

UNENFORCED LAWS: A FIELD EXPERIMENT

ABSTRACT

Unenforced laws are controversial. Some admonish unenforced laws for violating the separation of powers and undermining public respect for the law. Others herald the symbolic and expressive value of unenforced laws.

In this Article we examine and provide evidence of the self-enforcing potential of unenforced laws that assign passive rights. We conducted a novel experiment in a bar that operated a separate room where smoking was sometimes prohibited and allowed at other times. Because the smoking prohibition was never enforced in the separate room, non-smokers were at all times subjected to second-hand smoke there: the only difference was that sometimes smoking violated the smoking ban, while at other times it was permitted. As we manipulated the applicable smoking regime, an interesting finding emerged: although non-smokers in the room did not mind the second-hand-smoke, they reacted adversely to smoking only when a prohibition was in effect. Even though smoke concentrations were lower when smoking was prohibited, non-smoking customers left the bar earlier, consumed less and left smaller tips when the unenforced smoking ban was in effect compared to when smoking was allowed.

Our findings illustrate the subtle but significant shifts in social dynamics that occur in the presence of unenforced laws. We show that, even in the absence of expressive effects, passive rights create a sense of ownership that induces a preference for compliance. In this process, citizens adversely experience infringements of rights regardless of the consequences of the infringing behavior itself. The findings challenge the conventional wisdom that effective laws require that there is wide public support for the policy objectives or, alternatively, that laws must be backed by public deterrence and enforcement.

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I. INTRODUCTION

Not all laws are enforced equally.¹ Some laws remain unenforced because the executive branch purposely turns a blind eye to legal violations. Such acts of executive enforcement discretion are commonly observed in the federal criminal justice system and the administrative state.² During the 2009-2012 term the Obama Administration announced policies of abstaining from investigation and prosecution of certain federal marijuana crimes,³ postponed enforcement of several key provisions of the Affordable Care Act,⁴ and suspended enforcement of removal statutes against certain undocumented immigrants.⁵ At other times, under-enforcement is fully anticipated.

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¹ Historical and current examples of laws that receive varying and sometimes very limited public enforcement attention include Prohibition-era alcohol regulation, gun control laws, seat belt laws, distracted driving laws, compulsory voting laws, certain anti-dumping laws, etc.

² *Infra* Part II.A.

³ Memorandum from James M. Cole, Deputy Att’y Gen., to U.S. Att’ys, Guidance Regarding Marijuana Enforcement 3 (Aug. 29, 2013), available at <http://perma.cc/X35Q-YJYS>; Memorandum from James M. Cole, Deputy Att’y Gen., to all U.S. Att’ys, Guidance Regarding the Ogden Memo in Jurisdictions Seeking to Authorize Marijuana for Medical Use 1–2 (June 29, 2011), available at <http://perma.cc/M5A9-6A8C>; Memorandum from David W. Ogden, Deputy Att’y Gen., to Selected U.S. Att’ys, Investigations and Prosecutions in States Authorizing the Medical Use of Marijuana 1–2 (Oct. 19, 2009), available at <http://perma.cc/JEV5-E7AQ>.

⁴ Letter from Gary Cohen, Dir., Ctr. for Consumer Info. & Ins. Oversight, Dep’t of Health & Human Servs., to State Ins. Comm’rs (Nov. 14, 2013), available at <http://perma.cc/T3VW-66DZ> (indicating that health plans “will not be considered to be out of compliance” with certain laws under specified circumstances); I.R.S. Notice 2013-45, 2013-31 I.R.B. 116 (July 29, 2013) (providing relief from penalties for employers who fail to provide insurance as required by statute).

⁵ Memorandum from Sec’y Janet Napolitano, U.S. Dep’t of Homeland Sec., to David Aguilar, Acting Comm’r, U.S. Customs & Border Protection, et al., Exercising Prosecutorial

International treaties, for instance, sometimes include social and economic right (right to education, rest and leisure)⁶ without providing mechanisms to ensure actual implementation or public enforcement. Similarly, some laws, such as public smoking bans, littering laws or speeding regulations, are simply too difficult or expensive to enforce comprehensively.

Unenforced laws are highly controversial.⁷ Scholars disagree, for instance, whether the Executive branch's enforcement discretion is a legitimate policy instrument or instead violates the constitutional Take Care Clause,⁸ which provides that the President "shall take Care that the Laws be faithfully executed".⁹ Additionally, it is also argued that unenforced laws are problematic because they undermine the rule of law.¹⁰ When individuals observe law breaking without repercussion, the perceived lawlessness may erode the authority of and public respect for legal rules more generally.¹¹ For that reason, some question whether it is wise to enact laws without ensuring the budgetary and institutional means to ensure actual implementation.¹²

Discretion with Respect to Individuals Who Came to the United States as Children (June 15, 2012), available at <http://perma.cc/dh5s-3nxx>; u.s. dep't of homeland sec., dhs/uscs/pia- 045, privacy impact assessment for the deferred action for childhood arrivals (daca) 2–3 (2012), available at <http://perma.cc/u75h-mzp4>.

⁶ See, for instance, the UNIVERSAL DECLARATION OF HUMAN RIGHTS AND THE INTERNATIONAL COVENANT OF ECONOMIC, SOCIAL AND CULTURAL RIGHTS (ICESCR).

⁷ The Obama administration's policies of nonenforcement has come under severe scrutiny, prompting demands for impeachment among political opponents. See, e.g., Megan McArdle, *Will Obama Ever Enforce His Health Law?*, Bloomberg News, March 6, 2014; Andrew C. McCarthy, *Obama's Rule by Decree*, National Review, July 13, 2013; Peter Baker, *For Obama, Tricky Balancing Act in Enforcing Defense of Marriage Act*, NYTIMES, March 28, 2013; Charlie Savage, *V.A. to Provide Spousal Benefits to Gays, Administration Says*, NYTIMES, September 4, 2013 (Attorney General Holder wrote "The Unique Circumstances Presented Here Warrant Nonenforcement").

⁸ U.S. CONST. Art. II, § 3. See *infra* Part II.A.

⁹ See, e.g., Zachary S. Price, *Enforcement Discretion and Executive Duty*, 67(3) VAND. L. REV. 671 (2013) (finding in favor of limited and defeasible constitutional authority to engage in nonenforcement); Robert J. Delahunty & John C. Yoo, *Dream On: The Obama Administration's Nonenforcement of Immigration Laws, the DREAM Act, and the Take Care Clause*, 91 TEXAS L. REV. 781 (2013) (arguing that the Constitution's Take Care Clause preempts a broadly construed presidential nonenforcement power).

¹⁰ *Infra*__.

¹¹ This popular intuition is captured most famously in the words of Justice Brandeis in *Olmstead v. U.S.*, 277 U.S. 438, 485 (1928). ("Our government teaches the whole people by its example. If the government becomes the lawbreaker, it breeds contempt for law; it invites every man to become a law unto himself; it invites anarchy.")

¹² In the context of Prohibition era legislation, Albert Einstein famously observed how "nothing is more destructive of respect for the government and the law of the land than passing

Others claim that unenforced laws can serve valuable symbolic or expressive purposes by setting goals that society can aspire to and may one day achieve.¹³ For instance, when international treaties declare universal living standards,¹⁴ such legal rights are “aspirational”, embodying ideals that society hopes to implement some day.¹⁵ In this regard, expressive theories of the law suggest that individuals may come to internalize the values expressed in unenforced laws and regulations because such laws influence expectations about prevailing norms in society.¹⁶

Although a topic of feverous debate in the legal academy and beyond, there is little to no empirical evidence available on the actual effects of unenforced laws.¹⁷ We lack insight into many fundamental questions on this issue. What

laws which cannot be enforced." ALBERT EINSTEIN , MY FIRST IMPRESSION OF THE U.S.A. 17 (1921).

¹³ One of the main arguments in favor of aspirational rights is that they are often a starting point. Philip Harvev argues that throughout history there have been several laws that may not have been immediately enforceable, but had an aspirational effect. When a new law is created, enforceability is not merely an on or off switch. Philip Harvev, *Aspirational Law*, 52 BUFF. L. REV. 701, 712 (2004). *See, e.g.*, Sonia B. Starr, Rethinking "Effective Remedies": Remedial Deterrence in International Courts, 83 N.Y.U.L. REV. 693, 762 (2008); Deena R. Hurwitz, *Lawvering for Justice and the Inevitability of International Human Rights Clinics*, 28 YALE J. INT'L L. 505, 512 (2003) (Human rights law has the “intrinsic aim of making the aspirational a reality.”).

¹⁴ *See*, for instance, the UNIVERSAL DECLARATION OF HUMAN RIGHTS AND THE INTERNATIONAL COVENANT OF ECONOMIC, SOCIAL AND CULTURAL RIGHTS (ICESCR).

¹⁵ Some laws are recognized as being “aspirational, embodying ideals that do not command complete and immediate enforcement.” Richard H. Fallon, Jr., *Judicially Manageable Standards and Constitutional Meaning*, 119 HARV. L. REV. 1274, 1324-25 (2006). *See* in the context of international law, Michael Kagan, *Destructive Ambiguity: Enemy Nationals and the Legal Enabling of Ethnic Conflict in the Middle East*, 38 COLUM. HUMAN RIGHTS L. REV. 263, 318 (2007) (“Aspirational law “has the positive attribute of trying to make the world a better place, but it is hard to implement, because many countries... must be induced to change their behavior.”).

¹⁶ When law creates a focal point by expressing values that might tip norms to a new equilibrium, this process may create a social norm or internalize a normative value. *See* GARY S. BECKER, ACCOUNTING FOR TASTES (1996); Robert D. Cooter, *Expressive Law and Economics*, 27 J. LEGAL STUD. 585, 585 (1998). The idea of law as focal point that coordinates social expectations among citizens is explored further in Richard H. McAdams, *A Focal Point Theory of Expressive Law*, 86 VA. L. REV. 1649 (2000).

¹⁷ The most notable exceptions consist of research in development countries. Ryan Goodman, *Beyond the Enforcement Principle: Sodomy Laws, Social Norms, and Social Panoptics*, 89(3) CAL. L. REV. 643 (2001) (finding on the basis of interviews that unenforced sodomy laws in South Africa created a climate of public and social surveillance); Utpal Bhattacharya and Hazem Daouk, *When No Law is Better Than A Good Law*, 13(4) REVIEW OF FINANCE 577 (2009) (finding that unenforced insider trading law increases the costs of equity in developing countries).

happens if a law is passed but remains unenforced? Do unenforced laws erode the rule of law? Is an enforced law the same as having no law at all?

Using data gathered in a novel empirical study, we provide new insights into the effect of unenforced laws. This Article offers evidence on the manner in which unenforced laws may fundamentally alter the social dynamics in public settings. Our findings show that, by endowing rights, even unenforced laws induce a sense of entitlement, causing right-holders to react adversely to violations of their rights. Interestingly, such endowments-driven effects can occur even when right holders are indifferent to the impact of the prohibited behavior or when they do not internalize the underlying values or policy objectives of the law, as suggested by expressive theories of the law.

Our findings are based on a field experiment involving an unenforced smoking ban. We conducted our study in a bar that operated a separate room where smoking was sometimes allowed and sometimes prohibited, although the smoking prohibition was never enforced.¹⁸ Because non-smokers were aware that the smoking ban was not enforced in the second room,¹⁹ the decision to sit in that room (unless accompanied by smokers) suggests that these non-smokers are indifferent to second-hand smoke.²⁰ This control provides a unique opportunity to examine if and how the unenforced smoking ban influenced non-smokers and, specifically, enables us to distinguish between reactions to violations of the ban, on the one hand, and reactions to the second-hand smoke, on the other hand.²¹ We manipulated the application of the smoking ban in the second room in order to compare the behavior of non-smokers in this room when smoking was allowed and when it was prohibited.

An intriguing finding emerged: non-smokers who decided to sit in the smoking room and who were not inconvenienced by the second-hand smoke,²²

¹⁸ The bar instituted this arrangement in order to appease smokers at all time (ban is never enforced) while reducing the overall level of smoke in the room with the ban at times when the front room was more crowded and non-smokers needed to move there. For our research purposes, we manipulated the application of the ban during the study. *See infra*.

¹⁹ Exit interviews confirmed that the non-smokers (1) were aware that the bar did not enforce the smoking ban and (2) were not bothered by second hand smoke. *Infra*__.

²⁰ We conducted several tests to confirm this assumption. We excluded non-smokers who were in the company of smokers, we excluded times when the front room was crowded, we measured smoke concentrations, and conducted exit-interviews. We performed several additional tests to confirm that non-smokers in the second room were not inconvenienced by the second hand smoke. *See, infra*, III.E. Additional Controls, at __.

²¹ As is the case with natural field experiments, we analyzed behavior as we observed it in the actual setting of the bar, while preventing any type of interference with the natural behavior of the participants. *See generally*__.

²² This observation is based also on a comparison of the behavior of non-smokers as the levels of smoke in the room varied. Additionally, we asked non-smokers about their attitudes

reacted adversely to smoking but only when it was prohibited: they left the bar earlier, consumed less, and tipped less generously when the smoking ban was in place. Conversely, when smoking was allowed and smoke concentrations in the room were *higher*, non-smoking customers remained in the second room longer, consumed more, and left bigger tips as compared to when the smoking ban was in effect but remained unenforced.²³ The data indicates that when non-smokers had been granted the entitlement to be free from second-hand smoke, they experienced smoking as an affront *regardless* of their own attitudes towards public smoking and even if they were not inconvenienced by second-hand smoke. Being assigned the legal right to be free from smoke induced an endowment effect: individual right holders valued the legal right to be free from smoke *only* when the right was assigned and subsequently violated.²⁴ In this process, the harm experienced due to rule breaking was an artifact of the law-making process – distinct from the any physical costs imposed by the behavior itself. The smoking ban also affected the behavior of smokers. Fewer smokers lit up and violators left the bar earlier and consumed less when smoking was prohibited.

