shown beyond a reasonable doubt”); Weinstein, *supra* note 65, at 236 (describing the requirement of proof beyond a reasonable doubt as a “conscious distortion[of] the fact-finding process”).

¹³³ See, e.g., *In re Winship*, 397 U.S. 358, 372 (1970) (Harlan, J., concurring) (“I view the requirement of proof beyond a reasonable doubt in a criminal case as bottomed on a fundamental value determination of our society that it is far worse to convict an innocent man than to let a guilty man go free.”).

Trials and evidence law serve many objectives,¹³⁴ and sometimes these outweigh truth-seeking.¹³⁵ One example is the exclusion of evidence in order to incentivize desired behavior. Thus, subsequent remedial measures are inadmissible to prove negligence in order to incentivize the rapid remedy of potentially dangerous conditions;¹³⁶ offers to pay medical expenses are inadmissible to show liability for an injury in order to encourage the early payment of these expenses.¹³⁷ Similar reasoning supports exclusionary rules concerning statements made in settlement talks and plea discussions.¹³⁸ All of these exclusions are bottomed on the notion that the benefits of incentivizing certain behaviors outweigh the truth-suppressing costs of these rules.

Privileges are to the same effect. The attorney-client privilege frustrates the discovery of truth in order to facilitate open communications by a person seeking legal counsel.¹³⁹ The doctor-patient privilege,¹⁴⁰ the priest-penitent privilege,¹⁴¹ the marital confidence privilege,¹⁴² and the spousal testimonial privilege,¹⁴³ all incentivize some form of behavior or communication that is deemed sufficiently beneficial to warrant distorting the discovery of truth.

Other privileges and exclusionary rules operate in reverse: manipulating the proof process to disincentivize socially undesirable behavior. Rule 37 of the Federal Rules of Civil Procedure gives judges flexibility to declare certain facts “true” or “false” as a way of penalizing and thus deterring failures to comply with discovery orders.¹⁴⁴ In criminal prosecutions, similar reasoning applies to the exclusion of evidence obtained without a

¹³⁴ Summers, *supra* note 125, at 499–500 (“[T]rial court procedures and the rules of evidence, though generally directed at substantive truth, are also designed to serve other ends that actually come into play in a particular case.”); Weinstein, *supra* note 65, at 241 (“Even were it theoretically possible to ascertain truth with a fair degree of certainty, it is doubtful whether the judicial system and rules of evidence would be designed to do so. Trials in our judicial system are intended to do more than merely determine what happened.”).

¹³⁵ Monroe H. Freedman, *Judge Frankel’s Search for Truth*, 123 U. PA. L. REV. 1060, 1065 (1975) (“[I]n a society that respects the dignity of the individual, truth-seeking cannot be an absolute value, but may be subordinated to other ends, although that subordination may sometimes result in the distortion of the truth.”); Weinstein, *supra* note 65, at 236 (“The law mandates many conscious distortions in the fact-finding process in order to gain some supposed social advantage.”).

¹³⁶ FED. R. EVID. 407.

¹³⁷ FED. R. EVID. 409.

¹³⁸ FED. R. EVID. 408 (concerning compromise negotiations); FED. R. EVID. 410 (concerning plea discussions).

¹³⁹ See generally 1 MCCORMICK ON EVIDENCE §§ 87–97 (Kenneth S. Broun ed., 7th ed. 2013).

¹⁴⁰ See generally *id.* at §§ 98–105.

¹⁴¹ See *Trammel v. United States*, 445 U.S. 40, 51 (1980) (“The priest-penitent privilege recognizes the human need to disclose to a spiritual counselor, in total and absolute confidence, what are believed to be flawed acts or thoughts and to receive priestly consolation and guidance in return.”).

¹⁴² See generally Mikah K. Story, *Twenty-First Century Pillow-Talk*, 58 SANTA CLARA L. REV. 275 (2006).

¹⁴³ See generally R. Michael Cassidy, *Reconsidering Spousal Privileges after Crawford*, 33 AM. J. CRIM. L. 339 (2006).

¹⁴⁴ See FED. R. CIV. P. 37(b) (“If a party ... fails to obey an order to provide or permit discovery ... the court where the action is pending may issue further just orders. They may include the following: (i) directing that the matters embraced in the order or other designated facts be taken as established for purposes of the action, as the prevailing party claims; (ii) prohibiting the disobedient party from supporting or opposing designated claims or defenses, or from introducing designated matters in evidence; ...”).

warrant, without a proper Miranda warning, or subject to other procedural defects.¹⁴⁵ These rules frustrates the discovery of truth in order to deter police misconduct.