The findings illustrate the subtle but potentially significant shifts in social dynamics that occur in the presence of unforced laws that assign rights – even if only in name. In the context of our study, the unenforced smoking ban substantially altered the experience of all guests at the bar: smoking bothered even the most smoke-tolerant patrons, while smokers seemed more uncomfortable as well.

This Article makes several contributions to the literature. We show that unenforced laws can be a source of conflict in social settings. First, the results show how rule breaking may aggrieve individuals even when they are indifferent to the behavior itself *but for* the violation of the right. If violations of individual rights are perceived as taking away a legal entitlement from the right holder, the negative experiences of right-holders are an artifact of the law making process – the very same behavior would have remained unnoticed but for the express allocation of the passive right. Second, our study reveals that possessing an unenforceable passive right can be worse than having no right at all. Once allocated a legal entitlement, individuals are upset by rule breaking even if they are indifferent to the impact of the prohibited behavior or the underlying policy objectives of the unenforced law. Third, our findings

about second-smoke in the exit-interviews. The exit-interviews also confirm that non-smokers had no regard for the law's goal to protect non-smokers against second hand smoke – *See infra*.

²³ *See infra*, Part IV.

²⁴ *See infra*, __.

highlight a self-fulfilling potential of unenforced laws, since the desire to preserve a legal entitlement in and of itself might induce social enforcement.

The Article proceeds as follows. In the next Part we describe the causes of and controversy surrounding unenforced laws. Part III describes the methodology of our study. Part IV reports our main results. In Part V we explore possible interpretations. In Part VI we discuss policy implications. Part VII concludes.

II. UNENFORCED LAWS

A. *Political Nonenforcement*

During the current presidential term the executive branch adopted guidelines to abstain from investigating and prosecuting certain federal marijuana offenses in states where possession of the drug is legal, to delay enforcement of certain provisions of the Affordable Care Act (“ACA”), announced a policy of declining to seek removal of groups of undocumented immigrants who entered the United States as young children, and declined to enforce certain provision of the No Child Left Behind Act.²⁵

Executive nonenforcement is not uncommon. There are various different sources of nonenforcement. First, the ordinary efficient administration of the law necessitates discretionary decisions on behalf of enforcers. Mechanical enforcement is not realistic in most instances – the social and economic realities are constantly evolving and legislation cannot anticipate all possible circumstances that arise in the wake of acts of Congress. As such, nonenforcement is simply one of the discretionary options as the executive branch adapts enforcement to a complex, changing environment.²⁶

Second, budget constraints and limited resources for law enforcement necessitate that the agencies delegated with the administration of enforcement set enforcement priorities. In this regard, Congress contributes to under-enforcement when it passes strict laws but underfunds the administrative agencies responsible for those rules.²⁷

Third, Presidents sometimes refuse to enforce or defend acts of Congress that they maintain are unconstitutional.²⁸ This includes executive nonenforcement decisions for laws that are outdated, out of touch with more

²⁵ *Supra*, ___, notes 3, 4, 5.

²⁶ *Infra* __.

²⁷ Classic statement to this effect is Justice Brandeis in *Myers v. United States*, 272 U.S. 52, 291-92 (1926) (Brandeis, J., dissenting) (“Obviously the President cannot secure full execution of the laws, if Congress denies to him adequate means of doing so. Full execution may be defeated because Congress declines to create offices indispensable for that purpose.”)

²⁸ JOHN YOO, *CRISIS AND COMMAND: THE HISTORY OF EXECUTIVE POWER FROM GEORGE WASHINGTON TO GEORGE W. BUSH* 362 (2009). Sometimes enforcement may conflict with other duties under higher constitutional laws. Delahunty & Yoo and provide the example where immigration law enforcement might conflict with the President’s war conduct management when it requires deportation of war time combatants as illegal alien, instead of detention and trial by military authorities. Robert J. Delahunty & John C. Yoo, *Dream On: The Obama Administration’s Nonenforcement of Immigration Laws, the DREAM Act, and the Take Care Clause*, 91 TEXAS L. REV. 781, 785 (2013).

recent and conflicting legislation, or laws that Congress has not yet repealed despite having enacted more recent legislation conflict with these outdated laws.²⁹

For these reasons, scholars note that nonenforcement fits the logic of the separation of powers.³⁰ Courts generally acknowledge nonenforcement as a legitimate power of the executive, as evidenced by the scarcity of judicial review of agency nonenforcement decisions.³¹

Despite these widely acknowledged rationales, nonenforcement policies generate a great deal of controversy. The antagonistic reactions to President Obama's administration's various nonenforcement guidelines illustrate the contentious nature of unenforced laws.³²³³

The Constitutional Take Care Clause imposes on the President a duty to enforce constitutionally valid acts of Congress, regardless the administration's view of its wisdom or policy.³⁴ Although nonenforcement can be justified or excused for the reasons stated above, there are obviously situations where

²⁹ *Id.* 792 (“Separating the power to execute the law from the power to enact it creates a space in which liberty can be protected by discretionary executive decisions not to implement laws that are vicious, oppressive, or disproportionately harsh”) The authors provide a few examples including that of obsolete laws against sale of contraceptives).

³⁰ See, e.g., William J. Stuntz, *The Pathological Politics of Criminal Law*, 100 MICH. L. REV. 505, 514, 546-47 (2001) (arguing that Congress relies on executive nonenforcement as an antidote to overregulation and overcriminalization); Cass R. Sunstein, *Problems with Rules*, 83 CALIF. L. REV. 953, 1004 (1995) (separate legislative and executive powers require more open ended rules that enable executive discretion).

³¹ *Lincoln v. Vigil*, 508 U.S. 182 (1993) (declining judicial review of for agency nonenforcement decisions under the Administrative Procedure Act); *Massachusetts v. EPA* 549 U.S. 497, 527 (2007) (same); *Arizona v. United States*, 132 S. Ct. 2492 (2012) (affirming enforcement discretion by immigration officials).

³² Simon Lazarus, *Delaying Parts of Obamacare: “Blatantly Illegal” or Routine Adjustment?*, THE ATLANTIC, July 17, 2013; Michael R. Crittenden & Colleen McCain Nelson, *House Votes to Authorize Boehner to Sue Obama*, THE WALL STREET JOURNAL, July 30, 2014; Andrew C. McCarthy, *Obama’s Rule by Decree*, NATIONAL REVIEW ONLINE, July 13, 2013; Congressional Joint Resolution #45, IV 113 H. CON. RES. 45 (2013) (Congress indicates that President Barack Obama has violated Section 3 of article II of the Constitution by refusing to enforce the employer mandate provisions of the Patient Protection and Affordable Care Act); Eric Posner, *Obama is Legally Allowed to Enforce – or Not Enforce the Law*, NEW REPUBLIC, August 3, 2014.

³³ Daniel T. Deacon, Note, *Deregulation Through Nonenforcement*, 85 N.Y.U. L. REV. 795, 796 (2010) (accusing President George W. Bush of pursuing an agenda of “deregulation through nonenforcement.”)

³⁴ See, e.g., WILLIAM RAWLE, A VIEW OF THE CONSTITUTION OF THE UNITED STATES OF AMERICA 147-50 (2d ed. 1829) (“Every individual is bound to obey the law, however objectionable it may appear to him: the executive power is bound not only to obey, but to execute it.”).

nonenforcement conflicts with the President's duty to enforce law. For instance, arbitrary nonenforcement might violate the duty to enforce existing statutes "faithfully".³⁵ Especially polemic are instances of executive decision where nonenforcement reflects major substantive or policy differences with Congress. This raises the question to what extent executive discretion might enable presidents to effectively amend statutory policy for the duration of the elected term, providing "an authority to remake the law on the ground without asking Congress to revise the law on the books".³⁶ Skeptics warn that unlimited executive enforcement might render ineffective substantial areas of statutory law,³⁷ and the separation of powers in a democratic state.³⁸ Judicial review is plausible in such instances.³⁹

B. Pragmatic Nonenforcement

Nonenforcement also follows from the practical reality that resource constraints make it all but impossible to effectively enforce legal rights in all instances. In fact, some laws are passed with an understanding that enforcement will be limited. A body of literature in political justice, constitutional case law, international law, and human rights recognizes that laws often embody rights that are a mere starting point along a drawn out process that can take many years. For instance, in a seminal article justifying the Supreme Court's ruling in *Brown v. Board of Education*, Alexander Bickel advanced the idea that "constitutional language can embody aspirations that do not always require immediate enforcement, yet invite "reasonable future

³⁵ See U.S. CONST. art. II, § 3, cl. 5 (stating that the president "shall take [c]are that the [l]aws be faithfully executed"); Peter L. Strauss, *The President and Choices Not to Enforce*, 63 LAW & CONTEMP. PROBS. 107, 110, 116-17 (2000) (advocating stringent approach to the executive duty to enforce acts of Congress); Saikrishna Prakash, *The Essential Meaning of Executive Power*, 2003 U. ILL. L. REV. 701 (same).

³⁶ Price, *supra* ___, 674.

³⁷ Arguing against the use of executive nonenforcement as a "second, post-enactment veto" Delahunty and Yoo argue that the executive branch must provide adequate excuse or justification for nonenforcement decisions. Delahunty & Yoo, *supra* note ___, at 795.

³⁸ Critics of the modern administrative state fault the high degree of discretion and its conflict with separation of powers principles. See, e.g., Richard A. Epstein, *Why the Modern Administrative State Is Inconsistent with the Rule of Law*, 3 N.Y.U. J.L. & Liberty 491, 495 (2008); Gary Lawson, *The Rise and Rise of the Administrative State*, 107 HARV. L. REV. 1231, 1233, 1248-49 (1994).

³⁹ *Heckler v. Chaney*, 470 U.S. 821, 833 n.4 (1985) (judicial review might indeed be available in "a situation where it could justifiably be found that the agency has 'consciously and expressly adopted a general policy' that is so extreme as to amount to an abdication of its statutory responsibilities.>").

advances.”⁴⁰ In this context, legal rights are considered “aspirational”, embodying ideals that society is not (yet) able to rigorously implement.⁴¹ Such unenforced, aspirational rights are valuable because they set goals that society can strive towards and may one day achieve.⁴² Along these lines, expressive theories of the law suggest that even without public enforcement, laws can be effective since individuals may come to internalize the values expressed in laws and regulations over time or because laws may act as a focal point and can adjust expectations about prevailing norms in society.⁴³ Accordingly, individuals will comply voluntarily with laws and regulations that they consider to be fair and just.⁴⁴

Such viewpoints stand in stark contrast to the instrumental perspective on compliance. In the standard law and economics approach, individuals comply with legal rules either because they benefit from compliance, or conversely, because they fear the consequences of rule-breaking. Because individuals weigh off the expected benefits and costs of their actions, laws can serve as a deterrent by increasing the costs of unlawful behavior or by rewarding lawful conduct.⁴⁵ The economic analysis of legal enforcement has generated a rich,

⁴⁰ Alexander M. Bickel, *The Original Understanding and the Segregation Decision*, 69 HARV. L. REV. 1, 61 (1955).

⁴¹ Some laws are recognized as being “aspirational, embodying ideals that do not command complete and immediate enforcement.” Richard H. Fallon, Jr., *Judicially Manageable Standards and Constitutional Meaning*, 119 HARV. L. REV. 1274, 1324-25 (2006). See in the context of international law, Michael Kagan, *Destructive Ambiguity: Enemy Nationals and the Legal Enabling of Ethnic Conflict in the Middle East*, 38 COLUM. HUMAN RIGHTS L. REV. 263, 318 (2007) (“Aspirational law “has the positive attribute of trying to make the world a better place, but it is hard to implement, because many countries... must be induced to change their behavior.”).

⁴² Philip Harvey argues that throughout history there have been several laws that may not have been immediately enforceable, but had an aspirational effect. When a new law is created, enforceability is not merely an on or off switch. Philip Harvey, *Aspirational Law*, 52 BUFF. L. REV. 701, 712 (2004). See, e.g., Sonia B. Starr, Rethinking “Effective Remedies”: Remedial Deterrence in International Courts, 83 N.Y.U.L. REV. 693, 762 (2008); Deena R. Hurwitz, *Lawvering for Justice and the Inevitability of International Human Rights Clinics*, 28 YALE J. INT’L L. 505, 512 (2003) (Human rights law has the “intrinsic aim of making the aspirational a reality.”).

⁴³ When law creates a focal point by expressing values that might tip norms to a new equilibrium, this process may create a social norm or internalize a normative value. See GARY S. BECKER, ACCOUNTING FOR TASTES (1996); Robert D. Cooter, *Expressive Law and Economics*, 27 J. LEGAL STUD. 585, 585 (1998). The idea of law as focal point that coordinates social expectations among citizens is explored further in Richard H. McAdams, *A Focal Point Theory of Expressive Law*, 86 VA. L. REV. 1649 (2000).

⁴⁴ On the role of laws in shaping community norms and influencing behavior, see Paul Robinson, *Why Does the Criminal Law Care What the Layperson Thinks is Just? Coercive Versus Normative Crime Control*, 86 VA. L. REV. 1839 (2000).

⁴⁵ See generally Gary S. Becker, *Crime and Punishment: An Economic Approach*, 76 J. POL. ECON. 169 (1968); Isaac Ehrlich, *The Deterrent Effect of Criminal Law Enforcement*, 1 J.

imposing body of literature.⁴⁶ This includes valuable insights on diverse topics such as, the impact of the probability of sanctioning on deterrence,⁴⁷ the magnitude and form of sanctions,⁴⁸ marginal deterrence,⁴⁹ plea bargaining,⁵⁰ repeat offenses⁵¹ and incapacitation.⁵²

As the precise modalities and effectiveness of deterrence is currently undergoing rigorous testing by a growing body of empirical legal scholarship,⁵³ a number of notable limitations to the instrumental-based approach to public enforcement are widely acknowledged. Scholars in fields including law, sociology, psychology, economics, political science and ethics emphasize that legal obedience is driven also by broad, non-instrumental considerations steeped in notions of legitimacy, consent and voluntary cooperation. In this perspective, motivations to comply with legal commands may be rooted in

LEG. STUD. 259 (1972); George J. Stigler, *The Optimum Enforcement of Laws*, 78 J. POL. ECON. 526 (1970) (constructing a theory of rational law enforcement). RICHARD A. POSNER, *ECONOMIC ANALYSIS OF LAW* (5th ed. 1998) (explaining fundamental concepts of the economic approach to law). Additionally, expanding literature at looks to non-legal factors and other aspects that influence deterrence. See, e.g., Daniel S. Nagin & Greg Pogarsky, *Integrating Celerity, Impulsivity, and Extralegal Sanction Threats Into a Model of General Deterrence: Theory and Evidence*, 39 (4) CRIMINOLOGY 865 (2001).

⁴⁶ For an overview, see POLINSKY & SHAVELL, *ENCYCLOPEDIA OF LAW & ECONOMICS*.

⁴⁷ Mitchell Polinsky and Steven Shavell, *The Optimal Tradeoff between the Probability and Magnitude of Fines*, 69 AM. ECON. REV. 880-891 (1979) (presenting classic model).

⁴⁸ CARR-HILL, R.A. AND STERN, N.H. (1979), *CRIME, THE POLICE AND CRIMINAL STATISTICS: AN ANALYSIS OF OFFICIAL STATISTICS FOR ENGLAND AND WALES USING ECONOMETRIC METHODS* 280-309 (1979); Mitchell Polinsky and Steven Shavell, *The Optimal Tradeoff between the Probability and Magnitude of Fines*, 69 AM. ECON. REV. 880-891 (1979) (presenting classic model); Mitchell Polinsky and Steven Shavell, *A Note on Optimal Fines When Wealth Varies Among Individuals*, 81 AM. ECON. REV. 618 (1991) (providing formal model on the deterrent effect of fines relative to wealth).

⁴⁹ Dilip Mookherjee and Ivan Png, *Marginal Deterrence in Enforcement of Law*, 102 J. POL. ECON. 1039 (1994) .

⁵⁰ Jennifer Reinganum, *Plea Bargaining and Prosecutorial Discretion*, 78 AMERICAN ECONOMIC REVIEW 713 (1988).

⁵¹ Mitchell Polinsky & Daniel Rubinfeld, *A Model of Optimal Fines for Repeat Offenders*, 46 J. PUB. ECON. 291 (1991) (formal model policy adjustment for repeat offences).

⁵² Mitchell Polinsky and Steven Shavell, *The Optimal Use of Fines and Imprisonment*, 24 J. PUB. ECON. 89 (1984) (exploring social trade-offs between fine and prison time); Steven Levitt, *Private Information as an Explanation for the Use of Jail Sentences Instead of Fines*, 17 INTERNATIONAL REVIEW OF LAW AND ECONOMICS 179 (1997) (presenting empirical approaches to the trade-off between financial punishment and incarceration).

⁵³ For an overview, see generally, e.g., Thomas J. Miles and Stephen Levitt, *Economic Analyses of Deterrence: Empirical*, in *THE NEW PALGRAVE DICTIONARY OF ECONOMICS*, 2nd ed. (Steven Durlauf & Lawrence Blume, eds.) (2008); Justin McCrary, *Dynamic Perspectives on Crime*, in *HANDBOOK OF THE ECONOMICS OF CRIME*, Chapter 4 (2010).

ethical judgments and reciprocity rather than a desire to avoid punishments or gain rewards. Social psychologists provide evidence that legal obedience is “morality-based” and/or “legitimacy-based.”⁵⁴ A body of research suggests that legitimacy and social norms influence behavior as much, or even more than formal sanctions do.⁵⁵ As documented in the fields of psychology and economics, compliance is determined by whether people perceive the objectives of the law as just or fair.⁵⁶ In this regard, the perceived fairness of a law rests on a substantive evaluation of the goals and outcomes pursued by the legislators.⁵⁷ Other scholars emphasize the impact of the perceived fairness of legal procedures on legal compliance.⁵⁸ Individuals are more willing accept actions

⁵⁴ For instance, in the context of tax compliance, there exists an extensive literature on the assumption that “social motivations rather than mere selfishness ... affect taxpaying behavior, such as ethical concerns and social norms, perceptions of fairness and legitimacy.” Michael Wenzel, *Motivation or Rationalization? Causal Relations Between Ethics, Norms and Tax Compliance*, 26 J. ECON. PSYCHOL. 491, 492 (2005) (citing TOM R. TYLER, WHY PEOPLE OBEY THE LAW (1990)); see also John S. Carroll, *Compliance with the Law: A Decision-Making Approach to Taxpaying*, 11 LAW & HUM. BEHAV. 319, 319-35 (1987) (applying decision-making models to tax law); Simon James, et al., *Developing a Tax Compliance Strategy for Revenue Services*, 55 BULL. FOR INT'L FISCAL DOCUMENTATION 158-64 (2001).

⁵⁵ In a number of empirical studies it has been observed that ethical norms and beliefs are a stronger determinant of compliance than deterrence. See, e.g. James Alm, Gary McClelland, & William Schulze, *Changing the Social Norm of Tax Compliance by Voting*, 52 KYKLOS, 141 (1999); de Juan Lasheras, Rafaela Mayo, *Voluntary Tax Compliant Behavior of Spanish Income Tax Payers*, 49 PUBLIC FIN. 90 (1994); Michael Wenzel, *The Social Side of Sanctions: Personal and Social Norms as Moderators of Deterrence*, 28 LAW & HUMAN BEH. 547 (2004); Michael Wenzel, *An Analysis of Norm Processes in Tax Compliance*, 25 J. OF ECON. PSYCHOLOGY 213 (2004). See in this context a broader literature on the influence of social norms on ordering that includes, e.g., Lisa Bernstein, *Merchant Law in a Merchant Court: Rethinking the Code's Search for Immanent Business Norms*, 144 U. PA. L. REV. 1765 (1996) (discussing the supremacy of norms over laws in business communities); Robert A. Kagan, Neil Gunnigham, & Dorothy Thornton, *Explaining Corporate Environmental Performance: How Does Regulation Matter?*, 37 LAW & SOC'Y REV. 51 (2003) (describing different compliance styles of managers); Eric A. Posner, *The Regulation of Groups: The Influence of Legal and Nonlegal Sanctions on Collective Action*, 63 U. CHI. L. REV. 133 (1996) (discussing norms as a source of groups' enforcement mechanisms); ROBERT ELLICKSON, ORDER WITHOUT LAW (1995) (describing prevailing role of informal norms in close knit communities).

⁵⁶ For an overview, see Leandra Lederman, *The Interplay Between Norms and Enforcement in Tax Compliance*, 64 OHIO STATE L.J. 1453 (2003).

⁵⁷ TYLER, WHY PEOPLE OBEY THE LAW, *supra* ___, at 273 (classic treatment on compliance). Similarly, Paul Robinson has argued that some features of criminal law can be explained by the objective to align with “laypersons’ shared intuitions of justice”. Paul Robinson, *Why Does the Criminal Law Care What the Layperson Thinks is Just? Coercive Versus Normative Crime Control*, 86 VA. L. REV. 1839 (2000) (arguing that this serves the instrumental purpose moral authority and determining its ability to shape community norms and to influence people’s conduct through normative purposes”).

⁵⁸ J. THIBAUT AND L. WALKER, PROCEDURAL JUSTICE (1975); E. Barrett-Howard and Tom Tyler, T. R., *Procedural Justice As A Criterion In Allocation Decisions*, 50 JOURNAL OF PERSONALITY AND SOCIAL PSYCHOLOGY 296 (1986) (providing experimental evidence).

by public authorities if they have been treated with dignity and respect, if they feel that their rights have been respected, if decision-makers are perceived to be trustworthy and neutral, etc.⁵⁹

If, as expressive theories of the law posit,⁶⁰ laws can influence moral intuitions of right and wrong, perhaps unenforced laws can likewise sway behavior? On the other hand, if a law remains unenforced, this may undermine the moral authority of the law and limit the influence of the law on behavior. Our experiment addresses these important questions.

III. AN EMPIRICAL STUDY OF UNENFORCED LAWS

We collected empirical evidence on enforced laws in a novel study involving a public smoking ban. Public smoking bans provide a framework that is conducive to examining the social dynamics of unenforced laws.

Smoking bans are difficult to rigorously enforce. The fines imposed for violating smoking bans are rather modest, and the risk of apprehension is negligible in most circumstances⁶¹ – public health inspections at bars rarely occur and fines are seldom imposed.⁶² Public smoking bans have generated controversy in many countries, yet attained reasonably high rates of compliance – even in countries such as Italy, Turkey, and France, where public smoking was commonplace. Interestingly, smoking bans, although unenforced and often controversial, attained high compliance in most countries.

⁵⁹ Tom Tyler, *What is Procedural Justice? Criteria Used By Citizens to assess the Fairness of Legal Procedures*, 22 LAW & SOCIETY REVIEW 103 (1988) (presenting survey evidence); Tom Tyler, *The Psychology Of Procedural Justice: A Test Of The Group Value Model*, 57 JOURNAL OF PERSONALITY AND SOCIAL PSYCHOLOGY 830 (1989) (same).

⁶⁰ When law creates a focal point by expressing values that might tip norms to a new equilibrium, this process may create a social norm or internalize a normative value. See GARY S. BECKER, ACCOUNTING FOR TASTES (1996); Robert D. Cooter, *Expressive Law and Economics*, 27 J. LEGAL STUD. 585, at 585 (1998). The idea of law as focal point that coordinates expectations among citizens is explored further in Richard H. McAdams, *A Focal Point Theory of Expressive Law*, 86 VA. L. REV. 1649 (2000).

⁶¹ In the U.K., for instance, environmental health officer but not police officers can issue a fine ranging from 30 pounds to 200 pounds. *Smoking Ban: Initial Survey Reveals High Level Of Compliance And Public Support*, ACTION ON SMOKING AND HEALTH, August 4, 2007. In France, individual violators and bars potentially face 75 and 150 Euro fines, respectively. See *France to Ban Smoking in Public*, BBC NEWS, Oct. 8, 2006.

⁶² In the United Kingdom, only 45 written warnings were issued in the first two weeks, and only one fixed penalty notice was issued. Even when taking into account the deterrent effect on bar owners who might risk a suspension of their license, the lack of resistance among customers is remarkable. *Id.*

A. Background

We conducted our study in a bar that operates two separate rooms: smoking is prohibited at all time in the front room, while in the other room smoking is sometimes permitted but prohibited at other times. The bar explicitly designates the status of smoking in the second room with a sign on the door.⁶³ When the non-smoking room in the front of the bar gets crowded, management seeks to reduce the amount of smoke in the second room by explicitly designating it as a non-smoking area. For the purpose of our study, we manipulated the periods when smoking was permitted and prohibited in the second room, alternating each day between smoking being allowed and prohibited.⁶⁴ The applicable policy in the second room was announced to customers with a sign posted on the door of the room. This announcement also included a disclaimer that the applicable smoking policy could change throughout the day, and that customers were welcome to switch to the smoke-free room at any time.

Additionally, and crucial to our research purposes, although the bar enforces the smoking ban in the first room, it never enforces the smoking prohibition in the second room.⁶⁵ The bar tolerates smoking in the second room at all times, even when the room is designated as a non-smoking section. As a result, non-smokers in the second room are at all times subject to second-hand smoke there: the only difference is that sometimes smoking occurs in violation of the smoking ban.⁶⁶ The bar created this hybrid arrangement in order to regulate the amount of smoking in the second room (lower at times when

⁶³ A door separates both rooms. Customers can easily move from one room to the other. Since the smoking room is located in the back of the bar, non-smoking customers do not have to walk through the smoking area when selecting a table to sit at. The smoking area is located in the back of the building and opens to a small garden and street. Trees in the front and back of the bar block pedestrians' view of the bar. Both rooms are the same size and are furnished in the same manner. The front room is furnished with nine tables that each seat up to four people while the non-smoking room has two additional, smaller tables.

⁶⁴ In more technical terms, the arrangement of the rooms and the alternating smoking policy are the two treatments in our study. We term the two conditions *SA* (smoking allowed) and *SF* (smoking forbidden). Specifically, the applicable policy alternated as follows: first weekend: Friday=*SF*; 1. Saturday=*SA*; 1. Sunday=*SF*; Second weekend: Friday=*SA*; 2. Saturday=*SF*; 2. Sunday=*SA*.

⁶⁵ Although the bar in our study bar does comply with the law by enforcing the general smoking ban in the first room, it might be fined by the public authorities for not enforcing the smoking ban in the second room whenever that room is not explicitly designated as a smoking section. Inspections by public authorities are rare to non-existent, however.

⁶⁶ Throughout the study we controlled for the amount of smoke by measuring smoke concentration levels with a hidden device that we installed in the room.

smoking is not expressly permitted),⁶⁷ while enabling fervent smokers to light up at all times while in the second room (even when smoking is forbidden).

Since all patrons were aware that the smoking ban was not enforced in the second room,⁶⁸ when individual non-smokers (who are not in the company of smokers) decides to sit there, this suggests these patrons are rather indifferent to second-hand smoke and public smoking bans.⁶⁹ This control provides a unique opportunity to examine if and how the unenforced smoking ban influenced non-smokers and, specifically, enables us to distinguish between reactions to violations of the ban, on the one hand, and reactions to the second-hand smoke, on the other hand.⁷⁰ While non-smokers in the front room can be expected to object to smoking because they dislike second-hand smoke, non-smokers in the second room do not mind second-hand smoke.⁷¹ Non-smokers in the second room had the opportunity to sit in the smoke free front room, yet decided to sit in a room where smoking is always tolerated. By measuring the smoke concentration in the room at all times, we can verify whether these non-smokers are sensitive to second-hand smoke. At the same time, by manipulating the applicable smoking rule (posted on the door) we can distinguish non-smokers' reactions to smoking when it is allowed and prohibited.