The implications for insincere rules are transparent. To the extent that the behavioral benefits are sufficiently important, there is there is ample and accepted precedent for frustrating truth to achieve that end.

C. Is Cost Reduction Enough?

A response to the previous argument might be that while truth-seeking is sometimes frustrated to achieve important social ends, it isn't clear that cost reduction constitutes an important social end. Insincerity about the actual normative content of law, simply to economize on legal expenses, is unseemly.

Is it? Substantive law often aims to encourage or deter certain behaviors.¹⁴⁶ That effort is futile if the proof process gets in the way.¹⁴⁷ If the proof needed to establish a violation of law were always prohibitively costly, then the substantive law would never achieve its aim.¹⁴⁸ Even if proof costs were only sometimes prohibitively costly, it would make sense for lawmakers to try to reduce these frictions.¹⁴⁹ If the cost-reducing effects of insincere evidence improves compliance with law, then—far from unseemly—the use of insincerity serves the same laudatory ends as the substantive law itself.¹⁵⁰

¹⁴⁵ See, e.g., *Mapp v. Ohio*, 367 U.S. 643 (1961) (finding the need to exclude ill-gotten evidence incorporated against the states); *Escobedo v. Illinois*, 378 U.S. 478, 491 (1964) (evidence excluded when obtained by violation of constitutional right to representation); *Miranda v. Arizona*, 384 U.S. 436, 444 (1966) (“[T]he prosecution may not use statements, whether exculpatory or inculpatory, stemming from custodial interrogation of the defendant unless it demonstrates the use of procedural safeguards effective to secure the privilege against self-incrimination.”).

¹⁴⁶ See Sanchirico, *supra* note 126, at 1220 (“When it comes to analyses of the ‘substantive law,’ the idea that legal rules set incentives for everyday behavior—incentives to perform as contracted, to disclose accurate financial information, to take reasonable precaution, to adopt a safe product design, to eschew physical violence—occupies a central position.”).

¹⁴⁷ See Summers, *supra* note 125, at 497–98 (“[W]ithout findings of fact that generally accord with truth, the underlying policy goals or norms of the law could not be served. For example, a rule designed to secure safety on the highways by setting a speed limit of 70 mph and by punishing those who exceed it can not effectively serve its purpose if fact finders fail to find the true facts as to the speed of actual offenders and so let speeders go free of penalty.”).

¹⁴⁸ Weinstein, *supra* note 65, at 242 (“A system for determining issues of fact very accurately in all tribunals might permit a few adjudications a year of almost impeccable precision. But the resulting inability of the courts to have time to adjudicate the thousands of other pending litigations would mean that justice would be frustrated; people could flout the substantive law with relative impunity, knowing that the likelihood of being brought to trial was remote; and plaintiffs would be forced to avoid litigation because of its extraordinary expense and delay.”).

¹⁴⁹ See Chris William Sanchirico & George Triantis, *Evidentiary Arbitrage: The Fabrication of Evidence and the Verifiability of Contract Performance*, 24 J. L., ECON. & ORG. 72, 72 (2008) (“The design of legal obligations, whether by a public body such as a legislature or by private contract, should anticipate the enforcement process that induces compliance.”); see also *id.* at 73 (“Anticipating the judicial resolution of future disputes, contracting parties are likely to be interested in the likelihood or cost of judicial truth-finding only to the extent that the court’s ability to discern the truth efficiently improves contract incentives and the gains from trade.”).

¹⁵⁰ Weinstein comes close to making this exact point. Weinstein, *supra* note 65, at 243 (“Unless we are to assume that the substantive law is perverse or irrelevant to the public welfare, then its

In fact, this concern may be close to a strawman. Including costs considerations among the social concerns of the legal system is not a new proposition.¹⁵¹ Alongside the discovery of truth, the Federal Rules of Evidence list the elimination of “unjustifiable expense and delay” as one of their core objectives.¹⁵² The same phrase appears in the Federal Rules of Criminal Procedure.¹⁵³ The Federal Rules of Civil Procedure provide that they are to be construed “to secure the just, *speedy, and inexpensive* determination of every action and proceeding.”¹⁵⁴ Practicality has never compelled that cost considerations be ignored in promulgation of laws or the structure of the legal process.