B. Physical Setting

Patrons disobeyed the smoking prohibition in the second room on a regular basis. A number of factors may have contributed to the violations: ashtrays remained on the table at all times, and none of the staff members made any effort to enforce the prohibition. When a visitor to the second room inquired about the smoking ban, staff members stated that the law forbids smoking when the room is designated as a smoke-free area but that the bar does not

⁶⁷ The bar management assumes that an unenforced ban will reduce smoking in the second room and therefore provide extra seating for non-smokers who do not mind second hand smoke too much. As we will discuss in more detail below, the overall smoking level is indeed lower when the ban is in place.

⁶⁸ Exit interviews confirmed that the non-smokers (1) were aware that the bar did not enforce the smoking ban and (2) were not bothered by second hand smoke. *Infra*__.

⁶⁹ In addition to smoke concentration measurements and the exit-interviews, we performed several additional tests that confirm that non-smokers in the second room did not mind second hand smoke. *See, infra*, III.E. *Additional Controls*, at __.

⁷⁰ As is the case with natural field experiments, we analyzed behavior as we observed it in the actual setting of the bar, while preventing any type of interference with the natural behavior of the participants. *See generally*__.

⁷¹ We measured the amount of smoke in the room and non-smokers actually stayed in the bar longer when smoking was allowed and consequently smoke concentrations were higher. *See, infra*, III.E. *Additional Controls*, at __.

enforce the policy.⁷² The same two waiters worked in the second room during the entire six-day period. The waiters were aware that an experiment was being conducted. In order to preserve the natural setting and avoid an experimenter demand effect, we did not disclose the purpose of the experiment or reveal the content of the questionnaire to the waiters until the experiment was completed. The cooperation of the waiters was necessary in order to obtain information about the tip amounts. The owners of the bar endorsed the study because they were interested in finding out how the alternating smoking regime impacted their business.

C. Methodology

Our study adopts a field research methodology. Customers at the bar were not aware that they participated in a study until they were presented with exit surveys at the very end. This approach provides two important advantages over other forms of empirical research. First, our observations are based on the actual, everyday behavior of individuals. Second, by examining the behavior of actual visitors to the bar, our findings rely on the behavior of a broader sample of the general population than empirical research conducted in laboratories with undergraduate students.

We observed the behavior of non-smokers in the second room on the basis of three variables: the time non-smokers spent at the bar, their consumption, and tipping. We surmise that discomfort with smoking or violations of the ban might reduce a patron's stay at the bar, his or her consumption and also reduce tips left for the staff of the bar.

We collected data from a total of 627 visitors. To ensure independent observations, however, we treated each group of visitors as one observation, regardless of the number of individuals in the group. In doing so, we excluded the socially determined aspects of the duration of a patron's stay at the bar.⁷³ Additionally, when a group of visitors included a smoker, we excluded the entire group from our observations. We obtained 376 observations overall. During times when smoking was prohibited we collected of 76 observations. This included 48 groups of at least 2 individuals (137 total number of guests).⁷⁴

⁷² As we describe in more detail below, the amount of smoke did decrease somewhat when the prohibition was in place. At all times, we measured the smoke concentration in the room using a special device. *Infra*__.

⁷³ We assume that patrons might influence one another in deciding when to leave the bar.

⁷⁴ In addition, 22 customers (including 5 groups) did not observe anyone smoking during the time they spent in the café (total N for SF no rule violation=31). We analyzed this group separately using the data as a control group. Especially during evenings usually at least one person was smoking in the second room.

When smoking was allowed, we collected 81 observations (53 were groups; 161 total number of guests).

We also conducted brief exit-interviews with patrons. Upon their exit from the bar, the staff directed patrons to a separate staff room where we conducted the exit-interviews.⁷⁵ At the conclusion of the experiment we matched the results of the exit interviews to the behavioral data that we had collected inside the bar. The results enabled us to exclude data on patrons that became aware that a study was being conducted in the bar.⁷⁶ The exit interviews also allowed us to distinguish non-smokers from smokers who decided not to smoke (“latent smokers”). We fully safeguarded the anonymity of all visitors. Customers did not reveal their identity during the interviews and the bar only accepted cash payment. We obtained the permission to match customers’ responses to their receipts. Only a few patrons refused to complete the interview; either because they had privacy concerns or because they did not have time. The waiting staff provided us with the receipts and the tip amounts for each receipt.⁷⁷

The exit interviews enabled us to discriminate between non-smokers and “latent” smokers who decided not to smoke while visiting the bar. When smoking was allowed we collected 51 observations (including 21 groups; in total 81 guests) of these latent smokers. When smoking was prohibited, we gathered 59 observations including 18 groups (a total of 83 latent smokers). In order to be able to compare with other non-smokers, we also observed the behavior of non-smokers in the front room.⁷⁸ We collected 87 observations of non-smokers in the first room including 37 groups (totaling 144 guests).⁷⁹

⁷⁶ The exit-interviews confirm that patrons did not have any suspicion that a study was taking place. Given that patrons often were studying or did other work while at the bar, even taking notes was inconspicuous in these circumstances.

⁷⁷ Privacy was ensured because (1) names were not indicated on the receipts since the bar had a cash-only policy; (2) the procedure made it impossible to match faces and departure times of visitors.

⁷⁸ This enables us to control for omitted variables. *Infra*__.

⁷⁹ We observed the behavior of patrons for three full days for each of our treatments. The bar opened in the morning at 10 A.M. and closed at about 12:30 A.M. In total we collected 37.5 hours of data for each treatment. The weekend also provided the opportunity to include a wider variety of customers in the sample. During weekdays the bar is frequented mainly by students, while during the weekend professionals also visit the bar. In order to hold the conditions as similar as possible, the experiment was completed in consecutive weeks. Weather conditions were similar on both weekends: cold (approximately 38 degrees Fahrenheit) and dry.

D. Dependent Variables

We observed the behavior of both non-smokers and smokers by measuring the duration of a customer’s visit to the bar,⁸⁰ the amount of consumption,⁸¹ and tip amounts.⁸²

Additionally, we distinguished between periods when someone was smoking in the room and when no one smoked during a patron’s stay in the room. Since smoke occurred in the second room at all times,⁸³ the comparison of non-smokers who observed violations of the ban to those of non-smokers who did not, allows us to further isolate non-smokers’ responses to rule violations as distinguished from reactions to the second-hand smoke.

E. Additional Controls

We assume that non-smokers who decide to sit in the second room are relatively indifferent to second-hand smoke. All patrons were aware that the ban was never enforced in the second room⁸⁴ and there was always ample space in the front room for patrons most sensitive to second-hand smoke. Several aspects of our experimental design support the observation that the non-smokers in the second room were not concerned with second-hand smoke.

First, if customers are sensitive to second-hand smoke they would likely remain in the front room where smoking was strictly prohibited at all times.⁸⁵ The sign on the door of the second room alerted customers that the smoking policy might change at any time. Also, if the second-hand smoke irritated a customer, he or she could move to the smoke-free front room. Moreover, non-smokers were fully aware that smoking occurred in the second room even when the bar prohibited it. Also, upon entering the second room, a non-smoker might

⁸⁰ Time was analyzed in minutes. We measured how much patrons spent on drinks as well as the tip amounts (in cents).

⁸¹ This includes the amount patrons spent on drinks and other consumption at the bar.

⁸² We assume that the duration of stay and consumption are correlated to some degree. Of course, if customers feel less comfortable at the bar they might also buy fewer drinks within the shorter period.

⁸³ To control for varying some concentrations at different times, we measured smoke concentrations with a particle counting device. *Infra*__.

⁸⁴ The responses to the questionnaire at the end of the experiment confirmed that customers had noticed the sign, were aware what regime was in place when they were in the room, and that patrons expected smoking in the second room. Moreover, at all times patrons could observe that smoking occurred (ashtrays, smoking, etc.).

⁸⁵ Although we had planned to exclude from observation situations where there was no suitable seating space in one of the two rooms, there was always enough space available in each of the rooms.

observe someone smoking, notice the ashtrays, or sense the amount of smoke in the air.⁸⁶ From the exit-surveys it appears that almost all customers anticipated that smoking would take place in the room even when the ban was in effect. Only two customers indicated that they expected the room to be smoke-free when they entered.⁸⁷

Second, we measured the level of smoke in the room at all times to verify whether non-smokers were sensitive to second-hand smoke.⁸⁸ If the non-smokers in the second room were sensitive to second-hand smoke they would likely leave the bar earlier when the smoke concentrations are higher and, conversely, they would stay in the room longer when there is less smoke. We examined the effect of smoke by measuring the intensity of smoke particles in the air with an electronic particle counter hidden in the room. We calculated the means of 5040 measurements that we obtained when smoking was allowed and prohibited. The data indicates that the behavior of non-smokers did not correlate with the smoke concentration in the room.⁸⁹ To the contrary, as discussed in more detail below, non-smokers stayed in the bar longer when smoking was allowed – although smoke concentrations were higher at those times.⁹⁰

Third, we collected information on the sensitivity of non-smokers to second-hand smoke in our exit interviews.⁹¹ Non-smokers indicated that (a) they were

⁸⁶ Our measurements of the smoke concentration indicated that, except in the first hour in the morning, the room always contained smoke particles.

⁸⁷ Over the course of the entire experiment, we observed only two other customers who decided to move over to the non-smoking area once they observed others lighting up. Because the reactions of these customers might have been influenced by the surprise that the smoking ban was not enforced, we removed these two observations from the data set. All other customers indicated that they expected smoking in the second room.

⁸⁸ In other words, we measured smoke concentrations in order to control for the objective impact of the smoke on the behavior of non-smokers in the second room.

⁸⁹ The level of smoke does not correlate with the behavior of customers (the dependent variables of *time*, *spending* and *tip*) in either of the two treatments (SA and SF).

⁹⁰ Comparing the treatments with a t-test, the results indicate that the mean concentrations of smoke exposure do not differ across both treatments. On the basis of a two sided t-test with $p = 0.000$, we can reject the null hypothesis that the smoke concentration differed significantly across treatments. The averages are as follows: 40230.741 for the SA treatment and 32117.110 in the SF treatments. Given that the mean concentration of particles was smaller when smoking was forbidden, it is highly unlikely that our treatment effect can be attributed to different exposure to smoke.

⁹¹ The responses were indicated on a Likert scale ranging from 1= not at all to 7 = very strong. With this question we verify the assumption that customers self-select rooms according to their desire to be free of second-hand smoke. Because customers always have the opportunity to sit in the main room where smoking was never tolerated, we assumed that sitting in the second room reveals a strong tolerance of second-hand smoke. Second, we also

not sensitive to the smoke itself; and (b) their reaction to smoke was not affected by the smoking regime (allowed or prohibited).⁹² Overall, non-smokers in the second room reported that the smoke did not bother them.⁹³

Fourth, we compared the behavior of customers who did not observe violations of the ban in the second room to that of the non-smokers in the smoke-free front room. This comparison enabled us to further verify whether the exposure to second-hand smoke itself had any impact on the behavior of the customers.⁹⁴ Neither group of non-smokers experienced any violations of the smoking ban, yet were subject to different levels of smoke. Non-smokers in the front room were not exposed to any second-hand smoke. Non-smokers in the second room were always subject to second-hand smoke—even if no one smoked in their presence, residual smoke remained present in the room at all times. Statistical tests of the difference of the means of the three dependent variables (*time*, *spending* and *tip*) confirmed that there was no significant difference in the behavior of the non-smokers who occupied both rooms.⁹⁵ This suggests that exposure to second-hand smoke itself did not influence the behavior of non-smokers in our study.

Finally, we considered whether differences between the two rooms might have distorted the self-selection of smoke tolerant non-smokers in the second room. If, for instance, the rooms had very different interiors, some customers might prefer to sit in the second room despite the inconvenience of the second-

wanted to ensure that the preferences for a smoke-free environment are not differently distributed between treatments in the second room.

⁹² This finding suggests that the mere possession of a right to a smoke-free environment does not make customers more sensitive to the second-hand smoke. As we discuss in more detail below, customers seem to disentangle the violation of the right from the impact of the smoke itself. A t-test for the difference of the means is not significant ($p=0.85$). Because averages cancel out individual differences we included the individual data of the subjective smoke tolerance as a control variable in our regressions and will report the results below. Also, to confirm the reliability of our results we compared the responses of smokers with those of the non-smokers in the smoking room under the SF and the SA treatments. We calculated an average for the two treatments and compared the means. We expected that if our measure is reliable smokers should reveal a higher tolerance for smoke than non-smokers. The results confirmed that smokers (1.62) were more tolerant of second-hand smoke than non-smokers (1.88).

⁹³ An average of 1.88 (1 = not at all; 7 = very strong) obtained for customers when smoking was prohibited and 1.78 when smoking was allowed. Moreover, as we expected, non-smokers in the main room were more sensitive to second-hand smoke (mean score of 2.62). Non-smokers who opted to sit in the second room were less sensitive to smoke (1.88). The difference is significant (t-test, $p=0.00$).

⁹⁴ In more technical terms, we test the subgroups that did not face a rule violation in the smoking room and the customers in the non-smoking room for equivalence.

⁹⁵ Specifically, comparing time across treatments, we cannot reject that the means do not differ (t-test, $p=0.66$). For *spending* we cannot reject H_0 with $p=0.45$. For *tip* we find $p=0.72$.

hand smoke there. Both rooms in the bar are very similar in furnishing and lighting. Also, according to the exit survey, the non-smoker’s selection of the room was not affected by aesthetic considerations.

IV. RESULTS: ADVERSE REACTIONS TO VIOLATIONS

This Part presents the main results. First, we compare the behavior of non-smokers in the second room when smoking was forbidden (*i.e.*, when they had been assigned a right to be free from smoke) to the behavior of non-smokers when smoking was allowed (*i.e.*, when they had not been assigned an entitlement to be free of smoke).⁹⁶ Second, to examine the reactions to violations of the smoking ban, we compare the behavior of non-smokers who witnessed at least one other patron light up to that of non-smokers who did not observe any smoking ban infractions. Third, we analyze the behavior of smokers.

A. Non-Smokers in the Second Room

(a) *The duration of the visit.* We examined whether non-smokers left the bar earlier when the smoking ban was being violated.⁹⁷ If the violations, rather than the second-hand smoke, caused earlier departures, non-smokers would likely spend less time in the bar when the prohibition was in place, as compared to periods when smoking was allowed.

The data in Table below indicates that non-smokers remained in the room significantly longer when smoking was allowed than when it was prohibited.⁹⁸

⁹⁶ As explained above, the natural setting of the bar (management alternating the smoking regime in the second room) manipulates the existence of the right.

⁹⁷ We measured from the time when a customer got seated until they left the room. To ensure robust results, we also measured for every eight guest, the time between a meal order and its serving. This check controls for whether customers had to wait systematically longer in one condition than in the other; for instance, because the bar was busier on a particular day.

⁹⁸ In the first column on the left side of the table we provide the three dependent variables (time, spending and tip). The following two columns report the absolute values for the treatments we compared. The next column reports the results of a two-sided t-test comparing the means of the two treatments. The column after that report the regression results of all variables we used in the regression. The first variable indicates the treatment, reports the controls (sensitivity to smoke, the smoke concentration, how strongly patrons agree with the statement that patrons should be protected from second hand smoke, whether patrons had an aesthetic preference for either room). Finally we control for time, when spending is the dependent variable and for time and spending, if tip is our dependent variable. The last column reports the R^2 for the regression.

Non-smokers spent 66 minutes on average in the room when smoking was allowed, compared to an average of only 54 minutes in the bar when smoking was banned.⁹⁹

Non-Smokers	SA (N=81)	SF (N=76)	t-test (two-sided)	Linear Regression					R ²
	Treatment	Smoke Tolerance	Smoke	Legal Protection	Aesthetic Preference	Time	Spending		
Time (min)	66.09	53.89	0.000***	0.000***	0.692			0.253	
Spending (€)	10.15	6.79	0.000***	0.066*	0.343	0.000***		0.322	
Tip (€)	1.12	0.66	0.030**	0.195	0.798	0.821	0.047**	0.094	

Table 1: Effect of Violations of Non-Smokers’ Rights (Smoking Forbidden vs. Smoking Allowed)

Various statistical tests confirm that infractions of the smoking ban caused non-smokers to depart earlier.¹⁰⁰ Additionally, our analysis of the controls confirms that the earlier departures of non-smokers were not due to the impact of the smoke: measurements for smoke tolerance, the concentration of smoke, and aesthetic preferences about the room are clearly insignificant in the regressions.

⁹⁹ From the R² we learn that our smoking manipulation explains 25.3% of the variance in the time patrons spent at the bar. In other words, for all possible reasons that patrons might have had to leave, smoking accounts for 25.3% of the variance.

¹⁰⁰ A two-sided Mann-Whitney test comparing means of time spent between the SA & SF treatments yields a significant result (p)p. The two-tailed t-test result is strongly significant allowing us to reject the null hypothesis that the means do not differ. In addition we calculated a linear regression with *time* as the dependent variable and *treatment* as the independent variable. Since *treatment* “smoking forbidden vs. allowed” is dichotomous we code it as a dummy variable. A dummy variable is a variable that takes the values 0 or 1 to indicate the absence or presence of some categorical effect that may be expected to shift the outcome. We also included the controls for subjective smoke *tolerance*, the objective concentration of smoke measured with the TSI 3007, and the perceived importance of the legal protection of non-smokers as individual level data for each observation (customer) into the regression. See Table 1 for the exact values. We conducted a two-sample t-test to compare the means of spending between the SA & SF treatments. The two-sided result is strongly significant such that we can reject that the means of both treatments do not differ significantly. See Table 1, above.

(b) *Consumption.* We assumed that non-smokers would consume less if they felt uncomfortable when their rights are violated.

Whenever a customer was part of a (non-smoking) group, we calculated the average spending and included this value into our analysis as one observation. If a guest paid for others, we calculated the spending per capita and considered this value as one individual observation.¹⁰¹

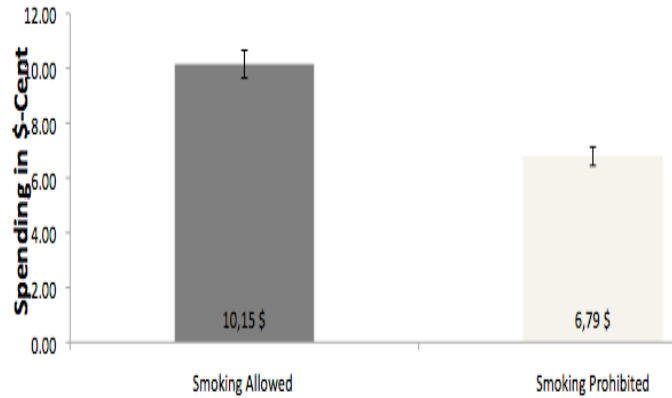


FIGURE 1: MEAN CONSUMPTION AMOUNT WHEN SMOKING IS ALLOWED/PROHIBITED

In line with our expectations, the results indicate that non-smokers consumed less when their right to a smoke-free environment was violated. On average, customers spent €10.15 on beverages and food when smoking was allowed but spent only €6.79 when a smoking ban was in place but was violated by other customers.

Since longer visits correlate with higher consumption overall, we controlled in a multiple linear regression for the time a customer spent at the bar.¹⁰² As

¹⁰¹ We conducted a two-sample t-test to compare the means of spending between the SA & SF treatments. The two-sided result is strongly significant so that we can reject that the means of both treatments do not differ significantly. See Table 1.

¹⁰² The evidence does not suggest that consumption itself influenced the time people spent at the bar – as would be typical for a fast food restaurant for example. People met in the bar to talk, drink, or work. Eating was secondary. We include *treatment* as a dummy variable in the regression as well as in the controls *smoke*, *tolerance*, *aesthetics* and the *legal protection* measure.

expected, patrons consumed more when they stayed in the bar longer.¹⁰³ The treatment effect remained significant in the regression,¹⁰⁴ suggesting that the consumption is lower when the smoking ban applied (the SF treatment) even when controlling for *time*. All other factors that might have influenced consumption (smoke concentration, individual smoke tolerance, aesthetic preferences, and patrons' valuation of the legal protection against second hand smoke is) remain insignificant in the regression.¹⁰⁵

(c) *Tipping*. If non-smokers were aggravated by violations of the smoking ban, they might leave lower tips (a) because they felt less comfortable at the bar and/or (b) as a form of retaliation against the staff for the lack of enforcement of the smoking ban.¹⁰⁶ We treated groups of customers as one observation calculating the average tip of the whole group.¹⁰⁷ We transformed the data by calculating the tip as a percentage of spending rather than in absolute terms, since the tip is usually a percentage of total spending. This transformation clarifies the social meaning of the tip: tipping €1 on a bill of €2 reflected more gratitude than tipping the same €1 on a €50 bill.

¹⁰³ Note that we assume that the duration of stay at the bar is not determined by the consumption. While consumption is a determinant of the duration of stay at restaurants and especially fast food establishments, we assume that the duration of stays at bars are motivated by social interactions and other variables (such as time constraints, work obligations etc.) rather than a fixed or pre-determined level of consumption. In other words, visitors to the bar consume because they enjoy having a drink while talking and eating something when they get hungry. We observed only a few visitors who left immediately after eating something.

¹⁰⁴ See Table 1.

¹⁰⁵ See Table 1 above. We split the regression again and repeated the analysis for each treatment separately. In both regressions the controls remain insignificant. The *legal protection* measure, however, was significant and stronger when smoking was forbidden than when it was allowed. *Id.*

¹⁰⁶ Our contention is that non-smokers reacted to rule breaking and not to the exposure to second-hand smoke, but non-smoker may also have reacted to waiters not enforcing the smoking prohibition when they decided how much to tip. Note, however, that we never observed a patron protest violations directly to the waiters. Because visitors could easily move to the non-smoking room at any time, they likely avoided confronting the wait staff over the lack of enforcement.

¹⁰⁷ We also conducted a two-sample t-test in order to compare the means of the tip between the SA & SF treatments.

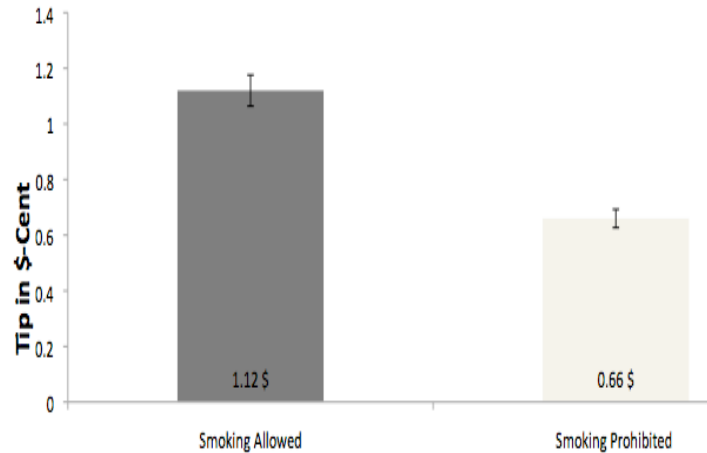


FIGURE 2: MEAN TIP AMOUNTS WHEN SMOKING IS ALLOWED/ PROHIBITED

As Figure 2 illustrates, non-smoking customers tipped almost twice as much when smoking was allowed (€1.12 or 15% of the bill) than when the smoking ban was violated (€0.66 or 7%).¹⁰⁸

To summarize, non-smokers tipped much more generously when smoking was allowed than when the smoking ban was in effect.¹⁰⁹

B. The Impact of Infringements on Non-Smokers

Next we analyzed the behavior of all non-smokers in the second room. Because the smoking ban was not constantly violated in the second room, we can compare the behavior of non-smokers whose rights were violated to that of non-smokers who witnessed no infractions of the smoking ban while they were in the room.¹¹⁰ Compared to non-smokers who did not encounter any infractions of the ban, non-smokers who observed violations of the smoking ban

¹⁰⁸ A two-tailed Mann-Whitney test yields a significant difference ($p=0.03$) so that we can reject the null hypothesis that the means of both treatments do not differ significantly. We performed a t-test and found a significant result, suggesting that customers tip more in the SA than the SF treatment. See Table 1 below. We also calculated a multiple linear regression with *tip* as the dependent variable and smoking regime and duration of stay as independent variables. We included the controls *smoke*, *tolerance*, *aesthetics*, and *legal protection* measurements in our regression. Treatment was the only significant variable; smoke concentration, an individual's *smoke tolerance*, the *aesthetics* of the rooms, and the normative assessment of *legal protection* against second hand smoke were all insignificant.

¹⁰⁹ Although the variable *time* has no significant effect on the amount tipped, it increases the fit of the model."

in the second room departed earlier (54 < 68 minutes), left smaller tips (€0.66 < €0.98), and consumed less (€6.78 < €9.40). We verified this finding by performing a t-test for the duration of the stay,¹¹¹ consumption,¹¹² and tip amount.¹¹³

Non-Smokers	SF		t-test (two-sided)	Linear Regression					R ²	
	Right Violation (N=22)	No Right Violation (N=76)		Treatment	Smoke Tolerance	Smoke	Legal Protection	Aesthetic Preference		Time
Time (min)	53.89	66.95	0.000***	0.001***	0.058*	0.258	0.444	0.829		0.166
Spending (€)	6.89	9.40	0.004***	0.042**	0.801	0.570	0.546	0.095*	0.002**	0.210
Tip (€)	0.66	0.98	0.023**	0.334	0.282	0.560	0.537	0.265	0.239	0.654

Table 2: Effect of Violating Non-Smokers’ Rights 2

(Non-Smokers Who Observed Smoking vs. Nobody Smoked in their Presence - Smoking Forbidden Condition only)

C. Effect on Smokers in the Second Room

We also compared the behavior of smokers when smoking was allowed to that when it was prohibited. A total of 279 cigarettes were consumed when smoking was allowed, whereas only 102 cigarettes were lit in the same time period when smoking was prohibited. More than half of the smokers refrained from lighting up when smoking was prohibited (52.21%), while only 30.85% of smokers abstained when it was allowed.¹¹⁴ Also the average number of cigarettes per smoker was significantly reduced when smoking was prohibited.¹¹⁵ Overall smoking reduced also because active smokers stayed for

¹¹¹ Comparing the group means for *time* on the basis of a two-sided t-test, the test returns a significant result. See Table 3.

¹¹² *Infra*, Table 3

¹¹³ *Infra*, Table 3. We used a one sided t-test. The treatment dummy has a significant effect in the regression suggesting that the difference between the means of the groups can be explained by the violations of the prohibition.

¹¹⁴ Exit interviews indicated whether someone was a non-smoker or a “latent” smoker who decided not to smoke during his or her visit at the bar.