And if proof costs are included in the balancing of social interests served by laws and the litigation system, then we are back to the same cost-benefit analysis. So long as the benefits of insincere evidence outweigh the costs, the frustration of truth is justifiable. An English court made essentially this same observation nearly 200 years ago:

The discovery and vindication and establishment of truth are main purposes certainly of the existence of Courts of Justice; still, [these objectives,] however valuable and important, cannot be usefully pursued without moderation ... Truth, like all other good things, may be loved unwisely—may be pursued too keenly—may cost too much.¹⁵⁵

VI. CONCLUSION

In this paper, we have analyzed the ability of insincere evidence to reduce proof costs. We have connected this effect to burdens of persuasion and other legal concepts. We have also considered various qualifications to the effectiveness and desirability of insincere evidence. Rather than summarizing that work, we conclude by sketching some open questions and pathways for future thought.

For one thing, insincere lawmaking complicates the notion of legislative intent.¹⁵⁶ To reduce proof costs through insincerity, legislators must drive a wedge between what they consider to be socially optimal behavior for society (their sincere intent) and what they publicly say to better effect outcomes (insincerity in the text of a statute and, possibly, in the legislative history that accompanies it). The idea that legislators would

enforcement is properly the primary aim of litigation; and the substantive law can be best enforced if litigation results in accurate determinations of facts made material by the applicable rule of law.”). Here, however, what matters is not the accurate determination of facts, but the *cost* of doing so, that determines the degree to which the litigation process will achieve the substantive objectives of law.

¹⁵¹ See Weinstein, *supra* note 65, at 241 (stating that other objectives of the evidence system include “economizing of resources, inspiring confidence, supporting independent social policies, permitting ease in prediction and application, adding to the efficiency of the entire legal system, and tranquilizing disputants.”).

¹⁵² FED. R. EVID. 102. See also Fed. R. Evid. 403 (including “undue delay” and “wasting time” among the balancing factors on which a judge may exclude an otherwise relevant item of evidence).

¹⁵³ FED. R. CRIM. PRO. 2 (“These rules are to be interpreted to provide for the just determination of every criminal proceeding ... and to eliminate unjustifiable expense and delay.”).

¹⁵⁴ FED. R. CIV. PRO. 1 (emphasis added).

¹⁵⁵ *Pearse v. Pearse*, 1 Deg. & Sm. 11, 28 (1846).

¹⁵⁶ Of course, legislative intent is already complicated. See, e.g., Kenneth A. Shepsle, *Congress is a “They,” not an “It”*: Legislative intent as oxymoron, 12 INT’L REV. LAW & ECON. 239 (1992).

bluster during floor debates is not shocking, but the idea that they might exaggerate their sincere preferences in the substance of law is less familiar. The more one thinks insincere lawmaking occurs in practice, the less compelling it becomes to equate legislative intent with traditional sources like statutory text and legislative history.

The same tensions are magnified when agencies need to justify exercises of their rulemaking authority. Under the Administrative Procedures Act, as part of the rulemaking process, an agency must produce “a concise general statement of [the] basis and purpose [of the adopted rule].”¹⁵⁷ While this statement need not be exhaustive, the expectation is that it will indicate the policy questions at issue as well as the agency’s reason for choosing its rule.¹⁵⁸ Judges often focus on this explanatory statement in deciding whether agency action should be set aside as arbitrary and capricious.¹⁵⁹ Though deferential, that review is not toothless.¹⁶⁰ Again, the use of insincerity complicates matters. Suppose, for example, that a regulatory agency faced the speed limit problem we have discussed. The need to explain itself would seem like an obstacle to using an insincere rule. Can the agency say to a court that it intentionally adopted a too-strict rule to improve enforcement? Maybe not. On the other hand, if the point of delegation to the agency was to achieve a given enforcement outcome, and if the agency better achieves that outcome with an insincere rule, then invalidation of the rule by the reviewing court would undermine the intent of the legislature in empowering the agency in the first place.

Before concluding, we should say something about the rule of law. That divine, contested concept lurks in the background of every page.¹⁶¹ One might wonder whether insincerity undermines the rule of law, especially its accessibility. Law, the argument goes, must be publicized and intelligible so that people can understand it.¹⁶² To the extent that insincere rules are adequately publicized, we do not see an obvious tension. But

¹⁵⁷ APA Section 553, codified as 5 U.S.C.A § 553 (West).

¹⁵⁸ See, e.g., *Indep. U.S. Tanker Owners Comm. v. Dole*, 809 F.2d 847, 852 (D.C. Cir. 1987) (“[S]uch a statement should indicate the major issues of policy that were raised in the proceedings and explain why the agency decided to respond to these issues as it did, particularly in light of the statutory objectives that the rule must serve.”).