¹¹⁵ The average numbers are the following: 1.88 when smoking is forbidden and 2.3 when smoking is allowed (t-test, p=0.00). Only the number of cigarettes consumed by the hour is similar (SF: 2.32; SA: 2.21) and the difference goes in the opposite direction we would expect.

shorter periods when smoking was prohibited: 50.91 minutes on average, compared to 62.77 minutes when smoking was allowed.¹¹⁶ These findings are noteworthy since, as indicated in the exit interviews, smokers did not expect any enforcement by the bar staff or public officials.¹¹⁷ The effect of the smoking ban on the behavior of smokers increased with the number of non-smokers in the room.¹¹⁸

Smokers	SA (N=121)	SF (N=54)	t-test (two-sided)	Linear Regression						
				Treatment	Cigarettes per hour	Presence	Legal Protection	Time	Spending	R ²
Time (min)	62.77	50.91	0.000***							
Spending (€)	9.19	6.96	0.000***	0.000***	0.021**	0.114	0.064*	0.000***		0.168
Tip (€)	0.88	1.14	0.000***	0.033**	0.979	0.897	0.534	0.000***	0.086*	0.311
				0.000***	0.402	0.056*	0.374	0.760		0.122

Table 3: Silent Enforcement

(Smoking in Violation of the Smoking Ban vs. Smoking When Allowed)

But this is likely driven by a ceiling effect that we are approaching for smokers when the ban is in effect. The mean number of smoked cigarettes is already one. Nearly all smokers who stay less than one hour smoke only one cigarette. Naturally any further reduction would make them a latent smoker. We also might observe a selection effect: customers who do not manage to refrain from smoking when it is prohibited might be the most regular smokers. Even as they reduce their consumption when the ban is in place, they might approach consumption that in on par with the other smokers that we observed when smoking was allowed.

¹¹⁶ When we compared the means the t-test is significant. In the OLS regression we integrate the controls: a) the amount of smoked cigarettes per hour, b) the perceived importance of the smoking ban, finally c) the presence of non- or latent smokers in the room. The treatment variable is strongly significant. We can conclude that smokers spend significantly less time in the bar when smoking is forbidden vs. allowed.

¹¹⁷ Ninety-eight percent of smokers indicated that did not take into account the possibility of being fined by for smoking. This expectation of smokers does indeed match the lack of public enforcement of smoking bans. Inspections in Germany are extremely rare, fines even more so. *Supra*__.

¹¹⁸ The more non-smokers were present in the room, the earlier smokers left the bar. The number of non-smokers has an impact only in the SF treatment when smokers violate the ban (OLS Regression, p-value for number of non-smokers: p=0.00), while in the SA treatment it has no significant influence (p=0.52).

To summarize, the results indicate that non-smokers who did not mind second-hand smoke,¹¹⁹ nevertheless reacted adversely to smoking when it was prohibited: they spent less time at the bar, consumed less, and tipped less when the smoking prohibition was in effect but was violated by other customers. Conversely, non-smokers stayed in the bar longer when smoking was allowed, even though smoke concentrations were much higher at those times. In the next Part we explore potential interpretations of these intriguing findings.

¹¹⁹ As indicated in the discussion of the control, *supra Section D*, we infer this from their decision to sit in this room and their knowledge that the ban is not enforced. Additionally, non-smokers indicated in the exit survey that they did not mind the smoke.

V. EXPLAINING REACTIONS TO UNENFORCED LAWS

As we observed in our study, even non-smokers who were indifferent to second hand smoke reacted adversely when they observed smoking in violation of an unenforced smoking ban. What might explain the adverse reactions to violations of an unenforced law?

A. “Owning” and Losing Passive Rights

The most plausible interpretation for our findings is based in the psychology of ownership as applied to legal entitlements. As the legal philosopher Joel Feinberg observes, “rights are themselves *property*, things we own.” As a result, rights holders may experience violations of these rights in the same way they would object to an involuntary conversion of their property.¹²⁰ Laws that restrict the actions of individuals or groups, such as smoking bans and littering laws, assign passive rights to the public: they relieve the public from certain actions imposed by other members of the public.¹²¹

The smoking ban, for instance, provided non-smokers with an entitlement to be free from smoke. Having been granted this entitlement, smoking is experienced by right holders adversely *independently* of what the right protected against (second-hand smoke). Although non-smokers in the second room did not mind second-hand smoke before they entered the bar, once they had been assigned the entitlement to be free from smoke, they reacted negatively to the very same actions that they were indifferent to prior to the assignment of the right. The right itself was not valued as such but became a factor of consideration once it had been granted to individuals *and* was subsequently taken away.

Legal entitlements might be subject to loss aversion: individual right holders might value a legal right more when they possess it than if they had not

¹²⁰ On the psychology of ownership, *see, e.g.*, Jon Pierce, Tatiana Kostov & Kurt Dirks, *The State of Psychological Ownership: Integrating and Extending a Century of Research*, 7 REVIEW OF GENERAL PSYCHOLOGY 84 (2003) (overview of the literature); Barbara Spellman & Frederick Schauer, *Artists’ Moral Rights and the Psychology of Ownership*, 83 TULANE L. REV. 661 (2009) (application to copyright law).

¹²¹ Active rights, by contrast, concern the own rights of right-holders (i.e. compare the active right “A has a right to do X” to the passive right “A has a right that B do X”. *See* David Lyons, *Rights, Claimants and Beneficiaries*, 6 AM. PHIL. Q.’Y 173 (1969); David Lyons, *The Correlativity of Rights and Duties*, 4 NOÛS 45 (1970).

been assigned the right already.¹²² Once aware of a legal entitlement, violations of that right might be experienced by right holders as a loss of something that they possess.

Several other aspects about the reactions of non-smokers are noteworthy. First, the entitlement to be free from smoke was important to patrons even though the surrounding circumstances clearly diluted the potency and credibility of the right itself: the exit interviews confirmed that non-smokers were aware that the ban was not enforced, they observed ashtrays and smoking as they entered the room. In other words, non-smokers had no illusions that the smoking ban conferred an effective right that would be enforced by a third party authority. Yet, once assigned, this hollow entitlement seemed to have purchase for the patrons in the second-room: violations influenced their decision how long to stay and how much to consume and tip. This finding is in line with prior empirical research that illustrates how perceived entitlements, even if groundless, unrealistic or infeasible, can act as “moral property rights” that create a standard of fairness that individuals may insist on.¹²³

Second, the loss experienced from violations of legal entitlements also helps explain the difference we observed between non-smokers and latent smokers.¹²⁴ The results of our exit survey indicate that latent smokers did not consider themselves as having been assigned a right to be free from smoke – as latent smoker the protection against second-hand smoke was meaningless to

¹²² On legal endowment effects more generally, see Daniel Kahneman, et al., *Experimental Tests of the Endowment Effect and the Coase Theorem*, 98 J. OF POL. ECON. 1325 (1990); Richard Thaler, *Toward a Positive Theory of Consumer Choice*, 1 J. ECON. BEHAV. & ORG. 39, 44 (1980); Daniel Kahneman, et al., *Experimental Tests of the Endowment Effect and the Coase Theorem*, 98 J. POL. ECON. 1325 (1990). Another famous experiment involves buying and selling lottery tickets. See Jack Knetsch & J.A. Sinden, *Willingness to Pay and Compensation Demanded: Experimental Evidence of an Unexpected Disparity in Measures of Value*, 99 Q. J. ECON. 507, 512 (1984). The endowment effect is often described as the gap between the willingness to pay (“WTP”) and the willingness to accept (“WTA”). See Elizabeth Hoffman & Matthew Spitzer, *Willingness to Pay v. Willingness to Accept: Legal and Economic Implications*, 71 WASH. U. L. Q. 59 (1993).

¹²³ For experimental findings on the influence of perceived entitlements on bargaining, see, e.g., Simon Gächter & Arno Riedl, *Moral Property Rights in Bargaining with Infeasible Claims*, forthcoming in *MANAGEMENT SCIENCE* (2013); Steven Kachelmeier, Stephen T. Limberg & Michael S. Schadeewald, *A Laboratory Market Examination Of The Consumer Price Response To Information About Producers’ Cost And Profits*, 66 ACCOUNTING REV. 694 (1991); Daniel Kahneman, Jack Knetsch & Richard Thaler, *Fairness As A Constraint On Profit Seeking: Entitlements In The Market*. 76(4) AMER. ECON. REV. 728 (1986). Also, because of the personal element and the visibility of violations, the deleterious experience of observing another person violate one’s passive, negative rights might be more salient than the lack of fulfillment of active rights by the state. See *supra* __.

¹²⁴ See *supra* __ and Table 4 above.

them.¹²⁵ Latent smokers did not regard themselves as claim-holders of the right to be free from smoke.¹²⁶ As a result, they were less sensitive to violations of the smoking ban.

Third, non-smokers did not seem to fully anticipate their adverse reactions to violations of the ban. When moving into the second room, they were fully aware that the ban was ignored by smokers and unenforced by the bar.¹²⁷ Nevertheless some non-smokers decided to sit in the second room. One possible explanation is that these non-smokers underestimated their own visceral reaction to rule breaking in the second room. This interpretation is supported by research that demonstrates how individuals often fail to accurately predict their visceral reactions and preferences across affective states.¹²⁸ In the

¹²⁵ Indeed, from the data obtained in the ex-post survey it appeared that smokers considered the goal of protecting non-smokers from second-hand smoke less important. The mean answers for smokers are 2.38 (SF) and 2.25 (SA), as compared to 2.69 (SF) and 2.57 (SA) for non-smokers. The 5 point *Likert* scales are accepted as interval scaled data. To test our hypothesis we perform t-tests comparing the average statement of smokers and non-smokers between treatments. First we test the SF treatment. We assume that smoker's normative statements will be significantly lower than the statements of non-smokers. We can reject the null hypothesis that the means are equal with a two sided test $p=0.00$. Secondly we test the results for the SA treatment. We can reject H_0 that the means are equal with a two sided test $p=0.00$. This might be explained by the fact that some individuals might prefer to smoke, on one hand, but endangering others when doing so and facing a prohibition, on the other hand, might create a dissonance between the desired action (smoking) and the normative evaluation of this action as communicated by the prohibition. To reduce the cognitive dissonance, smokers might adopt a normative position that aligns with their self-interest (smoking) and, consequently, criticize and challenge prohibitions against smoking in public. Additionally, no difference emerged between treatments.

¹²⁶ Additionally, we asked customers about the purpose of the smoking ban. Thirty-five customers answered that the ban serves the goal of protecting non-smokers from second-hand smoke, while only eight stated the ban aims to combat smoking addiction. Only one respondent mentioned that smokers as well should be protected from second-hand smoke (because "it is better for them to inhale only their own cigarettes"). Just two latent smokers perceived themselves as being protected by the smoking ban. Violations of the smoking ban were not perceived as taking away a right that latent smokers considered themselves entitled to.

¹²⁷ This assumption is confirmed by the environmental factors (smoke, ashtrays) as well as the exit-survey. *Infra*.

¹²⁸ On the underestimation of one visceral reaction to environmental stimuli, see George Loewenstein, *Hot-Cold Empathy Gaps And Medical Decision Making*, 24 (4) HEALTH PSYCHOLOGY 49 (2005). The core idea behind this line of research is that human understanding is "state dependent". Empathy gaps come into play "when people make decisions while in affective states that are unlikely to last". *Id.* A classic example is drug addiction: for someone who is not craving a drug it is virtually impossible to understand the grip that such craving could have over his or her behavior. George Loewenstein, *A Visceral Account Of Addiction*, in J. ELSTER & O. J. SKOG (EDS.), GETTING HOOKED: RATIONALITY AND ADDICTION 235 (1999). In our example, when not in a non-smoking room where the rules are violated, it is difficult to anticipate your reaction to such event until you are in that position/state. See also, Van Boven, L., Loewenstein, G., Welch, N., & Dunning, D. (2004). *The Illusion Of Courage: Underestimating The Impact Of Fear Of Embarrassment On The Self*. Pittsburgh, PA: Carnegie Mellon University, Department of Social and Decision Sciences.

terminology offered by George Loewenstein, non-smokers' failure to anticipate their adverse reaction to smoking in the second room is a "prospective empathy gap": non-smokers failed to predict their own future behavior in an affective state that is different (witnessing violations while in the room) from the one when they make a decision (the decision what room to enter).¹²⁹

Fourth, the fact that non-smokers took offense to violations of their right to be free from smoke should be considered also in light of the *social and interpersonal aspects* of the violations of the legal entitlement. Regardless of the substantive value of the infringed right, non-smokers might perceive the overt, public violations of their right to be free from smoke as particularly disrespectful. In other words, even when the instrumental value of the right (protection against second-hand smoke) was negligible, the social meaning of the violations of those rights was not. Likewise, smokers also seemed sensitive to the social aspects of violating the smoking ban in the second room. Even though they shared the second room with non-smokers who had decided to sit in a smoke-filled room, smokers seemed more uncomfortable when the room was designated as a smoke-free zone: they smoked less and left the bar earlier. The fact that this effect increased with the amount of non-smokers in the room indicates that unease with violations has a socially determined aspect.

B. The Expressive Effect of the Law

A competing explanation for the adverse reactions of non-smokers is be that the public smoking ban influenced non-smokers' viewpoints on second-hand smoke. As theories on the expressive function of the law suggest, a public smoking prohibition might cause non-smokers to internalize the values expressed by the regulation (protecting non-smokers against second-hand smoke)¹³⁰ or signal of the underlying attitudes and norm in a community.¹³¹ Along the same lines, a smoking ban might make the dangers and inconveniences of second-hand smoke more salient and objectionable. As a result, if the public smoking ban created a desire to receive legal protection against second-hand smoke, customers might become annoyed with the lack of

¹²⁹ This might be due to lack of experience with or poor recollection of the visceral experience. For experimental evidence of empathy gaps in the context of entitlements, see Leaf Van Boven, D. Dunning & G. Loewenstein, *Egocentric empathy gaps between owners and buyers: misperceptions of the endowment effect*, 79(1) J. PERS. SOC. PSYCHOL. 66-76 (2000) (presenting experimental evidence on bargaining where owners and buyers overestimated the similarity between their own valuation of a commodity and the valuation of participants in the other role).

¹³⁰ *Supra*__.

¹³¹ *Supra*__.

enforcement by the bar and (as observed in our study) leave early, reduce their consumption and tip less.

(1) Expressive Laws & Norm Internalization

In the context of our study, the potential expressive effect of the smoking ban is rather limited. The unenforced smoking ban does not provide a strong signal of a widely shared commitment against smoking. First, the potential expressive power of the smoking ban is undermined by the fact that the ban smoking was not fully banned at the bar. Second, the ban remained unenforced at this particular bar, and customers violated the ban without any repercussions. In this setting it seems unlikely that the smoking ban would influence the preferences or attitudes of non-smokers about smoking.

The data confirms that the expressive function does not adequately explain the observed behavior. If the ban had an expressive effect, it should create aversion against public smoking. Yet, non-smokers did not leave earlier, spend less, and leave lower tips when smoke concentrations increased in the room.¹³² Moreover, whenever smoking was allowed in the second room, our particle counter device recorded higher concentrations of smoke, yet non-smokers spent longer periods of time at the bar, left bigger tips, and consumed more overall. Also, if the smoking ban increased the value of the legal protection of non-smokers, we would expect that fewer non-smokers would elect to sit in the second room. However, the ratio of smokers and non-smokers in the room did not differ when the ban was in place.

Finally, the exit interviews confirm that the smoking prohibition did not strengthen the normative belief among non-smokers that public smoking should be prohibited. In the exit surveys we asked patrons how important the legal protection of non-smokers was to them. Customers that had visited the bar when the smoking ban was in effect did not hold a stronger belief that non-smokers should be protected from second-hand smoke.¹³³

¹³² We controlled for the smoke intensity in our regressions and for none of our three dependent variables *time*, *spending* or *tip* we observed even a weak correlation.

¹³³ The measure for the legal protection score does not differ: 2.69 vs. 2.58 for both treatments in a Likert scale of 1-5 (where 1=legal protection is not important at all; 5=legal protection is very important). Note that our data does not exclude the possibility of the expressive function of the law impacting non-smokers in the front room, making them stronger advocates of the protection against second-hand smoke.

(2) Expressive Laws & Coordination

Another perspective on the expressive theory of the law is that unenforced laws can tip behavior by adjusting their expectations of what others consider appropriate behavior.¹³⁴ Accordingly, individuals might change their behavior because the law has reduced the costs of third party enforcement and self-help.¹³⁵ Potential offenders become more uncomfortable and reluctant to engage in offending behavior when they expect or perceive resistance by right holders.¹³⁶

In the setting of our study, however, non-smokers were unlikely to confront smokers about violations in the second room. Instead of confronting smokers in the second room, non-smokers could always move to the smoke-free room in the front of the bar.¹³⁷ Nonetheless, smokers in our study seemed self-conscious about breaking the ban and became increasingly uncomfortable when more non-smokers were present in the room. When the ban was in effect, the amount of smoking was just 35% compared to when smoking was allowed,¹³⁸ and more

¹³⁴ See, e.g., Robert D. Cooter, *Three Effects of Social Norms on Law: Expression, Deterrence, and Internalization*, 79 OR. L. REV. 1 (2000) (suggesting a three-fold model of the effect of legality on behavior). Cass R. Sunstein, *On the Expressive Function of Law*, 144 U. PA. L. REV. 2021, 2022 (1996) (general discussion). For a more formal, economic account, see Robert Cooter, *Do Good Laws Make Good Citizens? An Economic Analysis of Internalized Norms*, 86 VA. L. REV. 1577, 1593–94 (2000) and Robert Cooter, *Expressive Law and Economics*, 27 J. LEG. STUD. 585, 653 (1998).

¹³⁵ If a law has normative authority, individuals may benefit from complying or enforcing these norms. See, e.g., Richard H. McAdams, *The Origin, Development, and Regulation of Norms*, 96 MICH. L. REV. 338, 365 (1997) (enforcers derive social esteem); ERIC POSNER, *LAW & SOCIAL NORMS*, __ (compliance works as a signal about one's discount value and creates future potential exchange opportunities); Robert Ellickson, *The Market for Social Norms*, 3 AM. L. & ECON. REV. 1 (2001) (explaining demand and supply effects in social enforcement).

¹³⁶ Some scholars have argued that laws can work as signal of the underlying attitudes of a community or society. See McAdams, *An Attitudinal Theory of Expressive Law*, 79 OR. L. REV. 339, 340 (2000). As a result, potential rule breakers may come to fear formal and informal enforcement from others. For an empirical distinction between the internalization or coordinating effect of legal commands, see Iris Bohnet & Robert D. Cooter, *Expressive Law: Framing and Equilibrium Selection* (Nov. 2003), <http://ssrn.com/abstract=452420>. See also Richard H. McAdams & Janice Nadler, *Testing the Focal Point Theory of Legal Compliance: The Effect of Third-Party Expression in an Experimental Hawk/Dove Game*, 2 J. EMPIRICAL LEG. STUD. 87, 116-17 (2005) (law enables coordination problems by allowing individuals to form expectations about what others are likely to do).

¹³⁷ On individuals' preference to avoid inconsistency, see Simon et al., 2004. Also, non-smokers might also realize that the bar would not have been supportive of confrontations and would prefer non-smokers to move to the front room when annoyed with second hand smoke or violations of the prohibition.

¹³⁸ *Supra*__ (reporting the amount of cigarettes consumed).

than half of smokers refrained from lighting up.¹³⁹ These findings are noteworthy since, as indicated in the exit interviews, smokers did not expect any enforcement by the bar or public officials.¹⁴⁰ The fact that non-smokers smoked less only when smoking was forbidden suggests that smokers were more mindful of the social aspect of violating the ban than to the objective and harmful impact of second-hand smoke.¹⁴¹ If smokers were concerned about the health effects of second hand smoke on the non-smokers in the room, they would likely reduce smoking also when smoking was allowed. In this regard the unenforced smoking ban did have a coordinating effect on the behavior of guests. Smokers reduced their smoking and non-smokers left the bar earlier when smoking occurred in violation of the ban. Note that these effects are contrary to what the bar had in mind when putting in place the unenforced ban. The bar installed the ban to drive traffic from the front room to the second room. The ban remained unenforced to appease smokers while attracting only the most smoke tolerant non-smokers (who always had the option of sitting in the smoke-free first room). Yet, when the ban was in place, however, smoking seemed to bother even the most smoke-tolerant non-smoking patrons, while smokers seemed more uncomfortable as well when the ban was in effect.

C. Principled Objections

An alternative explanation for our findings is that non-smoking patrons found violations of the smoking ban objectionable simply because they generally consider rule breaking irresponsible or immoral.¹⁴² In this “rule of law” perspective, smoking in violation of the ban might be offensive to patrons regardless of the inconvenience caused by the second-hand smoke and irrespective of their viewpoints regarding the health effects or the need to protect non-smokers against second-hand smoke.

The data indicates, however, that a principled opposition to rule breaking cannot fully explain the behavior of non-smokers in our study. First, if a principled objection to rule-breaking drives the reaction of the non-smokers in our study, non-smokers in the front room should similarly be offended when

¹³⁹ *Supra*__ . By comparison, only 30.85% of smokers abstained when smoking was allowed.

¹⁴⁰ Ninety-eight percent of smokers indicated that they excluded the possibility that they did not take into account the possibility of being fined by for smoking. This expectation of smokers does indeed match the lack of public enforcement of smoking bans.

¹⁴¹ If smokers were simply concerned with the negative health effects of second-hand smoke on non-smokers they would likely reduce their smoking in the presence of non-smokers *regardless* of whether smoking was allowed or prohibited.

¹⁴² *Supra*__.

they observed violations of the smoking ban in the second room through the glass door that separates both rooms. Exit interviews with patrons in the front room indicated that 90% of non-smokers in the front room realized that the smoking ban was being violated in the second room. These non-smokers reported in the interviews, however, that they did not mind these violations since they were shielded from the smoke by the door that separated both rooms.

Second, we also analyzed the behavior of smokers who did not smoke while in the second room.¹⁴³ If our results can be explained by a principled objection to rule breaking, these “latent” smokers should react adversely to violations of the smoking prohibition as well. Moreover, since they are smokers, these customers are especially unlikely to mind the second-hand smoke.¹⁴⁴ If a rule of law preference drives our results, we would also expect these latent smokers to object to violations of the smoking ban in the second room. Interestingly, however, the data reveal that, in contrast to non-smokers, latent smokers in the second room did *not* reveal any negative reactions to violations of the smoking ban.¹⁴⁵ Latent smokers spent 67 minutes on average in the bar when smoking was allowed, compared to 65.8 minutes when smoking was prohibited.¹⁴⁶ Similarly, as the data in Table 4 below indicates, no significant

¹⁴³ We distinguished between smokers that did not smoke because of the prohibition and those who had other reasons to abstain from smoking (cash restrictions, having smoked already, etc). We tested the two groups of smokers that either had personal reasons for not smoking or who did want to comply to the non-smoking policy and found that they did not differ in the dimensions of our dependent variables *time*, *spending* and *tip*. For duration of stay, we reject that the means differ with $p=0.82$. In the regression with *time* as dependent variable *legal protection*, *smoke*, *aesthetics*, *tolerance* as independent variables *treatment* is strongly not significant as well $p=0.91$. For tipping, the null hypothesis that means differ was rejected with $p=0.86$. In the regression we find a $p=0.92$. For *spending*, the t-test returned $p=0.69$, regression brought the same result. As a result, we could pool all observations and use the full data set: assigning all latent smokers independently of the reason for not smoking to either the SA or the SF treatment.

¹⁴⁴ Indeed, our measurements confirm that there is no difference between smokers and latent smokers regarding smoke tolerance.

¹⁴⁵ To examine is, we compared the behavior of latent smokers when smoking was allowed and when it was prohibited. See Table 4 below. The p-values are $p=0.70$ for *time* and $p=0.29$ for *legal protection*. When we repeated the regression for the SF treatment exclusively, the protection measure was still insignificant. For *spending* we find that *treatment* is insignificant as well as the *legal protection* measure. A similar result is yielded when we split the regression to analyze the SF treatment exclusively. Thus for *spending* we do not even see a trend suggesting that those customers who value the legal protection relatively higher than the other smokers, do not spend less time in the bar, when their right is violated in the SF treatment. *Id.*

¹⁴⁶ First we conducted t-tests comparing smokers in the smoking room under the SA and the SF treatment. For *time* we find the following means in minutes: 67 (SA) versus 65.81 (SF). The t-test confirms that we can reject the null hypothesis that the means differ significantly.

differences in *tipping*¹⁴⁷ or *spending*¹⁴⁸ appeared for latent smokers when smoking was prohibited or allowed.¹⁴⁹

Latent Smokers	SA (N=51)	SF (N=59)	t-test (two-sided)	Linear Regression					R ²
	Treatment	Smoke Tolerance	Smoke	Legal Protection	Aesthetic Preference	Time	Spending		
Time (min)	67.00	65.81	0.778	0.291	0.951			0.015	
Spending (€)	10.32	9.77	0.548	0.515	0.748	0.000***		0.327	
Tip (€)	0.99	1.03	0.729	0.486	0.682	0.000***	0.003***	0.364	

Table 4: Entitlement Effect or Rule of Law Preference? (Violating the Rights of Latent Smokers when Smoking is Forbidden vs. Allowed)

Third, if non-smokers were concerned with rule breaking, non-smokers would likely avoid getting seated in the second room, since they were aware that the smoking ban was not respected in that room.

VI. POLICY INSIGHTS

Our findings challenge conventional about unenforced rights and provide new insight into social dynamics that emerge in public settings when rights are unenforced.

¹⁴⁷ Tipping means are calculated in % of the variable *spending*. We find 11.41 (SA) and 11.19 (SF). The rejection on a level above 0.7 of the t-test for mean difference provides strong support that the results for *tip* are close to equal in the two treatments. See Table 4.

¹⁴⁸ For the variable *spending* we find the following means in US\$: 9.937 (SA) and 9.940 (SF) Conducting a t-test we get a $p=0.996$ rejecting H_0 that the means differ significantly, since the result is not within a 10 % range of equivalence, (1.454; -1.447). Still, the rejection of the t-test above 0.9 is strong evidence that the two means are close. See Table 4.

¹⁴⁹ In the regressions we are mainly interested in the *legal protection* measure. To increase the robustness we also include the controls (*smoke, tolerance & aesthetics*). See Table 4.

A. *Unenforced Rights as Harms*

Rights are often conceived as “options” that right holders are able to exercise.¹⁵⁰ In this rights-as-options framework, being assigned a legal entitlement is unequivocally positive for right-holders. In the context of public smoking for instance, smoke-intolerant individuals benefit when the state enacts a public smoking ban. Passive legal rights enable citizens to invoke the state’s enforcement powers to enforce their rights. Even if the law remains unenforced, smoke intolerant individuals are not worse off than if no law was enacted. Individuals that are more tolerant of second hand smoke (such as the non-smokers in the second room in our study) are not adversely affected by a lack of public enforcement either: they do not mind public smoking and would never call upon the authorities to enforce the prohibition. It follows then that unenforced laws are relatively harmless: unenforced law simply create hollow options that cannot be exercised.

Our findings challenge this view of rights as harmless options. The results show how rule breaking may aggrieve individuals even when they are indifferent to the behavior itself *but for* the violation of the right that accompanies the behavior. Non-smokers in our study objected to smoking only when the ban was in effect. Regardless of their individual tolerance for second-hand smoke, all non-smokers are potentially affected when the state enacts an unenforced smoking prohibition. This illustrates that violations of individual rights can be experienced negatively by right-holders even if they would treat the same behavior – but for to the assignment of the right – with indifference.

One plausible interpretation of our findings is that violations of rights may impose psychological costs that are distinct from the consequences of legally proscribed behavior. If violations of individual rights are perceived as taking away a legal entitlement from the right holder, the negative experience of right-holders are an artifact of the law making process – the very same behavior would have remained unnoticed but for the express allocation of the passive right. Therefore, when considering legislation that confers rights to the public, lawmakers should acknowledge the potentially adverse impact on right holders/beneficiaries if the state is not able to enforce the rights effectively.¹⁵¹

¹⁵⁰ IAN AYRES, *OPTIONAL LAW: THE STRUCTURE OF LEGAL ENTITLEMENTS* (2005).