¹⁵⁹ APA Section 706(2)(A), codified as 5 U.S.C.A. § 706 (West) (requiring a reviewing court to “hold unlawful and set aside agency action ... found to be ... arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law”).

¹⁶⁰ See generally *Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29 (1983) (endorsing fairly exacting *hard look* review of agency rulemaking); *Citizens to Pres. Overton Park, Inc. v. Volpe*, 401 U.S. 402 (1977) (similar).

¹⁶¹ See BRIAN Z. TAMANAHA, *ON THE RULE OF LAW: HISTORY, POLITICS, THEORY* 3-4 (Cambridge 2004) (noting widespread support for the “rule of law,” but also substantial ambiguity and even disagreement about what exactly this concept entails); Jeremy Waldron, *The Rule of Law*, *STANFORD ENCYCLOPEDIA OF PHILOSOPHY* (Fall 2016), <https://plato.stanford.edu/entries/rule-of-law/> (surveying disagreements about the desirability and definition of rule of law under the headings of “The Contestedness of the Rule of Law,” “Opposition to the Rule of Law,” and “Controversies about Application”).

¹⁶² See, e.g., Paul Gowder, *The Rule of Law and Equity*, 32 *L. & PHIL.* 565, 582-85 (2013) (discussing publicity of law as one uncontroversial aspect of rule of law concepts); Waldron, *supra* note 161, at § 2 ¶ 2 (same).

perhaps they cut against accessibility. Perhaps when deployed by judges, insincere rules could cut against norms of candor.¹⁶³ We do not work through these questions here.

We will, however, address a point about the *perception* of the rule of law. That perception, one might argue, would suffer if people discover the state to be deliberately misrepresenting its desired behavior. We are not sure this is right. Perception of the rule of law probably depends on both the law in books and the law in action. If people perceive the law in books to be too harsh, perceptions may suffer. But if people perceive the law in action to be about right, perceptions may improve. Insincere rules have both effects. How the scales of perception balance is yet unknown.

VII. APPENDIX

The main text of this paper provides an intuitive explanation of our theory of insincere evidence. Here, we extend that theory with a modest formalization. The only unusual aspect of this model is its reliance on likelihood concepts instead of posterior probabilities. One of us has elaborated elsewhere on the superiority of likelihood analysis as a model of legal persuasion.¹⁶⁴ Among other things, our reliance on likelihoods allows this model to avoid the always awkward problem of specifying the prior distribution of violations in the population.¹⁶⁵

Suppose the state seeks to regulate some privately beneficial but socially costly activity. Let $a \in \mathbb{R}$ be the level of activity a given individual chooses to undertake. All else equal, this person prefers higher levels of a . Let $\tau \in \mathbb{R}$ be the legal limit that state lawmakers have adopted for this activity. Activity levels $a > \tau$ are thus illegal and subject to punishment by the state.

Suppose that state agents can perfectly observe a person's choice of a , but cannot credibly disclose this information to the tribunal. Perhaps the agents cannot credibly disclose their knowledge of a because the fact-finder correctly predicts that they would exaggerate the extent of the observed violation if given the chance. Instead, the state is limited to proving a violation of law via objective evidence—a noisy signal of the actual activity level. For sake of clarity, assume that the combined weight of the objective evidence is distributed according to a normal distribution, centered on the true activity level, and dispersed according to an exogenous noise parameter, $\sigma > 0$, such that the evidence draw in a given case is $e \sim N(a, \sigma^2)$.¹⁶⁶ Agents of the state do not draw from the evidence distribution until after the costs of trial have already been borne.¹⁶⁷

¹⁶³ Cf. Micah Schwartzman, *Judicial Sincerity*, 94 VA. L. REV. 987 (2008) (arguing for the importance of sincerity and candor in judicial opinions).

¹⁶⁴ Sullivan, *supra* note 59.

¹⁶⁵ Cf. Davis, *supra* note 65 (noting the complexities that population distributions, prior probabilities, have in a probability-based model of the trial process).

¹⁶⁶ The following generalizes in an obvious way to other evidence distributions.