¹⁵¹ *Infra*__.

B. The Self-Enforcing Potential of Unenforced Laws

Prior scholarship has explained social enforcement by the social approval and esteem that individuals receive when they enforce a law that is widely supported.¹⁵² The dynamics observed in our experiment suggest that right holders might engage in social enforcement *even* if an unenforced law is controversial or if they do not support the law's underlying cause. Our findings indicate how right holders might engage in social enforcement merely to preserve their legal entitlement.

In the context of public smoking bans for instance, non-smokers often have opportunities to signal their disapproval to smokers. Non-smokers may complain outright to a patron that lights up or provide subtle indications of disapproval, such as glancing, changing seats to increase the distance to smokers, coughing, *etc.* In this regard, unenforced laws have a self-fulfilling potential: the passing of the law generates sensitivity to conduct that the law categorizes as rule breaking, prompting demand side pressure towards compliance and enforcement. This finding supports the perspective of unenforced laws as useful starting points, as emphasized by advocates of aspirational laws.¹⁵³

The resulting social friction might also induce public enforcement. In the context of our study, for instance, the adverse reactions of non-smokers might cause the bar to eventually enforce the smoking ban or to make the entire room smoke-free.¹⁵⁴ In fact, the bar permitted us to conduct the experiment also because it was eager to learn more about the impact of the alternating smoking regime and the lack of enforcement on the behavior of patrons. Interestingly, if the bar eventually installs a bar-wide smoking ban or begins to enforce the smoking prohibition, a smoke free environment will result not because of a general desire among patrons to be free from smoke, but rather because of the negative reaction of patrons to the violations of their rights. A smoke-free environment obtains then, not because patrons prefer a smoke free environment, but rather because the policy created an endowment and individuals prefer having their entitlement respected. It is the *violated right* to

¹⁵² If a law has normative authority, individuals may benefit from complying or enforcing these norms *See, e.g.,* Richard H. McAdams, *The Origin, Development, and Regulation of Norms*, 96 MICH. L. REV. 338, 365 (1997) (enforcers derive social esteem); ERIC POSNER, *LAW & SOCIAL NORMS* 111 (2002) (compliance works as a signal about one's discount value and generates creates future potential exchange opportunities).

¹⁵³ *Supra*__.

¹⁵⁴ Of course, such a tipping point will largely depend on the relative benefits and costs involved with either of the two available options to the bar: allowing smoke in the back room all the time, or prohibiting smoke at all times.

be free from smoke, rather than the second-hand smoke itself, that generates the negative reaction of non-smokers on our study. In this regard the smoking policy and laws more general can be self-enforcing without it being necessary that individuals internalize the values embodied in the law.¹⁵⁵

Several conditions in the setting of our study are conducive to this self-fulfilling potential of unenforced rights: (1) passive rights (to be free from smoke) are assigned to a broad segment of the population; (2) rule-breaking takes place in a public setting; and (3) right holders have some opportunity to voice their concerns and/or engage in social enforcement. Various other unenforced laws that assign passive rights, such as littering laws, scoop-a-poop ordinances share these key attributes. A littering law, for example, creates a general sense among the public that people are entitled to be free of litter, violations are observed in public, and there are opportunities to engage in informal sanctioning or to press for formal enforcement.

¹⁵⁵ In the framework of the expressive function of the law, self-enforcement and spontaneous compliance occurs if individuals internalize the legal rights as personal preferences. See, e.g., Robert D. Cooter, *Decentralized Law for a Complex Economy: The Structural Approach to Adjudicating the New Law Merchant*, 144 U. PA. L. REV. 1643 (1996) (suggesting that enacting legal rules can shift behavior from an inferior to a superior equilibrium); Alex Geisinger, *A Belief Change Theory of Expressive Law*, 88 IOWA L. REV. 35, 70 (2002) (arguing that legal rules can induce a “belief change” about the regulated behavior, causing changes in social norms and preferences). In our explanation, by contrast, it is sufficient that rights are assigned and violations are publicly observable. In a variation of the expressive function of the law, some scholars have argued that laws can work as signal of the underlying attitudes of a community or society. See McAdams, *An Attitudinal Theory of Expressive Law*, 79 OR. L. REV. 339, 340 (2000). Compliance occurs then because citizens takes cues from legal rules as to the behavior that will likely lead to social approval. See Robert Cooter, *Normative Failure Theory of Law*, 82 CORNELL L. REV. 947, 972-78 (1997) (describing the conditions necessary to develop optimal informal sanctions); Richard H. McAdams, *The Origin, Development, and Regulation of Norms*, 96 MICH. L. REV. 338, 365 (1997) (discussing the role of esteem in social sanctioning); ERIC A. POSNER, *LAW AND SOCIAL NORMS* (2000) (focusing on how normative desirable behavior signals trustworthiness, leading to future exchange opportunities); Robert Ellickson, *The Market for Social Norms*, 3 AM. L. & ECON. REV. 1 (2001) (discussing how norm related collective actions problems are solved on the basis of varying dispositions and benefits across individuals); Robert A. Scott, *The Limits of behavioral Theories of Law and Social Norms*, 86 VA. L. REV. 1603, 1613-15 (2000). Our explanation shares in common with this theory the notion that compliance is induced by expectations among potential violators about the likeliness of social enforcement. A crucial difference, however, is that the expectation about social enforcement in expressive law theories is based on some underlying normative or informational force of the law. For the legal endowment effect, it is sufficient that potential violators understand the basic psychological costs of violating someone’s right.

VII. CONCLUSION

An unenforced law is not the same as having no law at all. As expressive theories of the law recognize, when the state declares certain behavior illegal, this can influence public reactions to that behavior – even if the law remains unenforced.¹⁵⁶

Our empirical study reveals an additional, counterintuitive finding about unenforced laws: when an unenforced passive right becomes a right denied by a fellow citizen, rule breaking may upset right holders even if they are indifferent to the impact of the prohibited behavior or the underlying policy objectives of the unenforced law.

When legislators enact laws without providing mechanisms to ensure effective enforcement or when policy-makers engage in executive discretion, they should be mindful of the intricate social dynamics that result even when a law remains unenforced.

¹⁵⁶ *Supra*, Goodman at note ____.

APPENDIX

SURVEY QUESTIONS AND CONTROLLING FOR SELECTION EFFECTS

A. The Exit Survey

On the basis of the post-experimental questionnaire we obtained additional information about the customers at the bar. The results enabled us to assign our observations to the different treatments. Towards this purpose we presented three questions to customers. First, we asked subjects whether they are a smoker (“yes” or “no”). A post-experimental survey was likely the only way to identify smokers who decided not to smoke. Second, we asked smokers why they did not smoke even though they had decided to sit in the second room.¹²³ Third, we asked the question, “Did you expect that people would smoke when you entered the room?” to control for the ex-ante beliefs customers entering the back room. Only two people indicated that they expected a smoke free environment in spite of the announcement at the door that smoking was forbidden. As mentioned before, very often another customer was already smoking in the second room, the air was smoke-filled, and ashtrays were always present in the room. We excluded from the sample the two customers who indicated that they expected the room to be smoke free from, as well as two visitors who left the room once they observed smoking in the room.

The sequence of all the questions posed to customers in the survey is as follows:

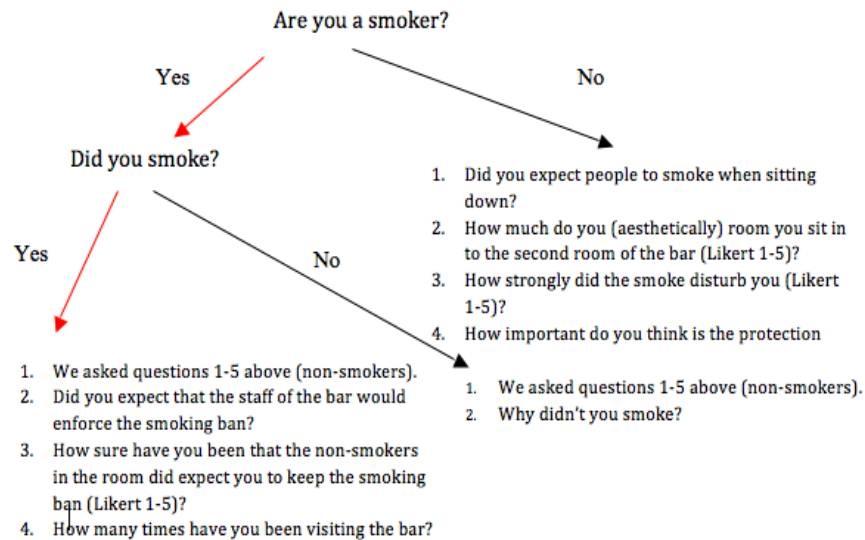


FIGURE 1

¹²³ We tested those customers who mentioned that they refrained from smoking because of the prohibition against those who mentioned that they did not smoke for personal reasons. This allowed us to pool the data, allowing us to work with the whole sample in case we do not find a difference.

B. Additional Control: Movement Across Rooms

If, contrary to our premise, non-smokers held the belief that that the smoking rule would be enforced and that the second room would be free of smoke, also more sensitive non-smokers might be present in the second room when smoking was prohibited. In such instances, a non-smoker’s decision to leave early might be due to the unpleasant surprise about the smoke rather than the violation of the smoking ban.¹²⁴ This selection effect could undermine the validity of our causal findings.

We assumed that the non-smokers in the second room are not sensitive to second hand smoke and presented strong evidence for this assumption.¹²⁵ Still, it cannot be excluded that patrons’ decisions are informed by considerations other than their tolerance of smoke (mistaken expectations about enforcement, etc.). In order to examine this possibility, we directly analyzed whether the change of the treatment (smoking regime) caused a shift in the ratio of smokers and non-smokers in the smoking room, comparing our two treatments. We compared the ratio of non-smokers who decided to sit in the second, smoking room and in the front, non-smoking room as the smoking regime altered in the second room (SF and SA treatments).¹²⁶

If the regime change influenced customers’ choices it seems likely that, when smoking was prohibited, relatively more smokers would select the front room while more non-smokers should choose the second room. The tables below list the number of customers in the smoking and the non-smoking room depending on the regime in place (SF or SA treatment).¹²⁷

Non Smokers	Non-smoking Room	Smoking Room
SF Treatment	234	148
SA Treatment	241	141

TABLE 1

We used the Fisher exact test to analyze, whether the difference in the distribution of the tables is random. The result of a two-sided Fisher test for the non-smoker is insignificant ($p= 0.333$).

In addition, we calculated the odds ratio of the likelihood of a non-smoker to be in the non-smoking room in the one or the other treatment. The intuition of this odds ratio is simple: if the distribution is not influenced by the treatment the odds ratio should be 1; the likelihood to see a non-smoker in the smoking room should be the same under the two treatments.¹²⁸ We determine

¹²⁴ In more technical terms, the population might self-select different customers in the smoking and non-smoking zone differently depending on the applicable smoking regime in the room.

¹²⁵ *Supra*, sub-sections 1-6 above__

¹²⁶ As a matter of procedure a second experimenter counted the number of customers in the non-smoking room. On each table in the front room we provided a list on which customers could indicate (without providing any additional information) whether they are smokers or non-smokers. All but one of the customers in the non-smoking room filled in the statement sheet.

¹²⁷ For the customers in the non-smoking room we did not elicit any data, except whether they are a smoker or not. They found a piece of paper on each table asking them to state whether they are smokers or not. The number of collected sheets matched the number of customers we counted. The waitress friendly reminded the customers to fill out the sheet and collected them as the customers paid their bill.

¹²⁸ Of course the odds ratio should be 1 only in theory. The visitors we actually see in the bar deciding for the smoking or non-smoking room are just a sample of all people who might have come to the bar at those days. Therefore we calculate a confidence interval of 95% for the odds ratio. As a benchmark we consider a perfectly symmetric 2x2 table containing as many observations in total as we have in our

1.275 as a range of equivalence, which allows for 5% deviation from the benchmark table. Since this difference was not exceeded we can consider the distributions to be statistically equal.¹²⁹ This provides strong evidence that the treatment of the smoking regime has no systematic impact on the distribution of non-smokers inside the bar.

This result confirms that no selection effect was induced by the applicable smoking regime.¹³⁰ We can conclude that (1) the smoke concentration does not influence customers' behavior; (2) the alternating smoking regime does not cause customers to chose a different room. In both treatments, the same ratio of smokers and non-smokers were present in the room.¹³¹

experiment. In this table the odds ratio is 1. In the appendix we see the 95% confidence interval for this perfectly balanced table. It is 1.15 for the upper bound.

¹²⁹ As pointed out the assumed selection effect has a direction, we should see more non-smokers in the smoking room under the SF than the SA treatment. As the table shows the likelihood for this distribution to realize should be lower than 1, since we see more non-smokers in the back room in the SA than the SF treatment. This suggests that we do not have a selection effect of non-smokers moving to the smoking room. Because of the direction of the selection effect, we only need to consider the ratio of the upper bound of the confidence interval. With 1.185 the interval is still in the range we defined for equivalence and thus within 5 % of the benchmark table.

¹³⁰ The result seems intuitive since we only include those smokers into our analysis who did not smoke. The reasons they indicate why they did not smoke (safe money; smoked too much before; not alone) suggest that it was clear to the customers when they entered the bar that they did not want to smoke anyway. Then the treatment should not influence their choice of a seat as long as they do not mind hers smoking.

¹³¹ We conducted the same analysis for smokers. The result was the same: The odds ratio for seeing a smoker in both treatments in the smoking room is statistically equivalent. In addition we found that guests in the SA treatment did not behave differently from guests in the non smoking room in the front of the bar. They stayed an equal amount of time (65 min vs. 66 min confidence intervals fully within equivalence range of 10%), spending was relatively equal (9.97 vs. 10.15 \$) and tips were similar (0.978 vs. 1.11 \$ equivalent within).