¹⁶⁷ This setup is an easy way to think about the situation, but it is not the only way to understand the model. Alternatively, the regulator could be understood as having no direct ability to observe a , but instead having access to an unbiased signal of a . Subject to some complications around the possible communication of asymmetric information by the individual, results in this alternative specification of the

Violations of law are established by producing enough evidence to convince the fact finder that $a > \tau$ by the applicable burden of persuasion. While it might seem natural to model this persuasion process in terms of the posterior distribution $f(a|e)$, this would require us to assume a prior distribution $f(a)$, which we do not do. Instead, we model the proof process via likelihood reasoning. Intuitively, the likelihood approach involves an iterative comparison of pairwise likelihood-ratio tests in order to determine whether $a > \tau$ has been established. The end result is that proof of $a > \tau$ under any given burden of persuasion requires an evidence draw, e , such that the following condition is met:

$$\frac{\sup_{a' > \tau} \phi(e|a', \sigma^2)}{\sup_{a' \leq \tau} \phi(e|a', \sigma^2)} > k,$$

where $\phi(e|a', \sigma^2)$ is the probability density of the normal distribution, evaluated at the observed evidence draw, under the assumed centrality parameter, a' . The k term in this likelihood ratio is a numeric representation of the applicable burden of persuasion. Sullivan has argued that $k = 1$ corresponds to preponderance of the evidence; that something like $1 < k < 10$ represents clear-and-convincing evidence; and that something like $k > 10$ represents proof beyond a reasonable doubt.¹⁶⁸

In the case of evidence draws distributed according to the normal distribution, it can be shown that the above general condition for proof of $a > \tau$ by any arbitrary burden of persuasion requires an evidence draw, e , such that

$$e > \tau + \sqrt{2\sigma^2 \log k},$$

with all variables as defined above.¹⁶⁹ For a given choice of legal limit, τ , and for given levels of the burden of persuasion, k , and noise parameter, σ , the probability of successfully proving a violation of law for activity level a is thus

$$f(a, \tau, k) = 1 - \Phi(\tau + \sqrt{2\sigma^2 \log k} | a, \sigma^2),$$

for $\Phi(\cdot | a, \sigma^2)$ the normal cumulative distribution function centered on the true activity level, a , and with noise parameter, σ .

model seem much the same as in the above specification. Another approach would be to interpret the state as having access to all available evidence of the regulated party's activity level, but subject to uncertainty about how the fact-finder will weigh this evidence at trial. Again, this approach would seem to result in largely the same model as the above specification.

¹⁶⁸ Sullivan, *supra* note 59, at 26-37.

¹⁶⁹ Here is an informal proof. Since $k \geq 1$ in every interesting application, a necessary condition for the state to win at trial is $e > \tau$. For the preponderance of the evidence standard, this condition is both necessary and sufficient. For higher burdens of persuasion, assuming $e > \tau$, the maximum likelihood estimator of a is simply e , and the constrained maximum likelihood estimator on the assumption that $a' \leq \tau$ is simply τ . As such, sufficient evidence of violation has been produced whenever $\phi(e|e, \sigma^2) > \phi(e|\tau, \sigma^2) \times k$. Simplifying and solving this expression for e leads to the stated condition.

With this definition of the probability of $f(a, \tau, k)$, we can operationalize the remainder of the model. While we would ideally focus on the state's optimal choice of legal limit and enforcement strategy, the assumptions needed to do so are more than we wish to defend at this point.¹⁷⁰ To obtain tractable results without limiting our approach, we characterize how the choice of τ affects the *necessary condition* for non-strategic enforcement of laws.

A necessary condition for the rational enforcement of any law is that the expected marginal cost of attempting to prove a violation of law should not outweigh the expected marginal benefit. Formalizing this necessary condition requires only modest assumptions. Specifically, we assume the existence of a known functional form for the cost of trying to prove a violation of law: $c(a, \tau) > 0$. And we assume a known functional form for the benefit of successfully proving a violation of law by any given choice of activity level. This is a reduced-form expression for whatever benefit society gets from the (unmodeled) marginal deterrence arising from successful punishment of a given level of violation: $b(a, \tau)$. Combining these terms with the probability of successful proof at trial, the necessary condition for the state to attempt to prove a violation of law is

$$b(a, \tau) \times f(a, \tau, k) > c(a, \tau).$$

As we explain in the paper, this necessary condition is more conveniently illustrated with the probability term on the cost side of the inequality:

$$b(a, \tau) > \frac{c(a, \tau)}{f(a, \tau, k)}.$$

¹⁷⁰ For example, these assumptions would include precise specification of the welfare implications of different choices of τ ; specification of individuals' exact preferences over all possible combinations of activity level, penalty, and probability of incurring a penalty, including any variation in this preference, in risk tolerance, or in strategic type; and specification of the game-theoretic equilibrium strategies individuals adopt in deciding when to violate laws, and that both individuals and the state adopt in deciding when to litigate disputed violations of law.